

THE FARMING WORLD

DEVOTED TO

CANADIAN COUNTRY LIFE



WASHING SHEEP

JUNE 1, 1907
Vol. XXVI., No. 11

**Progress
in Road Making**

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TWO YEARS FOR \$1.00

The Royal Dublin Society Show
A Good Barn Plan The Farmers Hog Pen
The Whole-Milk Creamery
Farm Windbreaks The Terrapin Scale

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Make the land pay for itself. Farmers with complete farming outfit can secure a quarter or half section without a cash payment, undertaking settlement and crop payment conditions.

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Western Lands for Eastern Canadians

THE FARMING WORLD desires to encourage natives of Ontario, Quebec and the Eastern Provinces to remain in and assist in advancing the Agricultural Prosperity of Eastern Canada, and to induce a desirable class of Immigrants to locate in these Provinces.

While this is true we realize that there are in each Eastern Province tenant farmers with large families of grown-up boys and girls—owners of small farms and large families—stalwart young men experienced in Agriculture, and possessing a little Capital, who are ambitious to better their condition, to own a home and to settle their friends or families around them.

Thousands of Canadians of this description have in years gone by migrated to the United States. To such the Canadian West now offers

Golden Opportunities for Home Making and Fortune Building

The demand for Western Lands is unprecedented, and undesirable areas are being offered for sale to Settlers by many agencies.

To protect and assist our readers who find it desirable to go West we have completed arrangements with a most reliable and experienced Real Estate Company, one of the largest, wealthiest and best equipped in Canada, to furnish us with areas of various sizes to suit purchasers, situated in what we know to be Good Districts.

Each parcel accepted by us has been inspected, and a map and careful reports made of it by Competent and Reliable Men. The lands we offer to our readers will not be Cheap, but will be good value and a safe investment. All lands offered in our last issue, amounting to 16,000 acres, have been sold. We have, however, made additional selections in Alberta and Saskatchewan.

TERMS OF PAYMENT (except as hereinafter stated) are:—

One quarter of the purchase money at the time of purchase, the remainder in equal annual payments extending over from four to nine years at the option of the purchaser, with interest at six per cent. per annum on the unpaid balance—said balance may be paid in full or in part at the end of any year without notice or bonus.

Payments Less Than One-Quarter

It has been hereinbefore provided that the first payment on all lands shall equal one-quarter of the purchase price; nevertheless, sales may be made to desirable purchasers, who will at once move on and improve the land, and a less first payment accepted. But all particulars concerning such purchasers shall be furnished to the Company on a form provided for the purpose.

Land will also be sold on the crop-payments plan. A man who owns stock and implements, and has plenty of help (that is, a family,) if he can assure us that his and their character is good, and that all are industrious and ambitious, we are prepared to help him and them—we will build him a house and assist him in other ways.

MONEY TO LOAN AT CURRENT RATES. For description of lands, maps, charts, etc., apply to

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PUBLISHER'S DESK**Coming Events**

Women's Institute Meetings—June 3 to July 10.
Farmers' Excursions to O. A. C.—June 7-8.
Seed Meetings—June 7-8.

Auction Sale

Rawlinson Bros.—July 20.

[Barn and House Plans Wanted

We want for publication in The Farming World during the next three months plans and descriptions of up-to-date barns and houses. The plans, if they cannot be drawn according to scale, may be neatly drawn by pencil on white paper, giving the dimensions, etc. In addition, particular attention should be given to material used, ventilation, and other information that might be useful to our farmers. If possible, photographs showing the buildings and grounds would be most helpful. Plans should be clear in outline, so as to reproduce well. For such plans and descriptions of either as we accept and publish, we will pay \$5.00.

Renewals

Unlike many other journals, we have subscriptions coming due every month. If you are not sure your renewal would be received at once. Our two years for one dollar offer is still good.

To Our Old Subscribers

Our present subscribers would do well to take advantage of the offer of this year the subscription price of The Farming World will be \$1.00 a year. If you have not already renewed, do so now and get the full benefit of this year's price. For \$1.00 you can renew for two years. If you have a friend who wishes to subscribe, send his name along. We will renew your own subscription for the next year and give you a new subscriber for one year both for \$1.00.

Western Land in Demand

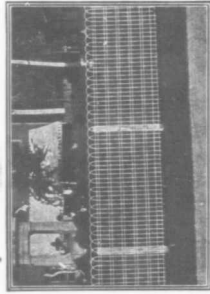
Our western lands are in demand. If you are interested, write for full particulars. Look up the description on page 494 of this issue. We have something to offer that will interest you.

The first irrigation convention, covering the Provinces of Saskatchewan, Alberta and Manitoba, will be held and open in Calgary on July 17th next.

THE FIRST STEP

Often means so much. It has meant success to thousands of young people who wrote for help toward a good salaried position. Take the step to-day.

—Address Central Business College, 395 Yonge Street, Toronto, W. H. Shaw, Prin.

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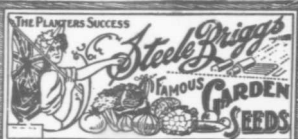
When Harvest Time Comes, you will realize the difference between seeds that are full first class and those that are put up merely to sell. You run a decided risk in planting seeds haphazard, without regard to reputation or quality. Men of large experience will tell you that

STEELE, BRIGGS' SEEDS

are pure and sure to grow. No disappointment with them. Your money's worth every time, full sized packages at popular prices, seeds that are tested and tried. Insist on having STEELE, BRIGGS' SEEDS and avoid disappointment.

They are sold by leading Merchants everywhere; if you can't get what you want from your local dealer send to us direct.

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If you examine it you will notice that it is composed of five different layers.

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This mineral surface is chosen for its weather-resisting qualities, and does away absolutely with painting and coating.

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This short description will give you some idea of how carefully Amatite is constructed and what effective protection it will give against weather of all kinds.

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THE RIGHT PAINT **TO PAINT RIGHT.**

June Institute Meetings

Some of the annual meetings of Farmers' Institutes to be held in June promise to be of a very interesting character. Supt. Patman has arranged for a number of the professors at the Ontario Agricultural College and others to address these meetings. The speakers and the meetings they will attend are as follows:—

Prof. S. F. Edwards—Mohawk, June 12.
Prof. R. Harecourt—Kent Bridge, June 5.
Chatham, June 6; Dutton, June 7; Shelburne, June 11.

Prof. G. E. Day—Hillsburg, May 31; Clifford, June 3; Port Elgin, June 4; Teeswater, June 5; Kincardine, June 6.

Prof. H. H. Dean—Beachburg, June 4; Vankleek Hill, June 6; Martintown, June 7; Newington, June 8.

Prof. C. A. Zavitz—Owen Sound, June 4.

Prof. J. B. Reynolds—Dangannon, June 17; Hensall, June 18; Bridgen, June 19; Inwood, June 20.

W. P. Gamble—Maxwell, June 11; Durham, June 12; Appin, June 18.
H. S. Peart—Millbrook, June 4; Baltimore, June 5; Bloomfield, June 6.

Simpson Rennie—Bowmanville, June 8; Centreville, June 14; Tweed, June 15; Mador, June 18; Fenelon Falls, June 27.

G. G. Puhlow—McDonald's Corners, June 11.

H. Glendinning—Huntsville, June 15; E. J. Zavitz—Norswich, June 11;

Delhi, June 12; Vittoria, June 13; John Campbell—Greenwood, June 7.

T. G. Raynor—Wyevale, June 21; Duntroon, June 25.

T. H. Mason—Weston, June 8.

The annual meetings at which no speaker will be present are as follows:—

Kentvale, June 15; Wiaraton, June 12; Exp. Farm, Ottawa, June 30;

Winchester Spgs., June 3; Aylmer, June 8; Parham, June 19; Cayuga, June 1; Milton, June 1; Belville, June 22; Brussels, June 7; Merrickville, June 6; Napanee, June 19; St. Catharines, June 1; Thorndale, June 8; Alisa Craig, June 4; Wellandport, June 17; Utterson, June 15; Brampton, June 1; Norwood, June 8; Russell, June 18; Scyllia, June 1; Welland, June 26; Mt. Forest, June 15; Guelph, June 1.

Special Seed Meeting

Held under the auspices of the Seed Branch of the Dominion Department of Agriculture and the Farmers' Institutes Branch of the Provincial Department of Agriculture.

Speaker, Mr. Simpson Rennie, Toronto—Nestleton, Peter Wright's place, June 7; Taunton, residence of J. A. Leask, June 8; Bowmanville, residence of A. H. Allen, June 10; Kendall, residence of Jno. Stewart, June 12; Napanee, town hall, June 11; Belleville, T. J. Hurley's farm, June 13; Centreville, town hall, June 14; Tweed, J. L. Newton's farm, June 15; Mador, Sam Curry's Hotel, June 17; Warkworth, farm of G. N. Stone, June 18; Westwood, township hall, June 19; Keene, township hall, June 20; Lindsay, E. H. Hopkin's farm, June 21; Fenelon Falls, Dickson's Hall, June 22; Woodville, Jno. Campbell's farm, June 24; Oakwood, half-mile south, June 25; Little Britain, Home Circle Hall, June 25; Stouffville, residence of D. H. Russell, June 26; Village Hall, June 26.

Speakers—T. H. Mason, Esq., Stratfordville, June 7-19; T. G. Raynor, Esq., Ottawa, June 20 to 26—Maple, Jas. McKel's farm, June 7; Weston, Dufferin Hall, June 8; Weston, P. P. Pearson's farm, June 8; Box Grove, Foresters' Hall, June 10; Victoria Square, public hall, June 11; Agincourt, Temperance Hall, June 12; Huttonville, June 13; Clavde, June 14; Mono Mills, picnic, 2 p. m., Wm. McKinley's grove, June 15; Elm Grove, farm of W. J. McLean, June 17; Stroud, farm of Wm. Wright, June 18; Penetanguishene, town hall, June 19; Randolph, farm of Wm. Evans, June 20; Wyevale, Orange Hall, June 21; Flesheron, town hall, June 23; Stavner, Stewart's Hall, June 24; Duntroon, Sons of Scotland's Hall, June 25; Meaford, town hall, June 26.

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They will please you. People who work for us make big money easily.

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Regarding Home Heating

Do you desire to improve the heating of your home, your church or your school? If so, we would advise you to investigate the Kelsey Warm Air Generator manufactured by The James Stuart Mfg. Co., Ltd., Brockville, Ont. Over 30,000 of this heater are now in use and are giving perfect satisfaction.

The advertisement of this firm, which appears in this issue, gives the opinion of several prominent people who are using the Kelsey Generator.

Sup't. at the New Fruit Farm

Mr. H. S. Peart, B.S.A., lecturer in Horticulture at the Ontario Agricultural College, has been appointed Superintendent of the new experimental fruit farm at Jordan, Ont. This is the farm given to the Province by Mr. M. S. Rittenhouse, the Chicago millionaire. Mr. Peart is by early training and education a practical fruit-grower and will, no doubt, give a good account of himself in this new field.

Mr. J. L. Byer, of Mount Joy, Ont., has been added to the list of inspectors referred to in our apiary department this issue.

\$832.50 a year from 7 Cows

In a little booklet which we have just received from the Vermont Farm Machine Company, makers of the U. S. Cream Separators, Mr. S. W. Coleman, of Missouri, tells of his success in dairying.

On a farm of ten acres, with seven cows, the total receipts were \$1651.50, and the expenses, \$819—leaving a profit of \$832.50. His cows averaged 400 pounds of butter a year. With the exception of the grazing, he buys all his hay, bran, etc. Many farmers who keep more cows, do not clear as much as Mr. Coleman does with his herd of seven, and it does seem that there is much room for improving the stock and the methods of dairying in vogue. In this booklet, Mr. Coleman tells what kind of cows he keeps—what he feeds—and how he gets so much cream from the milk.

The booklet contains such practical, money-making advice, that we urge our readers, who are interested in making their cows pay a bigger profit, to write for a copy. It will be sent free to those addressing the Vermont Farm Machine Co., Bellows Falls, Vermont, U.S.A., asking for "Profit Booklet."

Kindly mention Farming World when writing.

FARM LABOR

If you want help for the farm for the season or the year, write for application form to the

**Bureau of Colonization
PARLIAMENT BUILDINGS
TORONTO**

Are You Keeping Cows for Profit?

Do You Know That the
MAGNET CREAM SEPARATOR
is THE INVENTION of
CANADIAN MECHANICS?



Are you aware that it is **guaranteed** by a **Canadian Company**?

Have you **examined** the **double supported bowl** only found in the **MAGNET**?

Have you studied the **Common Sense gear**, applied to driving the bowl?

Have you seen the **perfect Skimmer** in the **MAGNET**, on **one piece, easily cleaned, and takes out all the Butter fat**?

Do you **consider quality** when you buy? If so see the **MAGNET'S nine years record** which is, **no repairs, no wear.**

Do you **consider results**? If so **experts** say "Never saw better skimming than was done by the **MAGNET**."

Are you looking **for profit** in your dairy? The **MAGNET** will make **twelve dollars** more every year from **each cow.**

If you want **comfort** in your dairy you will find the **MAGNET so easy to turn and clean** that you **could not** make hard work of it, if you tried.

Write for 1907 Catalogue.

PETRIE MFG. CO., Limited

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The simplest, easiest, and most effective method of killing bugs on potatoes is by using dry powder with an **EUREKA ELECTRIC EXTERMINATOR**.

One application is all that is required. Light, cheap and durable. We manufacture a full line of **Wagon Box and Rack, Root Cutters, Root and Cultivators, Combination Anvil, Hoes, Rakes, Corn or Potato Planters, Liquid or Dry Powder Sprayers, Hoop Trimmers, Etc.** Correspondence solicited. Free catalogue on application. Send post card today to

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LIMITED
Woodstock, Ont., Manufacturers.

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One Year 60c. **SUBSCRIPTION BLANK** Two Years \$1.00

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Enclosed please find the sum of.....
for which kindly send the FARMING WORLD to the following address for.....years.

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Name and address of person sending order. {

IMITATION IS THE SINCEREST FLATTERY

De Laval Cream Separators

HAVE MANY IMITATORS

But way down in the heart of every informed Dairyman, he knows that

De Laval Cream Separators are Best.

AGENCIES EVERYWHERE.

THE DE LAVAL SEPARATOR CO., 173-177 William Street,
MONTREAL.



REMARKABLE INVENTION

FOR THE

CULTURE OF HAIR

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

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

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

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

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

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

THE SECRETARY, EVANS VACUUM CAP CO. LIMITED
Regent House, Regent Street, London, W.

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Copies of Volume one and eight of the Clydesdale Stud Book of Canada. Parties having these in their possession and willing to dispose of them, please write J. W. Sangster, Secretary, Treasurer, Clydesdale Association, Temple Building, Toronto.

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The Farming World

Devoted to Canadian Country Life

Vol. XXVI.

TORONTO, 1st JUNE, 1907.

No. 11

Note and Comment

THE cool weather has continued well towards the end of the month, and there is no little anxiety as to the crop prospects for 1907. Recent reports from the West are more favorable and indicate that the seed has been sown in better prepared soil than usual, an advantage no doubt in insuring a good crop. In eastern Canada people are not so optimistic. Fall wheat in Ontario, except in a few favored sections, is a partial failure. But more serious, perhaps, is the hay crop, which has been very much injured in many sections. Of course everything will depend upon the season from this on, and there is nothing to prevent a fair crop of spring grain if growing conditions in June and July are favorable.

* * *

The power question is assuming definite shape, and in the near future many of the cities and towns within reasonable distance of Niagara will be supplied with electric power at a fair price. The terms arranged by the Hydro-electric Power Commission with the Ontario Power Company provide for a supply up to 100,000 horse power with a minimum quantity to be taken of 8,000 horse-power, the price to be \$10.40 per horse power per annum up to 25,000 horse power, and thereafter at \$10.

The distribution of this power to the different towns interested should enable a great many farmers en route to take advantage of it. The Power Commission should make provision for them to secure a supply if they so desire at the same price at which it is furnished to municipalities. With electricity on the farm many problems will be solved and the farmers' business made more profitable.

* * *

A change is to be made in the location of the pioneer farm in the clay belt of Northern Ontario. A site was selected some time ago, but owing to a change in the route of the Temiskaming and Northern Ontario Railway, it has been found necessary to select a new place, as it is most desirable that the farm should be adjacent to the railway.

The Hon. Mr. Monteith will make the new selection.

Interest is centered on the West these days. A pioneer farm that will show what the clay belt will do in the way of agriculture should help to divert this interest somewhat and direct it towards developing the fertile farm lands of New Ontario.

* * *

The important business transacted at the recent Colonial Conference was the endorsement of the principle of an all-British service from Great Britain via Canada to Australia and New Zealand. The plan in brief is to have a fast service to Halifax or to some other Canadian port equal to the existing service across the Atlantic to New York, thus saving two days. On the Pacific Ocean a service of at least 18 knots will eventually be established. If carried out it will mean a four day trip across the Atlantic, four days across Canada, and twelve to fourteen days from Canada to Australia, making about a twenty day service in all.

While a fast mail and passenger service would be of great benefit to Canada, the freight service should be in no way sacrificed in order to obtain it. Of the two we believe that greater permanent benefit to the country at large will result from an efficient freight service than from a fast mail and passenger service. If we can get the two so much the better, but if not, the fast service might better wait a few years. Our perishable food products must be got to the consumer in the best possible condition. On this the future prosperity of the country largely depends.

* * *

The importance of the Amendment to the rules governing the registration of imported Clydesdale horses is just beginning to be realized. For a number of years Canadian importers have been urging upon the Clydesdale breeders of Scotland and those who control their stud books the need of having their eligible stock registered, but all to little avail. The majority of the fillies that have been brought to this country during the past few

years have had only the Scottish export certificate to show as evidence of breeding. Though all of them might qualify, no registration certificate has been given to the purchaser, who if he desires to record in the Canadian record, is put to a lot of unnecessary trouble and expense. The Canadian breeder before committing himself to the purchase or use of imported Clydesdales, should demand that the Canadian pedigree of the animal should be shown him.

One of the difficulties in the way of facilitating the recording of imported animals is that ancestors recorded in the Scottish stud book have to be recorded in the Canadian book at a cost of 50 cents for each animal. This makes the total fee which the applicant will have to pay somewhat of an uncertainty. His application is forwarded to Ottawa, and he receives word to remit the amount required before the pedigree is sent him. This may be not more than two dollars or it may cost as high as six dollars. If the Clydesdale association could fix upon some flat rate for recording ancestors it would simplify matters very much and save those who desire to register imported animals a lot of trouble.

* * *

Live stock has never played a very prominent part in Nova Scotia agriculture, though that province can boast of some excellent breeds of pure bred stock. Of late years more attention has been given to this branch, and systematic efforts are being made to induce the farmer to keep better stock and more of it. Expansion just now seems to be turning more in the direction of the horse raising and sheep breeding branches of live stock husbandry, for which the province is very well adapted. There is a strong feeling among legislators and others that the local government should import horses and sheep particularly, and have them distributed over the province.

There is, however, a difference of opinion as to the best means of doing this. Some favor the auction sale, while others say that

THE FARMING WORLD

Devoted to Canadian Country Life

Published on the
1st and 15th of each month

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In Canada, if paid in advance, one year, \$1⁰⁰ Cents; 50 cents in advance, One Dollar per Year. In the United States and Great Britain 50 cents extra must be added.

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Publishers

Rooms 506-508 Temple Building
TORONTO, CANADA

Eastern Agency of The Nor' West Farmer

importations should be sold to farmers here and there at a very small figure. Those who advocate the latter plan are mostly politicians, and it does not require much acumen to discern that they see in this a means of pulling votes or making themselves popular with certain individuals who control votes. In our opinion a most serious mistake would be made if such a plan were adopted. The only fair way is to hold an auction sale and let everyone who wants to and can pay the price buy the animals as they are offered. To place breeding animals in the hands of men who are not willing to pay a fair price for them is like throwing money away. Besides, buyers would not give them the same care and attention as if they paid a fair market price.

The auction sale as now conducted in connection with the Amherst Winter Fair has given the greatest general satisfaction. It has given farmers a chance to sell animals that could not be sold any other way. The local agricultural societies appreciate it. It gives them the opportunity of seeing a large number of animals together

and thus making a better selection. The Nova Scotia government will be well advised if it adopts the policy of having all animals brought into the province by public funds sold by auction to the highest bidder. To practically give them away to parties here and there would most certainly defeat the ends for which the importations were made and do more harm than good to the live stock trade of the country.

Prof. Arkell Goes to Ste Anne's

Mr. H. S. Arkell, B.S.A., who for a couple of years has been lecturer in Animal Husbandry at the Ontario Agricultural College, has been appointed Professor of Animal Husbandry at Macdonald College, Ste Anne de Bellevue, Que., and assumes his new duties on June 1st. His first work will probably be to purchase the stock that will be required in the animal husbandry department, which, for the present at least, will make dairy and swine husbandry the more important features of the courses to be taught. There is already a splendid herd of Ayrshires on the farm.

wheat than usual has been plowed up, and much more would be turned under were it not for grass has been seeded down with the wheat, a considerable quantity of barley and oats, however, has been drilled into the bare spots for mixed feed. But little injury from insects has been reported, the white grub being most in evidence. The rye crop came through in better condition.

Clover—Like fall wheat, clover suffered greatly from the trying weather of April, many fields being badly heated by frost, or injured by ice forming. On warm, sandy soils, and on well-drained clays, some excellent fields are reported, but on the whole the crop came through the winter and spring in poorer condition than for years, and no section of the Province has been exempt.

Live Stock—When live stock went into winter quarters, it was felt that more than ordinary care would have to be exercised in their feeding and handling, as hay was not so plentiful as usual, and mixed feed was high in price. The early winter being mostly favorable, and the warm weather of March augured an early season upon the grass; but the keen, raw weather of April, and the backward growth of the first half of May, upset all calculations, and when correspondents wrote, fodder supplies were short with many, and in some cases live stock had to be turned out on pastures that were hardly forward enough to sustain them. Cattle are not in as good spring condition as usual, being on the lean side as a rule, although, with the exception of some losses from scouring and a few local cases of abortion in dairy cows, they are generally free from disease.

The fact that they were put on grass later than usual is a factor against them. Horses, owing to the high prices now being paid for them, are better cared for than ever. Some distemper has been reported, but generally of a mild form. The cool weather during spring work was in their favor. Sheep are gaining in favor and are doing well, although the usual losses in lambing are reported. The fatalities in spring litters of pigs have been serious, but otherwise this popular class of live stock is favorably spoken of, and shipments are being regularly made to the packing houses.

Farm Supplies—Hay is scarce and dear in most quarters, as a large quantity was prepared to be shipped early in the winter, and a good deal had to be led to live stock during the late spring. Oats also had to be fed in greater quantities than was anticipated, and the surplus on hand is comparatively small. Wheat has been largely disposed of, and, taken all together, fodder supplies have been more closely drawn upon than for years. Of course, there are individual farmers who have still a good supply of some or all of these commodities on hand. Fat cattle have been pretty well cleared off, exports having gone on regularly during the season. Some cattle are plentiful, but are late in getting on the grass. This, with the comparative scarcity of feed, is making the handling of beef cattle a more interesting problem than ever this year. Several correspondents speak of plum trees dying, but some attribute this to the severe winter of 1903-4 having told on the vitality of the trees. Other fruit trees have come through in good condition, and give fair promise of fruiting should spring frost be escaped. Complaints are made of injury from the San Jose scale and the oyster shell bark louse.

Representatives of the other breeds will be added and a complete course in animal husbandry established.

Prof. Arkell is a graduate of the Ontario Agricultural College. He made a specialty of live stock during his college career and passed his examinations with high honors. He comes of a family of stockmen, the Arkells being known far and wide for their success in the show-ring and as breeders of high-class stock. Therefore, both by education and practical training, he is well qualified to take up the important duties at Ste Anne's for which he has been chosen.

Live Stock and Crop Conditions in Ontario

The report of the Ontario Department of Agriculture regarding agricultural conditions in the Province about the middle of May, is not a very comforting one. Generally speaking, the wintry spring has given things a serious setback, and unless more favorable growing conditions come soon, the outlook for a big harvest is not at all bright. The cool weather has continued till the end of the month, and, as a result, growing conditions are not at all what they should be for this season of the year. The backward state of growth has prevented correspondents from obtaining an accurate opinion of crop prospects as usual. The following is a summary of the report:

Fall Wheat—While a few correspondents report good fields of fall wheat, the bulk of the returns are more or less unfavorable. More fall

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Progress in Road Making

Progress in road improvement in Ontario continues both steady and sure. The act passed by the Legislature several years ago, by which \$1,000,000 was appropriated for road improvement, has been taken advantage of by nine counties. Some have just made a beginning, while others have received sums extending up to nearly the \$100,000 mark. And this is not all. For every dollar given by the government the county must expend two dollars, so that a few counties within the past five years have expended altogether upwards of \$300,000 in road improvement. In detail the amounts paid by the government to date to counties which have qualified under the act are as follows:

Lennox and Addington.....	\$ 638.18
Middlesex.....	7141.36
Lincoln.....	9126.97
Oxford.....	17678.27
Wellington.....	17843.70
Hastings.....	24238.75
Lanark.....	30489.53
Wentworth.....	86800.24
Simcoe.....	97938.91

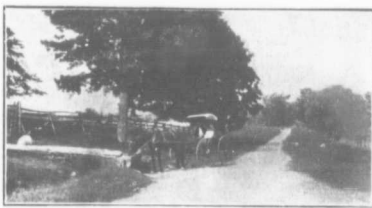
In other words, of the \$1,000,000 appropriated, nearly one-third has been paid out by the government.

At the last session the Act was amended and the \$1,000,000 fund reinstated, which means that a fresh start has been made, and the counties have the full amount to draw from. County councils in many instances have hesitated about taking up this work, as they feared the appropriation would soon run out. But the recent amendment shows that the government is alive to the importance of the work and may be relied upon to extend the appropriation should the necessity again arise in the future. In the meantime every county should get into line and take advantage of the government's liberality. Roads have to be kept up in any case, and the work might better be done on some systematic and permanent plan than in the patchwork fashion in which many of our municipalities build and maintain roads. Nothing will add more to the value of farm lands than an improved and well-maintained system of roads.

The original act provided that to qualify for the government grant, counties must lay out a definite system of roadways that will best meet the needs of the districts to be served, the main object being to obtain not only a system of good roads covering the county itself, but which would connect with leading roads in other counties so that from one end of the province to the other there might be

vantage of the Act, there are in some districts government improved roads extending for many miles. There is now a continuous system of county roads built in conformity to the Act extending from Niagara to the borders of York county. And as York county will likely take up the work very shortly, we may soon see the system extended to Toronto. Peel county has been added to the list, and plans have recently been approved by the government calling for the expenditure of from \$100,000 to \$150,000 in that county. Halton County Council will likely pass the by-law at its June session, and Ontario County is considering it. Very shortly, therefore, several counties will be added to those already drawing from the government fund.

The act has also been amended in other respects. Formerly the work was hampered by the county having to obtain the consent of the township councils to take over roads in their jurisdiction. This has been changed, and a County Council may by its own



A HUMANE CONTRIVANCE ON THE ROADSIDE



AN IMPROVED COUNTRY ROAD

by-law adopt plans for road improvement without consulting the township councils. The County Councils, can, also, by their own resolution, appropriate money for road improvement without by-law up to 2 per cent. of the assessed value of the county. These changes have simplified matters very much, and enabled county councils on their own initiative to take up the work. Another factor that has aided in removing friction is the new system of electing county councillors, as it does away with the necessity of having the township and county councils coming together to discuss roads to be taken over. These changes mark a distinct advance in regard to road-making, and progress will undoubtedly be

more marked in the next five years than during the past five.

A Watering Trough by the Wayside

One of the illustrations on this page shows a feature of our highways that should receive more consideration than it does. A watering trough by the roadside is a real "boon" to the tired and thirsty horse on a warm day. The illustration shows one of these, cheaply constructed, but at the same time serving the purpose. On the leading highways especially where a spring is handy, a watering trough should be placed, connected with it. There are many springs suitably situated for this purpose, and very little time and expense are needed to fix up a trough such as we have described. This is a practical idea for the humane societies to take up.

Earth Roads

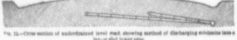
While the ideal system of roads is that to be found in the county system referred to elsewhere and which are built by experts after some uniform and approved plan, all the roads in the county cannot be chosen for this purpose, though more will no doubt be taken over as the work goes on, especially as counties have been granted the privilege of extending the systems upon which they have been expending public money during the past few years. There will, therefore, for some time to come be a number of roads, just as necessary as the others, that will have to be kept up by the municipalities and the people in the locality. Such roads, for the most part, are what might be called earth roads, many of them out of reach of good road-making material. These must be kept up and made as valuable as possible to the localities they serve.

An earth road is not necessarily a bad road, if properly looked after. It has gotten into disrepute largely because of neglect and not having been properly made. As much system and care are required in making and maintaining an earth road as a gravel or macadamized one. Certain principles govern the one as much as the other. Earth roads should be placed in charge of someone who understands them and who will see that they are kept in proper repair. If this is done there will be fewer complaints of bad roads in the spring and fall.

Drainage is the key to success in making earth roads. Water is destructive to any road, especially to a dirt road; therefore, drainage that will at once carry away rain or melting snow is absolutely necessary. Most country roads are too flat on



a complete and conformed chain of improved roads. Though comparatively few counties have as yet taken ad-



top to shed water; indeed, many of them are not only flat but concave, and become a regular cistern for

holding water. The sides of the road have often square shoulders (Fig. 2) which obstruct the water and, as a result, it lies on the surface until it is absorbed by the material or evaporated by the sun. If allowed to remain too long, holes and ruts come quickly and grow bigger and bigger.

SUB-DRAINAGE.

In open or pervious soils, surface drainage in connection with heavy rolling is usually quite satisfactory, provided the slope is good and the traffic not heavy. In close, impervious or clayey soils, sub-drainage is often necessary and is neither expensive nor difficult. Where springs exist in the soil, the roads should be tapped by blind drains of stone or brick or clay pipe leading diagonally to the side ditches. Where sidehill roads are springy, deep open ditches on the higher slopes will often suffice. Horizontal drains under the roadway, which should empty into the open drains or the natural watercourses at frequent intervals, are advisable on earth roads that are inclined to continue wet. Besides they help to carry away quickly when the snow goes or after a heavy rain. If the road surface is composed of deep open ditches on fine clay, there should be two or three drains, but if the soil is open, one drain in the centre of the travelled way will often be sufficient. The depth to which drains should be

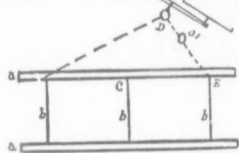


DIAGRAM OF THE SPLIT LOG ROAD DRAG

laid will depend upon the character of the soil as well as the depth of the frost line. They can be placed parallel with the surface of the road in rolling countries, provided they are a fall of not less than three-tenths of a foot to each too feet. Outlets to side ditches, or preferably into the adjacent fields or streams should be made as often as practicable. The size of the drain will depend upon the distance between outlets as well as the grade of the ditch. Ordinarily, if the distance is 500 feet or less, a 3-inch pipe will answer. If the distance is greater than that, the size of the tile should be increased about 1 inch in diameter for every 400 feet in length.

But, while sub-drainage is advisable and necessary in many cases, the great majority of earth roads can be much improved by surface drainage. A good crown on the road, so that water will quickly find its way to the ditches, is about all that is necessary on most roads. The section in the middle must be the highest part, and the travelled roadway should be made as impervious to water as possible so that the rainfall or melting snow will flow freely and quickly into the gutters alongside. A good shape for a cross section of an earth road is an arc of a circle with a gradual fall from the centre to the sides of about 1 in 20 after the surface has been thoroughly rolled or

compacted by traffic. Such a surface can be constructed and repaired with the road machine and a roller can be used on it to some advantage. When the surface is not kept smooth and compact, the crown should be a little steeper than 1 in 20, but should under no circumstances exceed 1 in 12. Too much crown is as detrimental as too little.

THE SPLIT-LOG DRAG.

There is no place where the split-log drag can be used to so much advantage as on an earth road. Placed in skillful hands and used frequently during the season, an earth road can be kept in fair condition by this implement. It is cheaply made and is a most useful instrument for road-

THE ROYAL DUBLIN SOCIETY'S SPRING SHOW

I left New York on April 10th, at 4 p.m., and reached Queenstown on the morning of the 18th. We landed about 7.30 a.m., and I proceeded at once to Dublin, where I hoped to witness the last day and a half of the above exhibition. But the train was too slow, taking the whole day up to 5.30 p.m. Friday was the last day and all showing and parades had been completed. However, I was able thoroughly to inspect all the animals.

The Royal Dublin Society hold two shows. One devoted mainly to an exhibit of bulls and farm machinery, to which is added a few classes of horses. The second show is held in August and is devoted exclusively to horses. It is a fashionable event and is largely attended by all interested in horses.

VETERINARY INSPECTION.

This horse show is well managed and has some features which are unique. All animals except the driving horses are subjected to a thorough veterinary inspection before being allowed to enter for competition in the respective classes. No less than fifteen vets. are employed in order that there may be no delay. Two of these are always held in reserve, to whom the owner may appeal in case he deems himself wronged. To facilitate the inspection, a full equipment is provided, consisting of an oval arena which contains a hard and also a soft, fresh-ploughed track. The horses are galloped around these in order to detect any weakness in feet, limbs or wind. In addition, there are two dark boxes provided with appliances to detect weakness of the eyes, and two others supplied with forges, etc., with blacksmiths in attendance, so that when desired shoes are removed at once, and after examination of the foot replaced. The vets in attendance have no knowledge of which horses they are to examine until the officer in charge calls them in. It will be seen how difficult it is for a horse with any unsoundness to obtain a premium as they cannot compete unless the veterinary inspection is favorable. At the spring show, however, none of this inspection is deemed necessary.

THE BULLS.

The bull show of the exhibition just closed was, I believe, the largest in the total number exhibited of any held previously, and I believe also contained more specimens of great renown than ever before. By far the largest class was the Shorthorns, although there was a creditable display of Herefords, Polled Angus and a few of the popular dairy breeds. The Shorthorn yearlings were divided into

making. Take the two halves of a splitting bar of twelve inch thick and seven to nine feet long. Set the halves flat sides to the front, fasten 30 inches apart with strong stakes, the ends of which are welded in two-inch auger holes, bored through slabs. Put a solid plank platform on the stakes for the driver to stand on. The hitch is made of strong wire or chain, the long end fastened to stake over the top of the front slab, the short end should be put through a hole made in centre of slab and near the end to prevent the back slab tilting forward. Face four or five feet of the ditch end of the front slab with iron. An old wagon tire, worn share or road grader or any piece of flat steel will answer the purpose.

three classes—those calved in 1906 between Jan. 1st and March 1st, 2nd, between March 1st and May 1st, and third, all after May 1st. The first class contained 100 bulls, the second 158, and the third class thirty in all, 283 yearling bulls. The two-year-olds bulls were divided into two classes, those calved in 1905 before September, and those calved in 1905 after September. In the first class there were 96 entries and in the second 58, total two-year-olds, 134. One more class of aged bulls containing 42 entries included all calved prior to 1905.

It will be easily seen that the judges had no small task in selecting the winners where the numbers were so great. They included many of the most noted show bulls in Great Britain. At the head of the aged bulls stood "Linkfield Champion," now owned by Mr. Miller, the great South American exporter, winning not only 1st in his class but also the "Chaloner Plate Championship." His bull is a very fine specimen, being remarkably smooth with a fine carriage and few faults. It will be remembered that this bull was placed 1st at the Royal last year and also 1st at the Dublin show a year ago. In his class he had a good second in Mr. Harrison's bull, "Pioneer," a roan bull from the King's herd at Windsor and sired by Ronald. In the two-year-old classes an easy winner was found in "Shenley Victor," sold at Birmingham for 1000 gs. and owned by Mr. McLennan. He was followed in his class by "Ester Stamp," sired by Sir Hugh Smiley, while a third was found in Mr. Harrison's bull, "Elvethan Sweetmeat." The first was well entitled to his honors, and is a massive, strong constitution bull, standing wide and deep and an all red of the precise fawn shade. He was awarded the champion silver medal in the two-year-old classes. In the yearling classes the top bull was "Village Purple," by W. J. Garne & Son, and owned also by Mr. Miller. His sire is Village Beau (86651), dam by Bapton Crown (728288). He was purchased by his present owner at Birmingham for 650 gs.

GENERAL QUALITY GOOD.

It would be expected in such large classes that a portion would be inferior, and a very close inspection proved the fact in this case. A considerable number should be in the pastures as steers. They would not excel there but they could do no harm to the breed. Beyond a small number of the popular dairy breeds of good quality. The inspectors I

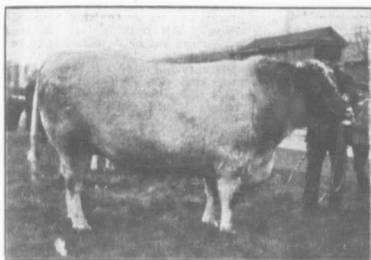


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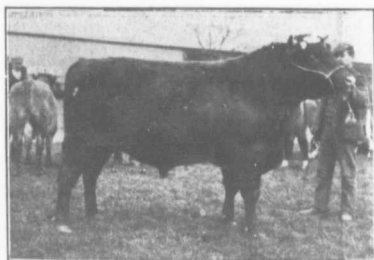


culture. (those of and ticket once while bulls, and feel similarity inferior) They wer





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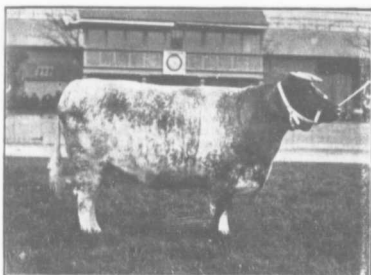


SHENLEY VICTOR—THE 1000 G. BULL

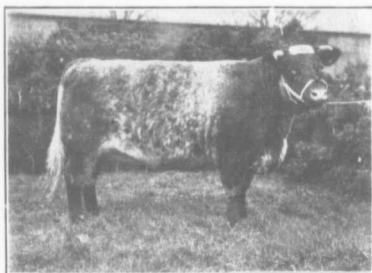
the Department of Agriculture were in attendance early and gave their judgment on each animal shown. It is their duty to select such as in their judgment are worthy to be placed as premium bulls, which means bulls subject to receive a bonus of £15 per year from the Department of Agri-

bodied, good constituted animals, every one of them being specially qualified as steer getters. A few of the bulls so selected were held at too high a figure for the ordinary farmer. Otherwise every bull was sold; \$500 was the highest price I heard of, while several sold at \$400, \$350, and

organization and has done much for the improvement of Agriculture in Ireland. Some of the work now done by the Department of Agriculture was originated by this society. They have a well-equipped show grounds situated in Dublin and known as Ballsbridge. It is on the line of



DONSIDE PRINCESS, 1ST PRIZE COW



FITLINE ROSEBUU, 1ST PRIZE TWO-YEAR OLD HEIFER

culture. One hundred and sixty-five of those of suitable age were selected and ticketed so that buyers knew at once which were classed as premium bulls. I looked them over carefully and feel free to say that the same similarity was seen throughout. No inferior weedy bull was ticketed. They were all well formed, deep-

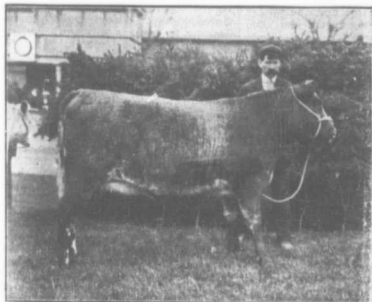
so on. The vast majority would bring from \$225 to \$300.

The prizes at this show are high, running from \$15.00 to \$150.00. The most money is given for the yearling classes, the prize list in the oldest yearlings running £30, £20, £15, £10, £5, £3.

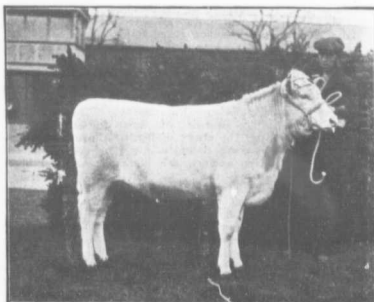
The Royal Dublin Society is an old

the tramcars or, as it would be called in Canada, the street railway. The admission fee is double the charges of the Industrial and on some days more, but no one interested stays away on that account.

JNO. DRYDEN.



BELLADONNA, 2ND PRIZE YEARLING HEIFER



REX. FARWELL, 1ST PRIZE YEARLING HEIFER



THE MAIN BUILDING, MACDONALD COLLEGE

Macdonald College Course

The new Macdonald College at Ste. Anne de Bellevue, Que., will be opened next fall. The curriculum in agriculture and household science adopted is as follows:—The institution is to comprise three departments: the school of education, the school of agriculture, and the school of household science. The principal, James W. Robertson, LL.D., C.M.C., together with the staff of the college and such other persons as the governors of McGill University may see fit to appoint, have been constituted as the Macdonald College Committee for the purpose of directing the educational policy and curriculum, of framing and enforcing the necessary regulations touching the details of the courses of study and teaching, of the college examinations, the admission of students, the amount and mode of payment of fees and the discipline and internal government.

The agricultural school, according to the curriculum, is to provide (a) Short courses from two weeks to three months each on live stock, seeds, crops, weeds, poultry and horticulture. (b) Two-year course leading to a diploma and which embraces a study of field and cereal husbandry, animal husbandry, poultry husbandry, home dairying and horticulture. This course also comprises a study of chemistry, physics, biology, bacteriology, English, mathematics and book-keeping. (c) Four-year course leading to a bachelor's degree. This is a continuation of the two-year course for the purpose of affording opportunity for a more advanced knowledge of rural economy and more thorough and exact acquaintance with the natural sciences and their application to the conditions, processes and organizations of rural life.

The courses that will be followed in the Household Science Department are: (a) Short courses of three months, including the study of foods, plain cooking, sewing, laundry, home nursing, sanitation and hygiene, home art and the care of the house. (b) One-year home-makers course, embracing a practical and theoretical work in foods, cookery, household economy, materials for clothing, dressmaking and millinery, laundry, fuels, ventilation, home sanitation, home nursing, hygiene, home art, besides studies in physics, bacteriology, chemistry and biology. (c) Two-year course, which is the continuation of the one-year course, and which comprises more advanced work.

The curriculum provides that all candidates for admission to the Macdonald College must be at least 17 years of age; produce satisfactory evidence as to moral character and physical health, and, in the case of candidates for the course of agriculture, evidence of having worked for a season on a farm in Canada. No examination will be required for short courses, but tests in elementaries will be required for candidates for the two or one-year courses. Tuition is to be free, all that the students will have to pay being a laboratory fee not exceeding \$5, and board not exceeding \$3.50 a week.

The staff of the college will be the following:—

James W. Robertson, LL.D., C.M.C., late Commissioner of Agriculture and Dairying for the Dominion, Principal.

Geo. H. Locke, Ph. D., head of the School of Education.

F. C. Harrison, B.S.A., Professor of bacteriology.

William Lochhead, B.A., M.S., Professor of biology.

Carlton J. Lynde, Ph.D., Professor of Physics.

Leonard S. Klink, B.S.A., W.S., Professor of Cereal Husbandry.

John Brittain, LL.D., Professor of Nature Study.

J. F. Snell, Ph.D., Assistant Professor of Chemistry.

W. Saxby Blair, Assistant Professor of Horticulture.

J. M. Swaine, M.A., Lecturer in Biology.

John Fixter, farm superintendent and instructor in farm machinery.

Fred C. Elford, manager and instructor in poultry department.

Nature Study in Rural Schools

The school children of the present generation in many parts of Canada have a great advantage over their predecessors. From the old grind of books and blackboard and little else, the curriculum of many elementary schools has branched out into manual training and nature study. Teachers in training at many of the Model Schools are afforded opportunity for preparing for this work when they later assume the role of tutor. The pupils of the model school serve to demonstrate the practicability of the theory of nature study, and in this get full benefit of the changed curriculum of the rural school. They are taught something of plant and ani-

mal life, the soil and the physiography of the surrounding country. Some of this work is done in the schoolroom but much more has to be done outside.

As a rule, Friday afternoon is appropriated for excursions into the fields and groves. The pupils of the Ottawa Model School when out on their rounds divide into groups of a dozen or fifteen, each group being in charge of a student teacher who had been taken over the ground the preceding day and given accurate instructions on the work to be done. The work for a recent outing was a careful examination of six species of evergreens and seven species of deciduous trees. The result is that practically every boy in the school knows these thirteen species and can identify them wherever found by bark, leaf, and general habit of growth. They did not learn all this from one lesson but from several.

This work may be extended to any branch of field or woodland life. The wild flowers are always interesting, and so are the grasses or the clovers of a district, and later the plants that may be termed weeds receive their share of attention. A school is fortunate in securing the services of a teacher who has not only received the advantages of a training in nature study, but who by temperament and disposition enjoys the study of plant and animal life. Having this, it becomes the privilege and duty of the pupils and the students to facilitate the study of nature by laying out flower beds and planting trees in the school grounds and by encouraging visits to interesting portions of the farms of the district. On the part of the teacher it requires careful organization and painstaking effort.

S. B.

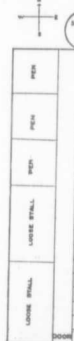
Societies Selected for Crop Competition

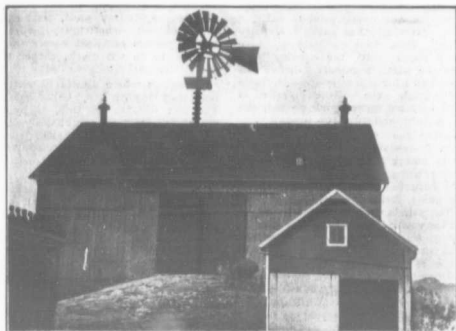
There has been a liberal response from agricultural societies to engage in the field crop competition as announced in last issue. It has been a case of first come first served, and as only ten could receive the grant this year, a great many will have to go without, or take up the work on their own account, as the Superintendent of agricultural societies advised them to do. Should the ten chosen societies receive the grant, they will supply free of charge an expert judge. The societies will also receive credit for the work when the regular government grant is appointed. Supt. White urges societies desiring to take up this work and are too late to take advantage of the regular competition, to endeavor to enlist some public-spirited men in the district in this work.

The following are the ten societies fortunate enough to be chosen for the regular competition: York and Markham; Caledonia; Puslinch; Verulam; Orford; Mt. Forest; Peninsula Centre; South Dorchester; Strong and Lucknow. These societies have the choice of their crops to offer prizes in, and ten farmers must enter into the competition in each case. Markham has selected: goose or Macaroni wheat; Caledonia, oats and peas; Verulam, white oats; Puslinch, white oats and barley; Orford, fall wheat and beans; Peninsula Centre, white oats and barley; South Dorchester, white fall wheat and alsike clover; Mt. Forest, oats and barley; Lucknow, oats and strong oats.



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BARN OF MR. THOS. McDONALD, HURON CO., ONT.

THE FARM

A Good Barn Plan

The accompanying illustrations show the plan and barn of Mr. Thos. McDonald, Huron Co., Ont. The convenience of its construction for feeding and caring for stock will be seen at a glance. A barn of this style say 50 feet or 60 feet by 70 feet, would be hard to equal for a hundred acre farm. The framework of a barn of this style and size calls for the upright purline post, with, in the case of a barn sixty feet wide, the centre purline posts about twenty feet apart, and with smaller purlines between them and the corner posts. In the stable below, the purline supports should stand at the head of the horses on one side and at head of the cattle on the other. In this way they occupy but little room. An important point in the construction of this stable is that no high partitions are used, thus allowing good light. Its handiness for feeding roots, silage, etc., will be seen at a glance. The plan of having the driveways in the barn across the passages in the stable below will also be readily appreciated. This makes the space between the head of the stall and the edge of the trench seven feet at one end and six

and a half feet at the other, so that the stable can accommodate both large and small cattle and with perfect regard to their comfort and cleanliness.

Deep vs. Shallow Cultivation

To prevent the evaporation of soil water is undoubtedly the most important function of cultivation. After rains, if the soil is not stirred, the surface bakes, cracks form and moisture escapes rapidly. Cultivation prevents this and by providing a mulch of loose soil retains the moisture for the use of the plants. The absence of weeds, therefore, is no reason for the abandonment of cultivation.

Deep and shallow culture experiments and the experience of all observant corn-growers who have given the subject attention, indicate that for practically all soils adapted to corn, surface cultivation best serves the requirements of the crop.

Differences of from ten to twenty-five bushels per acre in favor of shallow as against deep culture are not uncommon where the two systems have been thoroughly tested under similar conditions.

Surface culture, which means that the implement used shall not disturb the soil to a greater depth than three or four inches, stirs the soil without pruning or injuring the feeding roots of the plants and by forming the necessary mulch, reduces very materially the evaporation of moisture.

It is not to be understood that deep culture accelerates the evaporation of moisture; on the contrary, it probably conserves as much soil water as the shallow method, but the yields of corn from shallow worked fields are so much greater than those obtained under similar climatic and soil conditions from deeply cultivated fields, that the former method is certainly preferable.

The difference is generally attributed to the fact that deep culture injures the roots of the plants. After the corn has attained a height of eighteen inches or two feet, the soil below the first four inches from the surface contains a network of roots. All these are of vital service to the plants and any implement which cuts close and deep among them decreases

the ability of the plants to obtain food, with the effect of checking their full development.

Flat Sowing versus Drilling for Root Crops

I notice in your issue of May the 15th, an article by Mr. Simpson Rennie on root culture, and am surprised to see that so progressive a farmer as Mr. Rennie should advocate the method he does of growing roots. To my mind, the practice of drilling land for roots is not only valuable time and labor wasted, but is in many cases a positive injury to the crop.

I agree with Mr. Rennie that the best place to grow corn or roots is on a clover soil. It should be plowed early in the fall and kept well cultivated until the ground freezes up. A dressing of manure should be applied after plowing and worked into the soil. For this purpose there is no better instrument than the disc, followed by an acme harrow. In the spring, as early as possible, go on with the disc and work the surface of the soil fine; then roll and sow your mangel seed at the rate of four or five pounds per acre, using the grain drill, keeping the rows thirty-five inches apart. A shoe drill is preferable for this purpose as the hoe drill leaves two deep a furrow. If a hoe drill must be used, run the weeder after it to level the surface. Two or three days after sowing, go over the ground with the weeder, being careful to thoroughly pulverize the surface, and, if possible, go over it a second time just before the plants come up. We use a twelve-foot weeder mounted on wheels and consider it superior to any other as it can be handled better and pressure may be applied where needed. Of course, a man must use his judgment in working the weeder, the idea being to keep the surface of the ground thoroughly pulverized and prevent a crust forming. This will also destroy weeds.

When roots are sown on drills, the weeder cannot be used satisfactorily, as it will pull out too many plants.

Let us just notice some of the reasons Mr. Rennie gives for preferring to sow on drills.

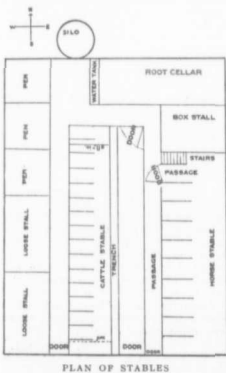
First, it permits earlier cultivation.

Second, it conserves soil moisture.

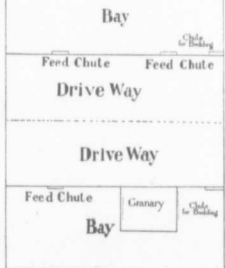
Third, to eradicate weeds.

Fourth, saving of time in hoeing and thinning.

First. This will readily be seen to be a mistake, as with our method



PLAN OF STABLES



PLAN OF BARN

cultivation starts long before the mangels are up.

Second. Mr. Rennie's method of cultivation will, I admit, conserve some soil moisture, but it is not so sure it does not keep in the right place, as there is always a high ridge of earth left just where the mangels are and just where the moisture is most needed, that is apparently in the best possible conditions to dry out and lower the vitality and hardness of the young plants.

Third. Scuffling the drills will kill the weeds between the rows, but these are not the ones that really count. It is the ones in the rows that are the hardest to get at. Try letting the weeder take them out for you—it is surprising how well it can do it.

Fourth. When roots are sown on drills there is always a lot of dirt left by the sculler to be moved and levelled down with the harrow. This is not only a lot of needless work, but it is a positive injury to the plants, as it leaves the roots almost entirely bare, so that it takes them days, sometimes weeks, to get cover, and occasionally they never do so.

It is not necessary or advisable to hoe deeply or to move much dirt when thinning roots. As long as the weeds and superfluous plants are cut below the crown, they will not grow. Scuffle if necessary after thinning, and do not be afraid to use the weeder occasionally until the leaves are quite large.

Use a scuffler with knives that cut shallow until quite late in the season, when it may be desirable to cultivate deeper. The above method of cultivation applies well to corn, only this should be sown forty-two inches apart using plenty of seed to insure an even stand, then thinning to the desired distance in the row.

LORNE FOSTER.

Ontario Co., Ont.

How to get a Sure Stand of Alfalfa

Faillures to successfully grow alfalfa are more often due to insufficient preparation of the soil than to all other causes combined. Experience has shown that the soil must be well drained, rich, well supplied with manure, lime, phosphate and potash. With these necessities supplied, it is not difficult to obtain a stand of alfalfa.

There are just two soil conditions which seem absolute to be met by the plant. The first is a soil constantly wet. It will not succeed where the water is nearer to the surface than six feet, or where water will stand on the ground for over forty-eight hours. This invariably matters it. If water simply flows over the field for a short time during a freshet, alfalfa will not necessarily be injured, if too much mud has not been deposited upon the plants. Even in such cases fields have been saved by disking once or twice, but it is not wise to sow on a field subject to overflow, or one where water rises to the surface in winter or spring, nor on a field so flat that water will not run off in time of heavy rain.

The other kind of soil upon which alfalfa will not grow is that which is too acid. This is a condition to be remedied before sowing the alfalfa by an application of lime to the land at the rate of five hundred to one thousand pounds per acre.

A simple test for acidity is to make a cut in the damp ground with a knife, pressing the earth slightly apart; then push a piece of blue litmus paper into the opening and press the earth together. Leave the paper there for a few hours. If, upon examination, the litmus paper is found to have turned pink or red, the soil is sour and requires lime.

Having the soil in good condition, the seed requires consideration, for alfalfa varies greatly in hardness according to where it is grown. That from Norwegian seed is a rank, coarse, prodigious yielding sort, but not at all hardy in a cold climate. Imported seed may come from Germany and be very good, or it may come from Algeria and be very unsale. The best source of seed for America is the Northwestern States, but they do not produce enough to supply all wants, consequently there is a lot of adulterated stuff upon the market. It is always a good plan to submit a sample of the alfalfa seed about to be purchased to the Seed Commissioner at Ottawa, or the Agricultural College at Guelph, for examination, for there are various weeds introduced with this seed that are difficult to eradicate.

The time at which alfalfa should be sown has been a much argued question. It seems, however, to be of very little importance in itself, success being attained equally in spring, summer or autumn. Other conditions being favorable, in Ontario probably the best time for sowing is June or July. The land should be plowed early, harrowed and allowed to lie until the weeds sprout, then it should be harrowed again. This should be repeated until late in June or some time in July, the weeds being taken to harrow after every rain, so as to conserve the moisture. By July, all the weed seeds near the surface will have sprouted and died. Then the alfalfa may be sown. It is best to do this after a rain, when the soil is moist, then cover with a harrow. No clipping is usually needed, and a strong stand is almost certain if the land is inoculated with the necessary bacteria.

Experienced men differ as to whether it is better to sow alfalfa broadcast or to drill it in. It would seem, however, that, given a soil in good condition and properly adjusted, there will be a more even and hence a more economical distribution and a better and more uniform covering of the seed. It is claimed that by the use of the drill, five pounds of seed per acre can be saved by a common method when using the drill, is to mix an equal quantity of wheat bran with the seed, thereby ensuring even distribution and a not too excessive seeding. The quantity of seed to be sown may depend upon a variety of circumstances, such as the germinating quality of the seed, condition of the soil, the weather at the time of sowing and the bacterial life present.

With land prepared by sowing a few pounds of seed six months or more beforehand, so as to induce the development of bacteria, careful soil preparation, normal moisture and clean seed, testing ninety per cent. germinable, there should be no need for more than ten pounds to the acre. The disking that the field ought to have later, will split the crowns and many new stalks will be sent up; so that in a few years a square foot of surface will not accommodate more than six to ten robust plants, and having these, the ideal stand has just

about been attained. In any event, if the seed be strictly good, well cleaned, and all conditions favorable, twelve pounds of seed would in all probability be too much, rather than too little.

In regions where alfalfa is new, the land may require to be inoculated. The best way to do this, is by the use of soil from an established alfalfa field, or it may be taken from a patch of sweet clover (*melilotus*). The same bacteria inhabit each of these plants.

It does not matter how much soil is used, so that it is made fine, scattered over the field and harrowed in before the action of the sun destroys the germs. As little as two hundred pounds will inoculate an acre and a ton may be used with better results. Distribution is the main thing. After inoculation is established, its effects exist for a long time even if the alfalfa is plowed under and other crops have been grown. Thus it is always easier to get a stand the second time and a stronger growth is usual from it.

Prof. Harcourt on Testing Soils

Editor of The Farming World.—In your issue of May 15th I noticed a reference to the need of some simple way of determining the deficiencies in soils.

In the past, barnyard manure has been about the only plant food directly supplied to the soil, and it is quite possible that it supplies one or more constituents of the soil may have been used up to such an extent that there is not sufficient of these in the barnyard manure to supply the needs of the crop. In my own hand, it is equally possible that either the growing of clovers, which gather large quantities of nitrogen from the atmosphere, or the keeping of a large amount of stock on the farm has so enriched the soil in nitrogen that it is present in an undue proportion. We do know that on many farms oats lodge badly. It would seem that those constituents which force leaf and stem growth are in abundance in the soil, and those which have to do with the production of the seed are deficient. Unfortunately there is no reliable or rapid method for determining the amount of available plant food in the soil. We can readily determine whether there is sufficient of the various constituents of the soil to produce crops, but the difficulty is that no really satisfactory method has been devised for determining the amount of plant food that is available to the crop. I think this is generally recognized that we have at present no better method of detecting the deficiencies of the soil than by noting the nature of the growth.

For two years now we have at the Ontario Agricultural College been conducting co-operative experiments with fertilizers to see if we can supply in proper proportions the constituents which are lacking in soils upon which the grain lodges badly. So far we have not obtained entirely satisfactory results, but we hope when this season's returns are in that we shall be in a position to give some definite advice as to the treatment of this class of soil. In the meantime we shall be glad to hear from farmers who have had difficulties with this or any other class of soils.

R. Harcourt.

O. A. C., Guelph.

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LIVE STOCK

The Hackney Horse

The Hackney horse and types closely akin will be much to the fore this year. The International Horse Show to be held at Olympia, London, at the beginning of June next will be attended by horse owners and breeders from all parts of the world. The Hackney will, of course, not be the only type on exhibition, but it will certainly be much to the fore, being, as it is, the carriage horse par excellence of the day.

An inquiry into the history and development of the Hackney, takes one back to about 1750 and shows us how the Hackney has issued from the same source as the English Thoroughbred and the American trotter. In the year 1735, a horse called Shales was foaled, and to this horse all the best Hackney stock traces back. Shales was out of a Hackney type of mare by a horse called Blaze. Blaze was by Flying Childers and Flying Childers was by the Darley Arabian, a wonderful sire bred in Palmyra and imported into England in 1706. Blaze was a Thoroughbred as far as Thoroughbreds went in those days, and having got Shales, alluded to above, he also got a horse called Sampson, to which Mambrino, the racer and trotter, and his son, Messenger, the ancestor of American trotters, also trace back. Messenger was exported to America in 1788, and he was responsible on the sire's side for Hambletonian, the father of the modern American trotter.

Thus it is that the Thoroughbred horse, Blaze, was the sire of both the Hackney and the trotting breeds of horses, and that as he traced back through Flying Childers to the Darley Arabian, it follows that all three breeds sprang from the same source.

The Norfolk trotter or roadster, as it was then called, was supposed to owe much of its good qualities to infusions of Dutch blood, stallions being imported from Holland in considerable numbers at a time when that country was noted for a breed of trotting horses. As time went on, the Norfolk trotter was subject to frequent crossings of Thoroughbred blood on the mares' side, in order to fine down the breed and bring them more into keeping with modern requirements.

The demand of fashion to supply stylish, thick-set, high-actioned horses, suitable for park work, soon became conspicuous and efforts were directed upon these Hackney horses to satisfy this desire with the result that we have these characteristics deeply inherent in the true Hackney of to-day. Color did not seem to play a very important place in the establishment of the breed and horses of all colors were and still are to be found, breeders taking full advantage of the axiom that "a good horse is never of a bad color." It is noticeable that a great many of the best horses of the breed were chestnuts. Efforts have, however, of late years favored the production of the popular bay.

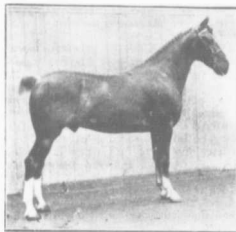
A good deal of misconception exists in connection with the word "Hackney." The popular acceptance of the word is a riding horse, but if we turn to a dictionary we find a Hackney means a "horse for riding and driving," that is, a saddle and harness horse—a dual purpose animal.

If we criticise closely the points of

the Hackney, we shall see that the blending of speed and draught has been uniquely fixed. We see that the fine intelligent head of the Thoroughbred has been maintained. While the neck has been slightly shortened and thickened, with an increased crest, sufficient length has been left to ensure good character and a fair amount of speed and the flexibility of that part has been fairly intact. The high withers and sloping shoulders of the racer remain, the shoulders and breast having been thickened in proportion to the amount of harness work he has been called upon to perform.

Generally we have a confirmation in the Hackney breed which fills the eye of even the most casual observer. A short, thick, rectangular form of body set upon short, well-shaped legs; in fine, a horse that is fit to ride and drive anywhere.

A. W. S.



A FIRST PRIZE ENGLISH HACKNEY GELDING

Register Your Clydesdales

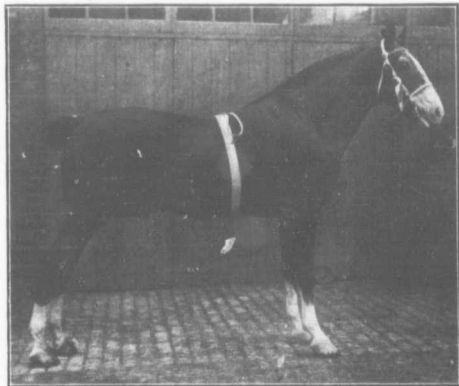
At the special meeting of the Clydesdale Horse Association of Canada on May 23rd, the following amendment to the first rule governing registration was unanimously adopted. It was moved by Wm. Smith, Columbus, seconded by John Bright, Myrtle, that

the rules of the Clydesdale Horse Association of Canada be amended to read:

"Imported Clydesdale males and females, recorded and bearing registration numbers in the Clydesdale Stud Book of Great Britain and Ireland, and whose dams and sires, together with their dams and sires, are also recorded and bear registration numbers in such stud books, shall be accepted for registration in the Clydesdale Stud Book of Canada, and this amendment shall come into force on the first day of July, 1907."

This amendment, which is somewhat farther reaching than the interpretation applied to the one passed by the Board of Directors at their meeting on April 3rd last, clearly states what is intended by the Clydesdale Association, and that is the complete exclusion of the importation of the short-pedigreed filly. The negligence of the Scottish breeder in regard to the registration of his stocks for a long time has made it difficult for the Canadian importer to assure himself of the breeding of the animals he wants. While it is true that the Scottish stud books are not truly representative of the Clydesdale breed in Scotland, it is also true that the Canadian stud books have not been representative of the true situation here. But a better state of things may now be looked for. The Canadian Association is at last alive to the real state of the case, and is determined that Canada's standard, as well as Canada's Clydesdales, shall be of the highest order possible.

Many imported fillies now in Canada cannot record under the new rules after July 1st, 1907. In fact, none of the fillies brought over during the past three years will be eligible, as this would require that they bear registration numbers in the Scottish Stud Book, and these are not accorded to fillies, nor to any female until she has produced a foal. Neither is it accorded to any stallion until two years of age. The owners of such should attend to the matter at once. Many stallions standing for service in Canada have never been recorded. A number of importers have been in the habit of selling to breeders on the export certificate. If asked for the Canadian registration



ROSADOR, 15 YEARS OLD—ONE OF THE MOST REMARKABLE HACKNEY STALLIONS EVER FOALD



KELVIN, WINNER OF THE KING'S PLATE

T. Ambrose Wood, owner, at head; his trainer with blanket over shoulder, with jockey Foley up.

papers, they reply: "The Scotch papers are as good as the Canadian; the first man that wants to record a colt from him will have to do it, and no one may ever do it anyway."

After July first, all applications for the registration of four cross fillies whose ancestors may happen to come under this list will have to be considered by the Executive of the Association, who may or may not decide to grant registration to the animal. The importance of attending to these matters is therefore too great to be overlooked.

The King's Plate

On the 18th of May, the 48th race for the King's Plate was run at the Woodbine and was won by Kelvin, a three-year-old colt, owned by Mr. T. A. Wood, of Toronto, and bred by Mr. Hendrie, of Hamilton.

His extended pedigree reads:— Kelvin, br. c., 3, by Martinmas-Nancy Lee; T. Ambrose Woods, owner; Chas. Phair, trainer; Valley Farm, breeder.

KELVIN, br. c., 1904 Nancy Lee Martinmas Bonnie Bird, Strawberry Higgonet, Canadian	Hermit.....	Newminster Steeleson
	Puce.....	Maryvas Vesuvienne
	Bramble.....	Bonnie Scotland (by Lee)
	Robinet.....	Brown Dick Valencia
	Glengel.....	Ciadel
	La Polka.....	Lexington Dance
	Judge Curtis.....	Lexington Lilla
	Bonnie Braes.....	Starbrowne Pasta

*Imported.

The victory of this horse was somewhat of a surprise to the knowing fraternity, who are in the habit of placing more faith upon ownership and trials than upon breeding. Had they studied Kelvin's pedigree, they should have seen that he was a factor to be reckoned with, and that by reason of his descent he inherited the qualities of some of the best thoroughbreds Canada has ever produced,

and, as every breeder knows, "blood will tell" when the real test is made.

On his dam's side Kelvin represents the old-fashioned Canadian line of Bonnie Braes, who gave to the turf, through Bonnie Vic, horses that bulk largely in the history of the King's Plate, including as they do Bonnie Ino, Victorious, Bon Ino, Harako and Inferno.

While Bonnie Bird was a fine race mare, and Bonnie Vic was a failure on the turf, those conditions were reversed in their breeding careers, Bonnie Vic being the practical foundation of the success of Mr. Seagram's Waterloo stud. Yet it was because of Bonnie Bird in the pedigree of Kelvin that the colt came into his present ownership. Bonnie Bird, granddam of Kelvin, won the plate in 1880, and Bonnie Duke, full brother of Bonnie Bird, repeated the victory in 1887.

Experiments in Feeding Range Steers

A great deal has been said and written about finishing range steers in Manitoba for the British market, and from year to year experiments have been tried with more or less success. The past winter was admittedly the coldest the West has known for 25 years, so that any experiment of feeding in the open that has been successful last winter, establishes the possibility of success for all time. Mr. John L. Cook, of Newdale, on the Manitoba Northwestern line of the Canadian Pacific, has been finishing steers for the past few years with conspicuous success.

Last fall he brought down from Churchbridge, which is 112 miles west on the same line of road, 90 selected three-year-old steers, and put them into his feeding lot, which is fully a mile from any building. The lot contains some fifty acres and is on the side of a hill, and has here and there little bluffs of scrub poplar and willow. At the foot of the hill is an unfailing spring of water which has never been known to freeze in the coldest weather, and where the steers have been able to go and drink whenever they felt like it. Here and there in the shelter of bluffs are troughs

with rock salt. At other points are rough wooden troughs, raised about three feet from the ground to prevent snow getting in, in which the grain ration is fed.

The entire ration fed during the winter was oat straw six days a week, hay on Sundays, and a grain ration of barley chop and bran up to May first, when a small quantity of low grade flour was added. The amount of grain fed at first was very small but has gradually been increased until now each steer gets 8 pounds per day. Seen on the 30th of April, these steers were a fine, thrifty lot, with long silky hair and sleek sides, and will certainly average 1,400 pounds apiece on June first, at which date they are to be shipped, having already been contracted for at 5 1-2c. per pound at their own station.

All the meal for these steers has been carefully weighed and an exact record kept, so that Mr. Cook knows to a fraction what each steer has cost him. The oat straw would have been waste if not fed in this way. An abundance was hauled to the lot each day so the steers would have all they wanted to eat and plenty for bedding. The object in view was that on Sunday was not only to vary the ration but to save work as one load of hay would do in lieu of three loads of straw. It is understood there is a net profit on these steers of 1 1-2c. per pound.

It may be thought by some that Mr. Cook has almost ideal natural conditions for feeding cattle in this way, and that without these conditions it would not be wise to attempt it, but these conditions, though desirable, are not essential, as a neighbor of Mr. Cook's, J. M. Young, has fed a bunch of steers in his own barnyard, which has a high shelter fence on the north and west, but no sheds. These steers have been fed precisely the same ration as the others and look equally thrifty, though never once under cover all winter. Mr. Young has to pump water for his stock, but they always have an abundant supply.

The reason why these men have fed such small bunches is because they did not want to keep more than enough to consume the roughage of their own farms.

To Determine the Age of Sheep

The sheep, like the ox, has a set of deciduous or milk teeth, which in the course of time, are worn and replaced by a new and permanent set. It has no canine teeth. There is a considerable space of the jaw which is destitute of teeth, that is, between the front or incisors and the molars or grinders. There are thirty-two teeth in all, the same as in the ox tribe, and all are placed on the lower jaw.

The age of sheep is generally determined by examination of the front teeth, or incisors. There are eight of these, and the permanent ones appear in regular order in supplanting the milk teeth, which can always be distinguished from the permanent ones by the fact that they are narrower. The permanent incisors are broad and widened considerably towards the top. Henry Stewart, author of "The Domestic Sheep," gives the following ages for replacement of the various pairs of the front teeth: One and a half years; two and a half years; three and a half years; four and a half years. He says further: "After the fifth year the sheep is known as to its age by the full mouth, and as

the age of the teeth, a sire gets a poor pair quickly w that they as to find age. This count, an other resp however, practically favorite of that a she age is any purchasers be able to the point.

John A. placement book, "Ju "The first appear who one year e each side i the followi sheep is a pair appear over three pair when years old, tier of inci indicates four and fi

But in 1 must allow dividua w well matur to show a as early as Condition while it is natural cha either mak rapidly that tarked as is or lambs fe sometimes o that the sh is. The she be nearly n than commo advanced in the rest of that have b show yearli yet twelve i sometimes y will show " is due to th led heavily as well mat



CARING FOR THE WEAK ONES

the age increases by the wearing of the teeth. But this is not altogether a sure guide, for a flock pasturing on a poor pasture or sandy soil will so quickly wear down its cutting teeth that they will appear to be so blunt as to indicate a greater than the true age. This is to be taken into account, and the general appearance in other respects must be considered. It, however, is not of much importance practically, for except it be some favorite or prolific ewe, it is rarely that a sheep is kept so long that its age is any objection. Shepherds and purchasers of sheep, however, should be able to ascertain the age up to the point of maturity."

John A. Craig, speaking of the replacement of the front teeth, in his book, "Judging Live Stock," says: "The first or central pair of incisors appear when the sheep is slightly over one year old. The next pair, one on each side of the central pair, appear the following year, that is when the sheep is two years old; the third pair appear when the sheep is slightly over three years old, and the fourth pair when it is between four and five years old. This completes the number of incisors, and a full set always indicates that the sheep is between four and five years old."

But in matters of this kind, we must always expect to find some individual variation, and a very early, well matured yearling might chance to show a two-year-old month even as early as the middle of November. Conditions surrounding the sheep while it is young will make some unnatural changes in the teeth oftentimes either making them develop more rapidly than usual or they may be retarded in growth. Heavy feeding, such as is the case with show sheep or lambs fed for the market, will sometimes cause the teeth to indicate that the sheep is older than it really is. The sheep in such a case would be nearly matured at an earlier date than common, and the teeth would be advanced in growth in accordance with the rest of the body. Early lambs that have been "pushed" will oftentimes show yearling teeth when they are not yet twelve months old. English sheep sometimes when eighteen months old will show "two-year-old teeth." This is due to the fact that they have been fed heavily since birth and are really as well matured as two-year-old sheep

under ordinary conditions. However, the rule given is a good one and can, in most cases, be relied upon. After a sheep is four or five years old, it becomes difficult to tell its exact age. Some teeth will wear shorter with age, and especially is this true with sheep that have run on sandy pastures. Others will still keep their length, but will grow apart. Age makes irregularity in the mouth, and after five years the age has to be reckoned by the wear of the teeth."

Raising Young Pigs by Hand

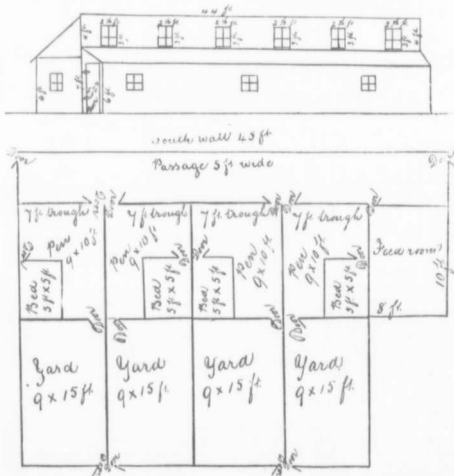
In reply to an inquiry in your issue of May 15, re raising young pigs by hand, I might say that I have had fairly good success by placing an ordinary baby nipple on a small bottle. Dilute cows milk with water half and

half, heat this to blood heat (98 degrees), and for the first two or three days after the pigs are born they will take what they will require from the bottle about every two or three hours during the day, but if fed at bed time they will do very well till early morning. Once each day add 5 or 6 drops of castor oil to the milk—give them a very warm dry place to sleep. At less than a week old the pigs will be strong enough to drink from a flat dish or pie plate, and at two weeks you may begin to feed skim milk gradually, and to desist giving the castor oil. The vessels used for feeding very young pigs must be carefully scalded and dried, as everything sour will be quickly followed by fatal results. F. W. S.

A Farmer's Hog Pen

With present prices of building material and labor at a high level, the erection of suitable houses for hogs requires more consideration than it otherwise would. I notice that some writers warn farmers to avoid too large and expensive hog-houses; others go so far as to say that best results are obtained without a separate building for hogs; fix them up in any temporary "shack" and bring the sows into a box stall in the cow-stable to farrow. While I agree with the former idea, I entirely disagree with the latter one. For many years I was obliged to put up with make shift shacks and temporary structures, often running great risks, at the mercy of the weather, which sometimes was favorable and sometimes not. During the past four years I have had experience with a fairly up-to-date hog pen with accommodation for handling fifteen breeding sows and litters, and I would by all means advise farmers to construct for their hogs a separate building, not necessarily elaborate nor costly, but one that will best serve and meet their requirements, and they will find it will soon pay for itself in the saving of

(Continued on page 538)



VIEW AND GROUND FLOOR PLAN OF FARMER'S HOG PEN. (SEE ARTICLE)

THE DAIRY

The Whole-Milk Creamery

In the development of the creamery method of making butter, two systems have been involved. These are the whole-milk and creamery and the skim-milk creamery. At the former the whole milk is delivered, the same as to the cheese factory, and the skim-milk returned to the patron. At the latter only the cream is delivered. These two systems have their advocates, and there is more or less rivalry between them.

The whole-milk system was the original plan for operating a creamery, and is still recognized by many, and especially exporters, as the only one that should be followed in making butter for the English market. It is claimed that by delivering the whole milk, the maker has control of the conditions governing the ripening of the cream and is thus able to make a better quality of butter than if he received the cream only. To a very large extent this is true. If the milk is delivered in good condition there is nothing to prevent a fine quality of product from being made, providing the maker understands his business and has the necessary equipment for the work.

The only drawback to the whole-milk system is the extra cost of manufacture as compared with the cream-gathering plan. Where milk has to be hauled several miles to a factory, the cost to the producer is no small amount, especially in these days of scarcity of help. To employ a man and team half a day, and he will have to begin early at that, to haul the milk of a dozen patrons six or seven miles to a creamery. Excepting, perhaps, the cost of wintering or late fall, this will have to be done every day, thus adding very materially to the cost. Then there is the skim-milk to be returned. Its value for food for young stock will depend very largely upon its being fed sweet.

Of late years more attention has been given to preserving the skim-milk sweet for return to the patron. But it was not always so. One of the grievances which farmers have had against the whole-milk creamery is that this valuable by-product was never properly cared for and when received at home was not worth anything more than whey for stock feeding. Because of this, the patron of the whole-milk creamery was placed at a disadvantage as compared with the cheese factory plan, where he received a great cash return for his milk and the former was not able to make up the difference by the increased value of the skim-milk over the whey for feeding purposes, as should have been the case. But, as we have already stated, better appliances at the creameries of late years for handling the skim-milk have enabled it to be delivered to the farmer in a sweet condition. He is still, however, at a disadvantage as compared with the cheese factory patron, other conditions being equal, and the whole-milk creamery has not been able to hold its own against the cheese factory as a revenue-producer for the dairy farmer.

The whole-milk creamery plan is the one chiefly followed in Quebec, although there are signs that it is being gradually replaced by the cream-gathering plan. To the credit of our Quebec friends, be it said, that

they produce the best quality of butter made in Canada to-day. Whether this can be ascribed wholly to the use of the whole-milk system, as many claim, is hard to say. Perhaps the rich pasture lands and pure water of the Eastern Townships have something to do with it. But we have no desire to belittle the system. It most certainly is one that, if properly managed and if the patrons are willing to pay for the cost of hauling the whole milk, is splendidly adapted for making good butter, and it is possible that, taking everything into consideration, a more uniform quality of product can be made than if the maker received only the cream and is not able to control all the conditions governing its ripening. But, allowing this to be true, and that the patron of the cream-gathering creamery because of it has to take a lower price for his butter, it does not necessarily follow that the whole-milk plan is the best one for the farmer to adopt. The saving in hauling by delivering cream instead of milk and having the skim-milk at home sweet for young stock, much more than makes up for the extra price. This, however, is a story that will have to be told in our next issue.

The Cheese and Bacon Combination

It is a remarkable fact that while hog raising and dairying constitute an excellent combination, each assisting the other in making profit, it is not the dairying counties that produce the greatest number of hogs per farm. This is true over the Province of Ontario, and Quebec, which is first in all a dairying country, there are hardly enough hogs raised for local consumption. The situation is difficult to explain, unless meat raising and dairying are looked upon as separate and distinct branches of agriculture.

Sections of Western Ontario have gone beyond this stage of belief and practice, for we find in the Counties of Oxford, Perth and other the output of cheese and hogs correspondingly large. Farmers have found that whey has a feeding value for swine, and that swine raised largely upon it, suit the packers and make good profits for their feeders. In many sections, more particularly in Eastern Ontario, only about one hog per cow is raised, while tons upon tons of whey are allowed to run off in the gutters during the summer, polluting the atmosphere and in many cases the water supply. The reason given in these sections is that no raising more hogs is that they do not pay. The prevailing idea seems to be that hogs must be kept housed and fed largely on grain. Under these conditions it would be difficult to make a profit, even though the price of live hogs should reach nine or ten dollars per cwt.

The value set upon whey for hog feeding varies very considerably. Prof. Day places it at about four cents per cwt., while many factory patrons in the Ingersoll district say that the whey from 100 lbs. of milk is worth ten cents. No doubt this is a high valuation, but much depends upon the conditions of the whey and the method of feeding it.

The holding of whey presents one or two difficulties that call for judgment in overcoming them. Many cheese makers object to having whey return-

ed to the farms in the milk cans, on account of the danger of imparting an objectionable flavor to the milk brought to the factory in them. To avoid this many of the best factories purchase young hogs to feed but keep them at sufficient distance to guard against the effects of evil odors. Hogs are taken in weighing from 75 to 100 lbs., and by feeding whey and a comparatively small quantity of grain they are soon made ready for the packers.

They in all cases should be fed sweet, according to the experience of these factory feeders, and it is preferable to feed it warm. As a rule, the hogs receive one feed each day of whey alone, and two feeds of grain mixed with whey. A hundred-pound hog will make profitable use of about 25 lbs. of whey per day. In the early stages of feeding the hogs receive from 1 1/2 to 2 lbs. of mixed corn, bran, or low grade flour, per day, until they are approaching maturity, when when the grain ration is increased to about 3 lbs. per day. Less whey is then necessary or desired by the hogs.

Where the whey is returned to the farmer it is of great importance that the danger of contaminating the milk supply be guarded against, either by using separate cans or, failing that, to have the whey emptied from the cans immediately upon its arrival home, and the cans thoroughly washed and aired in readiness for the next supply of milk.

Many very successful hog raisers keep their shoats on clover or other pasture in summer, supplementing this with whey, upon which they grow and thrive well until it is time to finish with corn. In this section commenced and increased as judgment dictates, until the hogs are sold.

A very satisfactory method of feeding whey to hogs is to soak shorts or finely ground clover in it and feed three times a day. Shorts form the best grain part of the ration until the hogs weigh about 80 lbs., after that ground barley, corn and clover with the shorts of the hogs reduced, answers well. Many hundred-acre dairy farmers in the County of Oxford, Ont., sell from \$500 to \$800 worth of hogs annually and purchase comparatively little grain. These farmers sell practically no grain, except, perhaps, a little fall wheat; their land is becoming more productive year by year, which enables them to keep more cows and feed them better, and in this way secure an increasing revenue from their farms. Farmers who patronize a creamery or cheese factory at a large amount of profit to slip past them year by year.

S. B.

Cheese Make falls off One-third

Up to a week ago, farmers, with few exceptions, were feeding their cows, and as the stock of fodder was low in many places, the ration fed was by no means sufficient to maintain the milk flow up to the usual standard of this season. This is shown by the make of cheese and butter, which is about one-third what it was a year ago at this time. Prices for both products are higher than they have been in many months and it looks as if dairymen could have another good season so far as the value of the products is concerned.

In spite of these high prices, however, there are many farmers who have been compelled to sell their feeding cows owing to the scarcity of help. There are others, tempted by

the high price of milk to keep up their creamery. The milk price recently occurred gave up attention to which can be put to expenditure once there is any bring price again. We feature also it were, it prices at a number many who are to sta-

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Soaking about 5 per method some mission ho- tubs be boll- be rubbed of- ing.

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the high values, who are endeavoring to keep up the milk supply as best they can. Should a serious drop in price occur, these will be the first to give up dairying and turn their attention to some other line of farming in which the work is not so exacting and can be performed with less expenditure for hired help. This will at once tend to decrease the output and bring prices back to a higher level again. We have, therefore, in this feature alone a sort of barometer. It is true, that will help to maintain prices at a profitable basis. But they must remain at a pretty high level if many who are now in the business are to stay in it.

Putting Cows on Grass

The supply of fodder has been insufficient in many places, and consequently, many cows will be put out on grass in poor condition. Precautions, therefore, should be taken that when put out to grass they will not over-eat themselves. They should be turned out gradually, only a few hours at a time, and bring them in a few hours before milking. Keep this up for a few days till the cows become accustomed to the change, when they may be left to hustle all day, providing the pastures furnish a sufficient supply of food. Until the grass has some body in it, it may be necessary to keep up the fodder ration or the milk flow will fall away considerably.

Preventing Mould in Butter Tubs

The growth of mould in the tub may be prevented more or less successfully (1) by steaming the tubs in a dry place, (2) by storing the butter at a temperature below the growth point (this varies very much), (3) by treating the tubs in some way to destroy the mould and its spores, or (4) by treating the tubs in some preparation on which mould cannot grow.

The tubs may come to the butter-maker badly infected, or he may not have at his command suitable storage. Few creameries have refrigerators holding a temperature low enough to inhibit the growth of mould if other conditions are favorable. The buttermaker is therefore frequently forced to resort to the third method.

The method of steaming the tubs is often used to destroy mould, but this has not been very effective. It is difficult to heat the tub thoroughly by a steam jet, and the sudden swelling of the tub frequently breaks the hoops.

Soaking in a solution containing about 5 per cent. of formaldehyde is a method sometimes used, and one commission house recommends that the tubs be boiled in brine and that salt be rubbed on the inside before packing.

A few of the larger factories have recently begun coating the inside of the tubs and boxes with paraffin. This not only destroys the mould already present but gives a surface on which mould will not grow.—Bulletin 89, Bureau of Animal Husbandry, Washington, D.C.

A City's Milk Supply

"A safer milk supply" is the slogan of every progressive city. Toronto and Montreal have for a number of years been able to secure approved milk from healthy, well-kept herds.

Ottawa recently had its milk source investigated, with the result that special officers are to be appointed to keep an eye on the farms and herds supplying milk to the city and to see that the fluid itself is handled in accordance with modern ideas as to sanitation on the farms and while in the hands of vendors. New York city has recently taken a forward step towards the safeguarding of the health of its people so far as their milk supply is concerned. Mayor George B. McClellan has selected five experts and charged them with the duty of recommending plans for the protection of the public, and especially the babies, from infected milk.

The commission consists of Prof. Abraham Jacobi, the famous American authority on the hygienic care of infants; Dr. Joseph D. Bryant, former president of the Academy of Medicine; Dr. Mitchell Prudden, bacteriologist; Dr. Rowland G. Freeman, milk expert, and Dr. L. Emmett Holt, specialist in infants' diseases.

This step is the outgrowth of the demonstration afforded by the pasteurized milk depots established in 1893 by Nathan Strauss, the philanthropist.

With the expanding of the work of this charity and the consequent wider use of pasteurized milk by infants, the death rate of children under five years of age fell from 96.2 to the thousand in 1892 to 55 to the thousand in 1905, and the summer mortality of children, which was at the rate of 136.1 per 1,000 per annum in 1892, was at the rate of only 62.7 per 1,000 per annum last summer. This was equivalent to a saving of the lives of 17,635 children last year.

Two bills touching the treatment of milk sold in New York city have recently been framed. One of these, introduced in the State Legislature, provides for the pasteurization of the milk supply by the city. The other measure is before the City Board of Aldermen. It requires the pasteurization of all milk that cannot be certified as having less than 50,000 bacteria to the cubic centimeter, and

as coming from herds tested with tuberculosis and proved free from tuberculosis.

So thoroughly aroused is the New York public that it now seems cer-

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 caseins—the casein particles—forming a spidery web all through the milk. You'll see this web growing thicker and thicker until it forms a solid curd. How can you expect all the cream to rise through that? It can't. This



casein 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 10,000 times more skimming force than pans or cans, and cost 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. The Tubular is positively certain to greatly increase your dairy profits, so write at once for catalog I-20, and our valuable free book, "Business Dairying."

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This man made
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\$832.50 a year is big profit from 7 cows. Almost \$120 a year per cow on an average. More than many dairymen make on their whole herd. This man's own story, telling just how he did it,—and is doing it today,—makes mighty interesting reading. In it he gives valuable advice regarding selection of stock, feeding, handling of product, etc. Every line is chuck full of interesting, practical, money-making pointers to dairymen.

Every one milking cows should read it. If you write today, asking for "Profit Booklet No. 110", you will get a copy FREE, by addressing—

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This free booklet



tells how

tain that a large part of the city's milk supply will shortly be properly pasteurized, and that only such portion as can be certified to be safe and free from infection will be allowed to be sold raw. S. B.

Denmark to Ship Milk to Britain

A few weeks ago, when the trouble was on between the producer and the retailer, milk was brought into Toronto by train 100 miles or more, an achievement that caused no little surprise to many people. But what will these people think of the proposal to ship fresh milk from Denmark to England. A Dane, Professor Duddle, has recently patented a means for preserving milk, known as the hydrogen-peroxide system. By this system he claims that milk can be kept sweet for a number of days, and as it only requires at most five days to put Danish milk on the British market, the proposal to ship milk from that country seems quite feasible.

The first point of attack of the Danish milk shipper is Edinburgh. A citizen of that town states that he recently tasted milk produced in Denmark on Thursday and sold in Edinburgh on the following Tuesday that was quite sweet and palatable.

The venture is causing no little alarm among the dairymen of England and Scotland. Should such milk be put upon the market in quantity and sold in sealed cans, free from contamination, it will prove a most formidable competitor to the home product. The home producer will have to meet it by producing milk under conditions more favorable to health than the foreigner can possibly do.

It is worth noting that the city milk trade is the only one that the British dairymen has for a number of years had wholly to himself. Canada has captured a large share of the cheese trade. Denmark and other countries are shipping in tons of butter every week and it now looks as if the energetic Dane was out after the fresh-milk trade of Britain, thus endeavoring to wrest from the home

producer the only remaining branch of dairying peculiarly his own.

Cow-Testing Association

Over fifty testing associations, mostly in Ontario and Quebec, will be in operation this year under the direct charge of the Dairy and Cold Storage Commissioner, Ottawa. About eight thousand individual cows are under regular test, the milk being weighed every tenth day, and the composite samples tested every month. Reports are sent monthly to each farmer detailing the total estimated yield of milk and butter-fat of each cow whose milk he has weighed and sampled, whether he sends records from five or fifty cows.

At the Spring Creek Association, near Woodstock, Ont., for the 30 days ending 11 April, 75 cows were tested, averaging 688 lbs. milk, testing 3.7 per cent. fat. The lowest yield was 235 lbs. milk and the highest 1,460 lbs., testing 3.0.

Dixville, Que., for month ending April 20, had an average from 116 cows of 572 lbs. milk, testing 3.7, the highest yield of any cow being 750 lbs., testing 2.2. At North Oxford, Ont., 106 cows gave an average yield of 726 lbs., testing 3.2, the most from any single cow being 1,725 lbs., testing 3.5. This cow a two-year-old gave over ten thousand pounds in twelve months.

St. Prosper, Que., had only 22 cows for the first period ending 26th April, with an average of 351 lbs. milk testing 3.5. The number of cows will be largely increased next month.

The first test at Keene, Ont., for the thirty days ending 25th April showed an average from 46 cows of 629 lbs. milk, testing 3.0. The lowest yield was 209 lbs. and the highest 1,120, testing 3.4.

The members of the Association at East and West Oxford sent in records from 104 cows, average 599 lbs., testing 3.3. The best individual cow here gave 1,560 lbs., testing 3.7. One good herd record shows an average from 11 cows of 1,124 lbs. milk, testing 3.1, or 35.7 lbs. of fat each.

Dairy Notes

The National Dairy Show of the United States will be held in the International Live Stock Exposition Building, Union Stock Yards, Chicago, on October 10-19, 1907. The National Corn Exposition will be held at the same time. E. Suiendori, Secretary National Dairy Show, 154 Washington St., Chicago.

The arbitrators in the milk dispute between the Toronto Milk Producers and Retailers Associations have given their award, and the price of milk to the producer for the next six months will be \$1.23 per eight gallon can, delivered in Toronto, or \$1.08 at the farmer's gate. This is not as much as the producers asked for and the award will be unsatisfactory on that account.

The Eastern Townships Dairymen's Exchange at Cowansville, Que., a week ago, passed a resolution not to ship any cheese from their factories under ten days old. Their action is to be commended.

A deputation from the Western Dairymen's Association waited upon the Minister of Agriculture this week and asked that the testing of milk and the prosecutions be conducted by the inspectors solely instead of the responsibility for prosecutions resting upon the factorymen as at present. This did not seem to meet with the approval of the Minister, and probably some arrangement will be come to whereby the dairy associations will appoint officials, whose duty it will be to test milk and prosecute delinquents.

A meeting of representatives from the organizations interested was held in Toronto on Tuesday last when it was decided to hold a National Dairy Show in the St. Lawrence Arena, Toronto, during the last week of January, 1908. About \$6,000 is required to conduct the show, over one-half of which has been promised.

EASY TO OPERATE EASY TO CLEAN

THESE are two things it pays to watch out for when you buy a cream separator.

L. H. C. CREAM HARVESTERS are of simple construction; are very easily operated and easy to clean.

Notice the natural and easy position of the operator in the illustration. The handle is placed at just the right height to turn easily. No high reaching or stooping over. The machine is also geared just right to make it run easily.

Another important feature is the low supply can,—one that is filled easily and yet the milk and cream spouts are high enough to make possible the use of large receiving vessels. The skimmed milk will flow directly into a ten-gallon milk can.

In many separators, either the supply can is high or the milk and cream spouts are low.

And because of their simple construction, **L. H. C. CREAM HARVESTERS** are easily cleaned. All that is needed is a pail of hot water and the two brushes which go with the machine.

These are but two of the good points of the **L. H. C. CREAM HARVESTERS**, and before you buy a cream separator, you will do well to know all about them.

They skim close under all conditions, whether the milk is warm, cold, rich, viscid or old—they get all the cream down

to a thousandth part.

They are made so strong and simple that in years of operation, they show no perceptible wear. We have given them a practical test that equals several years' wear in the dairy. Every machine is tested before it leaves the factory.

The working parts are self-oiling, and neatly housed to prevent accident; yet all are readily accessible, which makes them easy to keep clean.

L. H. C. CREAM HARVESTERS are made in two styles, and various sizes;

Dairymaid, a chain drive separator, and **Bluebell**, a gear drive separator.

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POULTRY

Raising Brooder Chicks

An abundance of exercise is necessary to the health and development of the chickens, without which the best results can never be achieved. Until the introduction of the dry system of feeding, one of the greatest difficulties in artificial rearing was to persuade the chickens to take exercise; they were so liable to merely stand about all day long, taking no exercise whatever, and thus speedily developing bowel trouble and other complaints.

The system of burying the grain in chaff, and making the chickens work for their own food, has an excellent effect, and renders rearing much more simple. Without sufficient exercise the chickens are apt to become sickly, while they do not develop strong constitutions.

When the dry feeding is employed, the floor of the run should be boarded, as it is necessary to keep it littered with chaff, among which the grain is scattered. Were the chaff spread upon the grass, it would involve considerable waste, besides which it would quickly become damp in wet weather.

When the moist system of feeding is preferred, it is better to have the run without a bottom, so that the chickens always have access to the grass. Especially in this latter case is constant moving essential as chickens quickly taint the soil, and this must be prevented at all costs, since it has so serious an effect upon their health. Foul ground is an almost certain forerunner of disease; even if disease itself be not engendered, the birds are sickly, and great difficulty is experienced in rearing them successfully.

Three times a week at least the brooder should be shifted on to a new place; with most makes, this is quite a simple operation, involving only a few minutes' work. If it can be avoided it is not advisable to rear the chickens two consecutive years upon the same piece of land without ploughing or digging it over, because they are bound in some measure to affect the purity of the soil. Should space be so limited that the brooder cannot be regularly moved—though in this case it would be better to leave rearing severely alone—then fresh ground should be brought to the chickens. An inverted sod or a shovelful of earth thrown into the run, after removing that placed therein the previous day, answers the purpose to a limited extent.

CLEANLINESS.

The greatest attention must be paid to cleanliness of the brooder, as well

as of the birds themselves. Both the inner compartment and the run should be whitewashed out after each occupancy, as this is the only certain way of keeping down lice. Strict attention should be paid to the corners and crevices, as it is here the vermin congregate. Ordinary white-wash answers, but it pays to make the following special preparation: To two gallons of lime and water add one-half pound of soft-soap and one pint of paraffin oil, the former to make the whitewash adhere to the walls, the latter to kill all vermin.

The White Wyandotte

There are many beginners in poultry-keeping who are undecided as to just what breed they should start with. A large percentage of them think they ought to start with a "general utility" fowl, and in this they are correct if they mean that they want birds which will produce eggs and meat.

The general utility fowl at its best

is a bird which breed best fulfills the requirements.

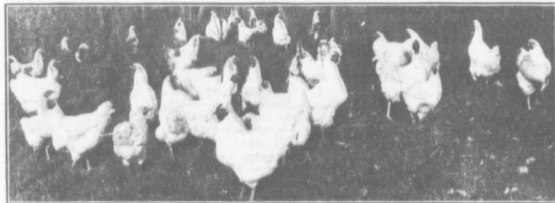
The main trouble is that when one or more of the good traits are cultivated to a high degree, some other good trait is likely to be sacrificed. The American breeds most nearly approach these ideals and of this class the Plymouth Rocks and Wyandottes take the lead. The Plymouth Rocks are an older breed than the Wyandottes and for a long time were considered the leaders of the American class. Now, however, White Wyandottes are crowding them for supremacy and bid fair to take an equal stand with them. There are various reasons for this. In the first place their size is much in their favor. The cocks will average about 8 1-2 lbs.; hens, 6 1-2 lbs.; cockerels, 7 1-2 lbs., and pullets about 5 1-2. The flesh is of fine texture and flavour. Being a white-plumaged fowl there is an absence of dark pin-feathers which so often detracts from the looks of a dressed fowl. Their neat, compact bodies, rose combs and white plumage make them a very attractive breed.

A beginner in the poultry business usually desires to start small and gradually work up. Therefore, he should have a breed of fowls that will make good mothers. The White Wyandottes are not easily excited, are not clumsy and awkward as some of the heavier breeds, and for these reasons make excellent sitters. Their sire enables them to hatch and brood

a good hatch with care, and they are, therefore, desirable as mothers.

The Wyandottes as a rule are good foragers and if left to their own devices will roam over considerable territory in search of insects and green food. They bear confinement well and are extremely hardy. Being rose-combed they are not liable to frost-bites and are able to endure very severe winter weather.

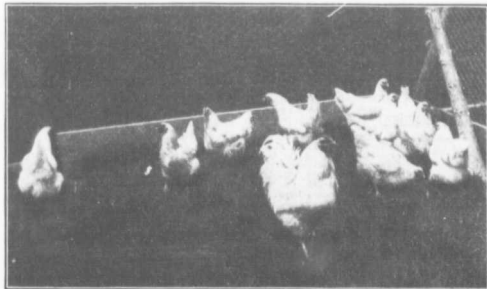
As a laying breed they are considered excellent.



A GROUP OF WHITE WYANDOTTE COCKERELS

At the poultry farm of Wright Bros., Brookville

is a bird which embodies to a greater or less extent the good qualities of an all-round layer, a meat producer, a sitter, and a hardy, attractive bird. When all these points are considered, it is rather a difficult matter to de-



TYPICAL WHITE WYANDOTTES

One of the breeding pens at Wright Bros. poultry farm

Gapes in Chickens

Perhaps more young chickens die of gapes than of any other disease. Keep them out of the dew, that is, don't let them out until the dew has dried off the grass.

Since poultry wire is coming into general use, many farmers have their chicken coops placed in small enclosures surrounded with this netting. By this means the young chicks can come out of the coops, scratch around and keep happily until they can be turned out for the day to range around their mothers. These small enclosures can be kept clean by covering the ground with sand or gravel. A small gate will allow of ingress and egress. The hens will soon learn to come up in the evening and go into their separate coops. To encourage them to do this, have the feeding trough in the enclosure, and when both hens and chicks will remember to come up on time. If your chickens are troubled with gapes use a small amount of copperas in their drinking water, a piece of water of a pea in one gallon of water.



Points on Duck-Raising

If young ducks get their liberty, they will wander far and wide in search of slugs, worms, etc., and cause no slight anxiety to their owner, or, if they once obtain access to water, which it is desirable to keep beyond their reach, they will never rest satisfied until they can enter the pool or stream whenever they choose. It is this wandering propensity on the part of ducklings which causes so many of them to fall victims to rats and other enemies. Many a promising brood has been entirely swept away by rats. I have known the latter to enter a coop at night and kill the whole hatch. They will also lie in wait on the sides of a ditch, and swoop down upon the ducklings as they are revelling in the mud below. Some years since, out of a lot of seventy ducklings, I did not get forty fit for market, nearly the whole of the remainder being captured by rats in the manner just described. The reader, then, will understand that there are situations, such as near the banks of a stream, or in the neighborhood of old barns, where the duck-breeder must be very careful, or his profitable seasons will be few and far between. It is not enough to hatch good broods—they must be reared. I, therefore, advise anyone who contemplates breeding, to take a good look round before he commences operations, and if the visits of rats are feared, let him adopt chicken-rearing instead.

**MONEY
IN
MUSHROOMS**

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Send for our free booklet and learn how big profits are made at home the year around by men and women growing mushrooms in cellars, stables, sheds, barns, etc., in almost any small space. Markets everywhere waiting for all sized. We sell best quality mushrooms year around. Write to Dept. 61, Eastern Importing Co., Brighton, Mass.

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As ducks consume a large quantity of food, it is necessary, if profit is the end aimed at, to hatch the ducklings as early in the season as possible, so that the full benefit of the high prices which prevail in the spring may be obtained. The birds, too, must be kept improving from the time they are hatched until they are ready for the spit. Large numbers of ducklings are, I know, hatched during the summer, and remain about the yards for some months, and then are fastened up for two or three weeks to be fattened. It is impossible for much profit to be made out of such birds, and too often, if they are reared at a loss. As to the time required for getting ducklings ready for market, I may describe a case which occurred several years since in a southern county. Early in the spring a brood of ducklings was hatched at a farmhouse. Among the men employed there was a young fellow who was hired as the son of a farmer. When the ducklings were taken from the nest he offered to take charge of them, and pledged himself, on condition that he could use as much meal as he wanted, to get the birds ready for market at eight weeks old. His offer was accepted. He at once placed the hen in a coop near a small pool, and there the ducklings remained until they were sold. Bread-crumbs, hard-boiled eggs, and curds were used for a few days, after which nothing but barley-meal was given, and on this the ducklings were made fit for the table by the time stated. Such cases are, perhaps, exceptional, especially with ducks kept by ordinary farmers. Still, it is surprising what can be done in a short time if constant attention be given. It is in something the same way that I advise keepers to go to work. Supposing the eggs used for sitting are laid about the same time, and are fresh, the whole should hatch on the twenty-eighth day within a few hours of each other. If the ducklings are hatched by a hen, as is probably the case, I should remove them from the nest when they are about twelve hours old. Nothing will be gained by delay unless some of the ducklings are not thoroughly dry. Their first meal should consist of hard-boiled egg and bread-crumbs.

Very little will be eaten for a few days, but as soon as the ducklings begin to pick, oatmeal may be given, and this may be followed by barley-meal and shorts mixed together. The whole of the meals should be mixed into a stiff dough, which will break when thrown on the ground. As regards water, use as little as possible. According to my experience, the more water the ducklings have, the longer they are in getting fit for the market. They thrive best when kept on a dry grass run. No special fattening is necessary if the birds are well-fed throughout, but scraps of meat, liver, potatoes, etc., may be mixed with the meal, and are all good foods when thus used.

York Co. J. H. S.

The forerunners of roup are canker, sneezing, distemper, heavy coids, swelled head, ulcers in mouth, discharge from nostrils—but it only becomes a case of roup when a joint stretch accompanies these symptoms.

It is surprising how many people, church goers, and, as a rule good people, are willing to pay for a secret by which summer eggs can be preserved to be sold in winter at a profit. Be above such dishonest practices.

POULTRY EXCHANGE

ONE CENT A WORD, CASH WITH ORDER

BAIRED ROCKS exclusively. Bred for utility and show. **White Eggs.** \$1. A. S. WHELDON, Anselvia Farm, Bethel, Ont.

POLE SALE—At Valley Mills Poultry Hatch, hatching eggs from \$3.50 white leggers; heavy winter layers, \$4.50 per 100; \$1 per setting. See circular "E. C. APPS, Box 224, Brantford, Ont."

CLARK'S BUFF ORPINGTONS—National winners at Madison Square Gardens, New York. On four series won 1st cock, 1st coo, 2nd hen, 3rd hen, 4th hen. At the Ontario, Guelph, won 1st coo, 1st hen, 2nd hen. Second prize, three large silver cups and six specials. At Canadian National, Toronto, I won 1st and 2nd cocks, 2nd coo, 2nd hen, and medal for best collection. Ten grand breeding pens containing the best birds in Canada. Write for free catalogue, with nesting list and prices. Incubator eggs a specialty at \$5.00 per 100. J. W. CLARK, Free-Stratton Club, Cedar Lake Farm, Gainsville, Ont.

BUFF ORPINGTONS—White Plymouth Rocks, Pekin Duck eggs for sale. From heavy laying strains. One fifty per cent. Correspondence solicited. **FLANK DUFF, Myrtle, Ont.**

DURST'S WHITE LEGHORN—Bred for beauty and utility. Send for descriptive card, circular and nesting list. A postal will bring it. **DURST BIOS, Bensenville, Ill.**

HARVEY PERKINS, Ottawa, Ont., Buff Orpingtons (imp.), S. C. Brown Leghorns, Barred Rocks. Eggs for sale.

SILVER WYANDOTTES—Eggs for hatching, \$1.00 per 12. The only best kept on farm. **GEO. N. HARRIS, Lyndon, Ont.**

ELM SHADE POULTRY YARDS—Eggs \$1 per setting, from exhibition Buff, White and Fawn Game, Buff, White, Silver, Golden and Black Wyandottes. Winners at Niagara Falls and Brockville. **FOURKAY & BOWE, Brockville, Ont.**

WRIGHT STRAIN White Wyandottes. Record layers and leaders in show rooms. Free mating catalogue gives full particulars. Send your name and egg fee to **WRIGHT BIOS, Box W, Brockville, Ont.**

SCHOFIELD HILL POULTRY YARDS—Brockville, Ont. White, Silver and Wyandottes; S. C. White and Brown Leghorns and White Plymouth Rocks. We have eggs from above prize winning breeds for sale. The eggs will be found reliable and satisfaction guaranteed. Correspondence solicited. **CLOW & SON, Proprietors.**

PARTIDGE WYANDOTTES—The most beautiful bird in existence. Four firsts and silver cup at the great Eastern Ontario Show, Ottawa, 1907. Great laying strain. Eggs from prize winners \$5 per 12. **J. E. FILLIPI, Brockville, Ont.**

BROCKVILLE POULTRY YARDS, Canada, W. M. OSWALD, Prop., breeder and exhibitor of yellow legged black Leghorns. Write for catalogue and winnings at the Ontario and Eastern Ontario Shows, and the Ontario, Guelph.

WHITE WYANDOTTES—Large pure white. Extra winter laying strain, from imported stock. Eggs, \$1 for 15. **W. H. STEVENSON, Box 620, Ottawa, Ont.**

J. J. SACKETT, Lindsay, Ont.—Breeder of White Leghorns, S. S. Hainton and Barred Rocks.

J. P. RYLEY, Lindsay, Ont.—Breeder of Barred Rocks, W. Rocks, Buff Wyandottes and H. Minoras.

STEPHEN OLIVER, Lindsay, Ont.—75 kinds of fowls—Roughlegs, W. Leghorns, H. Cops, Hindus and W. C. B. Poland.

Poultry Sold on Credit

Have the largest poultry plant in the W. M. OSWALD, Prop., breeder and exhibitor of yellow legged black Leghorns. Write for catalogue and winnings at the Ontario and Eastern Ontario Shows, and the Ontario, Guelph.

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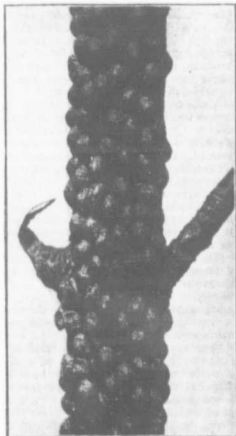
HORTICULTURE

The Terrapin Scale

From every State east of the Mississippi River and from the Province of Ontario the Terrapin scale has been reported.

It is noteworthy that this scale, which is more conspicuously marked than any other of the genus, is the most generally injurious one. In consequence of its wide range of food plants, including both wild and cultivated trees, it must be considered a dangerous pest which may be controlled but never eradicated.

This scale insect can be recognized and identified especially well in the hibernating winter stage (as shown in our illustration) when it appears as a reddish hemispherical scale, two mm. in length, mottled with radiating streaks of black which are particularly conspicuous about the margin. Sometimes these radiating streaks coalesce forming a subdorsal dark band surrounding the central reddish boss. Occasionally individuals



TERRAPIN SCALE

are found which are entirely red or black.

FOOD PLANTS.

For many years the Terrapin scale has been considered a specific enemy of the peach. At present we know it as infesting a large number of host plants, including many varieties of peach, plum, apple, cherry, pear, quince, thorn, maple, etc.

REMEDIES.

Unfortunately, the lime-sulphur wash, which is such an excellent remedy for the San Jose scale, is worthless as against the Terrapin scale. Numerous experiments in the use of the wash against this scale on various host plants have produced only negative results.

Kerosene emulsion has proved to be the most effective remedy for the control of this pest. This emulsion when properly made can be sprayed with

safety on any tree during the dormant period—in winter or early spring before the buds open—at a strength of twenty to twenty-five per cent. A nozzle throwing a fine spray should be used. Care must be exercised to prevent the liquid running down the trunk of the tree and collecting about the roots, as the oil, which will be retained by the soil for an indefinite period, might seriously kill or injure the tree.

KEROSENE EMULSION.

Coal oil, 2 gallons.
Hard soap (or 1 quart soft soap), 1-2 lb.

Water, 1 gal.
Dissolve the soap in boiling water, then remove from the fire, add the coal oil immediately and thoroughly agitate the mixture until a creamy solution is obtained. This can be done by pouring the mixture into the tank of a spray pump and pumping the liquid through the nozzle back into the tank. This is a stock solution which must be diluted before using. In order to make a twenty per cent. emulsion, add to each gallon of the stock solution about two and one-third gallons of water and agitate thoroughly before using. This strength will kill a large percentage of the hibernating females, without injury to the trees.

The Codling Moth

The larva of the codling moth is by far the most serious of the insect pests which affect the apple. The losses due to its work equal, if they do not exceed, the losses from all other insect pests of this crop combined. In unsprayed orchards throughout the country from one-half to three-fourths of the crop is destroyed, entailing a loss of millions of dollars annually. A large percentage of this is preventable and many fruit-growers practically control the insect by timely and thorough work. Indeed, the codling moth can be perhaps more satisfactorily controlled than most other insect pests of the apple. Notwithstanding the large amount of testimony from experimenters and fruit-growers as to the advantages of spraying, there are yet many people, farmers especially, who take no steps

to control the pest or who secure only indifferent results from lack of knowledge of the insect itself and of the requisites for successful work.

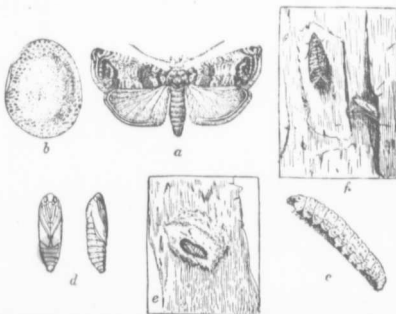
Wormy apples are familiar to most people and so is the small pinkish larva about three-fourths of an inch long which is the cause of all the mischief. The greater part of the life of the larva is spent within the fruit, during which period it feeds freely on the substance of the apple, eating out a tunnel and pushing from the entrance hole a considerable quantity of powdery brown frass. Many of the apples injured when small by larvae, drop from the trees, and these constitute a large percentage of windfalls.

Larvae of the first generation will mostly enter the fruit at the blossom end, some, however, entering at the side, as where two fruits are in contact or where an apple is touched by a leaf. Larvae of the second generation enter the fruit more from the side than the calyx end and probably cause the greater part of the total injury in the southern and south-western counties.

LIFE HISTORY.

The eggs of the codling moth are small, flat, somewhat oval in shape of about the size of a pinhead. When first deposited they are of a pearly-white color, but become darker with the development of the embryo, which after a few days is easily distinguished as a reddish ring within the egg. Under a lens the surface is seen to be covered with a network of ridges coarser towards the edge. The eggs of the first generation of moths are deposited mainly on the leaves and twigs, comparatively few being placed on the apple, possibly on account of the fine hairs with which it may be more or less covered when small. The majority of the eggs of the second generation, however, are placed on the fruit, which by this time presents a comparatively smooth surface. The average time required for the egg to hatch is about eleven days, the time varying considerably with the temperature.

It is in the larval or "worm" stage that injury is done to the apple. The larva, when hatched from the egg is very small, about one-twentieth of an inch in length. If produced from eggs placed on the foliage, they feed more or less upon the leaves as they wander around in search of the fruit and may thus be poisoned, if spraying has



Stages of the codling moth: a, the moth or adult insect, slightly enlarged; b, the egg, greatly enlarged; c, the full-grown larva, slightly enlarged; d, the pupa, slightly enlarged; e, the pupa in its cocoon on the inner surface of a piece of bark, reduced about one-half; f, moth on bark and empty pupa skin from which it emerged, about natural size.

been done. Larvae entering the fruit by the calyx end, feed within the calyx cavity for some distance penetrating the fruit, and hence the advantage of thoroughly spraying trees shortly after the petals have fallen and while the calyx lobes are still spread, in order to place in each calyx cavity a small particle of poison to be eaten by the larva as it seeks to enter the apple.

After entering the fruit, the larva feeds and grows rapidly and in the course of about twenty days attains full development. At this time they are about three-fourths of an inch long, pinkish in color on the upper surface and whitish below. The head is brown and well developed, and there are eight pairs of legs, the three pairs of true legs on the thorax and five pairs of prolegs on the abdomen.

When ready to leave the fruit, the larva usually eats out a hole at the side, makes its exit and crawls down to the trunk or drops by a silken thread and seeks a suitable place for pupation. If the apple has fallen before the larva is fully developed, the insect simply crawls to a convenient place and there constructs a cocoon, within which in the course of a few days it may change to pupa or it may remain in the larval condition until the following spring.

The pupa is about half an inch long, at first yellowish or brownish, but later becoming dark brown and shortly before the emergence of the moth, assuming a greenish brown color. This stage varies much in length, but on the average about twenty days elapse from the spinning of the cocoon until the emergence of the moth (where the cocoon has occurred). After emergence, the moths in the course of a few days begin egg-laying, the entire life cycle from egg to egg requiring on the average some fifty days.

The adult moth is rather variable in size, but the wing expanse rarely exceeds three-fourths of an inch. Above, the forewings are of a brownish gray colour, with numerous cross lines of gray. Near the tip of each wing is a conspicuous brown spot, in which are two irregular broken lines of a metallic copper or golden color. The hind wings above are grayish brown, becoming darker toward the margin, which bears a delicate fringe at the base of which is a narrow dark line. When at rest on the grayish bark of an apple tree, the color of the moth is harmonized with its surroundings, so that it is not readily distinguished, and the insect in this stage is but little known to fruit-growers.

Shortly after emerging, mating takes place and the females begin the deposition of eggs, the number for each individual, as stated by observers, being about fifty.

The winter is passed in the larval stage under the protection of a tough silken cocoon. In the coming of spring, the larvae enter the pupal stage and later, at about the period of the blossoming of the apple, the moths begin to appear, continuing to emerge for three or four weeks, when belated individuals may not emerge until sometime later.

REMEDIES.

If all the orchards of a district were sprayed and banded for a few seasons, the control of the codling moth would be secured uniformly on the part of fruit-growers in this particular is much to be desired and

should be secured by stringent legislation if necessary.

Bordeaux mixture with an arsenical added is the most effective treatment for the principal diseases of the fruit and foliage of the apple and for the destruction of the codling moth. This combined fungicide and insecticide, when made as described in the last issue of *The Farming World*, and properly applied to the trees in the form of spray, should enable the fruit-grower to protect from these pests eighty-five to ninety per cent. of his crop.

The first spraying to destroy codling moth should be made immediately after the blossoms fall. In this application the object is to place as nearly as possible a small quantity of the poisoned spray in the calyx cavity of every apple. At this time the little apples are mostly upright on the stems and the most effective work may be done by spraying from above, directing the spray downward. Long extension rods are indispensable and for this application an elbow, fitting between the end of the rod and nozzle to better deflect the spray, may often be used to advantage, or the chamber position of the nozzle may be turned after the way that the spray will be directed at a right angle to the axis of the extension rod.

One man at least, who should give special attention to treating the higher parts of the trees, should be on an elevated platform rigged upon the spray wagon. This is without doubt the most important of all the applications for the codling moth, and some growers find it profitable to respray the trees at once after the first application has been finished and before the calyx lobes close, to further insure that the calyx end of each apple shall contain some poison.

The second application for the codling moth should be made about two or three weeks from the dropping of the blossoms. The eggs of the first brood are hatching about this time in maximum numbers, and as they are mostly deposited on the foliage or twigs, the resulting larvae will feed more or less here before gaining entrance to the fruit.

If the first and second sprayings have been well done, subsequent treatments are sometimes unnecessary, especially if there is no danger from outside unsprayed orchards. The first and second sprayings may always be combined with the applications of Bordeaux mixture for apple scab.

Where spraying with Bordeaux is done for leaf-spot diseases, apple blotch, or bitter-rot, arsenicals should always be added for the second brood of the codling moth, and where injury from the first brood has not been satisfactorily prevented, it will pay to spray for the second brood of the moth irrespective of other considerations.

Banding the trees and spraying for further and later broods will be dealt with in the next issue.

The Garden

Throughout the greater part of Canada, and more especially in the Maritime Provinces, the last half of May and first week of June is the most favorable time to plant the majority of garden vegetables, and even with the harder sorts, a sowing at this period will not be much behind, as the milder nights and warm, sunny days promote a steady, rapid growth.

Beans may safely be planted, now that the danger of the seed rotting in the soil and of night chills and frosts are not so liable to occur as in the past.

The green podded bush beans such as Yellow six weeks, Refugee, and Valentine, are harder and mature somewhat earlier than the wax varieties and are not attacked by the pod spot or anthracnose, which in this locality ruins the crop to a great extent especially in a wet season.

While not as salable as the white or wax podders, they are for home use, they are all that can be desired. Later on in the season they are excellent shelled green, and the surplus may be dried for winter use.

Pole beans are not planted as largely of late years as formerly, but they have their advantages. They give a large crop on a small space and are seldom troubled by disease or insect pests.

The Golden Cluster and Indian Chief are the best wax podded sorts, while the Kentucky Wonder and Asparagus are said to be the best of any bean as far as quality is concerned.

The White and Scarlet Runners are two old but good varieties, but the Pole Limas have never been a success with me owing to the long season they require to perfect their growth.

Usually plant the dwarf varieties in rows and the pole sorts in hills, manuring with old manure or compost in the drill or hill and only using fertilizers where the soil is capable of holding moisture.

Another sowing of peas should be made now for a succession, and the Early Champion of England is, although not a new variety, is generally second early pea. Telephone and Yorkshire Hero are also good and have much larger pods. All these sorts are tall and need brush or netting support, but the Telephone is a heavier than the dwarf varieties and if they are kept picked they will keep in bearing for some time.

The pea louse or aphid, which is so destructive to late sowings of the dwarf sorts, does not damage the tall varieties to any extent, and the pods being kept from contact with the soil, wormy peas and half decayed pods are not common.

Sowings of beets, turnips and carrots for fall use may also be made, but for winter use the first half of June is not too late, as the earlier sown ones are larger and not so good in quality.

The English varieties of turnips may be sown in July, but, with the exception of two varieties, the White Milan and the Golden Ball, they are little grown for table use, the Swedes and Rutabagas being preferred for fall and winter. The latter class embraces many varieties, some white-fleshed and the great majority yellow, the Sweet German and the improved Purple Top being both good for the table.

While not grown now to any extent, for home use there is no variety of table beet can equal the long, smooth blood. It requires deep, rich soil and is longer in maturing than the turnip varieties, but in quality it is much better than either the Eclipse or Egyptian.

The Oxheart is a fine variety of carrot for a second sowing, its thickness making it possible to injure the from the rust-fly, a pest which has been very destructive of late years and for which there seems to be no good remedy.

(Continued on page 518)

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FORESTRY

Farm Windbreaks

Under modern conditions, the farmer not only requires to cultivate his land to the best advantage, but must also provide for a constant water supply and to a certain limited extent regulate the climatic conditions of his farm. For the processes of nature no longer supply his soil with plant food, nor provide sufficient water in available form for his crops and live stock, and excessive clearing has laid his fields open to the injurious effects of alternate freezing and thawing in winter and of drying, and crushing wind storms in summer.

The effect of ordinary tree cover such as would be maintained in a well settled agricultural country, in producing increased rainfall, is not likely to be great, but the influence of tree cover in conserving the water derived from melting snow or from rain, is of paramount importance. This effect is mechanical, for a thickly grown woodlot the action of sun and wind is reduced to its minimum, the snow melts slowly, and but little moisture is carried away by evaporation. Windfalls, dead leaves, twigs and branches cover the ground and form a mulch which keeps the soil beneath in a porous condition: the water is absorbed and held there for gradual and even distribution.

A few rows of trees grown as a wind-break or shelter belt also exercise a beneficial effect in the same way, by breaking the force of drying winds, whereby rapid evaporation is checked and thus more moisture is absorbed by the soil and remains available to the crops and also retaining the snow where it falls and delaying its melting in the spring. Where such shelter belts exist the snow cannot be drifted off the fields by the winds and when it melts it disappears slowly, sinking into the soil rather than flowing off over the surface and carrying with it the soluble fertilizing elements exposed to its action.

To the fruit-growers of the inland districts, the effect produced by this retention of snow is important. It results in checking the premature appearance of fruit blossoms and thus prevents injury by late spring frosts, operating in this respect in much the same way as large bodies of water are known to do.

The value of shelter belts to live stock is too well known to need special reference. Animals of all kinds instinctively seek the shelter of trees to avoid the scorching sun and drying winds of summer and the cutting blasts of spring and fall. The loss incurred by stock-feeders, and dairymen owing to the exposure of their cattle in pastures unprovided with shelter can hardly be estimated in dollars and cents, but it must each year be far more than it would cost to establish wind-breaks on every necessary place about the farm. Some of the most troublesome insect pests which affect cattle, will not molest them when they are standing in the shade, and relief from this annoyance alone would result in improved condition and greater returns.

It would almost appear that the great majority of Ontario farmers have accepted the conclusion that fall wheat can no longer be profitably grown in this Province. A considerable acreage is, however, annually sown, because the work can be done

in the fall when other matters are not pressing. It is a useful crop to bring into the rotation and the straw is much needed for bedding, etc., but the yield is so small they doubt if it pays. The average yield is certainly small, something less than twenty bushels per acre, but is it necessarily so? With our increased knowledge and improved methods of cultivation, cannot this valuable cereal be grown as successfully as it was formerly?

Up to forty or fifty years ago even with the very rough system of farming that was practised in those days and despite the fact that the fields were unencumbered with stones and stumps to such an extent as to occupy a considerable portion of the available land, the average yield of wheat seems to have been nearly double what it is now. Exact statistics covering that period are not obtainable, but there are many records brought down to us proving that very large crops were harvested, forty to fifty bushels being a common yield and in good seasons and under favorable circumstances even more.

Some years ago an effort was made to ascertain the cause of the falling yield of the fall wheat crop. Experienced and prominent farmers from nearly every county in the Province were asked for their views on the matter, and the result of the enquiry showed: That there had been a gradual decline in the yield of fall wheat since the country had been over-cleared. Farms protected by bush on the north and west uniformly produced good crops, while on those exposed, the wheat was always injured or winter killed.

The same conditions prevail to-day. Where shelter exists, wheat can be successfully grown, and if modern methods are adopted, the yield should be greater than it ever was. The effect of cutting away all the bush was to allow the wind to sweep across the fields and carry off the snow, which, if allowed to cover the crop, protects it from the intense cold of winter and the evil effects of alternate thawing and freezing towards spring, this last process being particularly fatal to wheat and causing much loss by heaving clover. A solid bush is not necessary for the purpose

of furnishing the needed shelter, nor to prevent drifting. Well placed wind-breaks composed of a few rows of trees will answer the purpose perfectly and well repay the money and care required for their establishment.

Situated on the high ridges and along the top of slopes, a belt of trees will give effective protection against the high windstorms which frequently occur with or immediately after the summer thunderstorms. If these storms occur in over-cleared districts when the grain is heavy in head, the crop is sure to be so badly beaten down that it cannot rise again, it is then difficult to harvest and the yield is certain to be largely reduced. As these winds travel with great velocity parallel to the surface of the earth, any obstruction strong enough to resist them will naturally turn the current of air upward and so deflect it as to protect the land under its lee for some considerable distance.

In districts devoted to market gardening or fruit culture, the protection to be obtained from such shelter belts may be an essential to success in preventing unseasonable frosts. It is not to be understood, however, that narrow belts of trees suitable for windbreaks would have an appreciable effect on the general climate of a wide area of the country, but for local purposes, the planting of ridges and hill crests and the consequent heightening of these elevations, will result in the creation of currents which will carry off the cold air and prevent it from settling on the lower lying lands, thus largely reducing the possibility of late spring and early autumn frosts.

Good shelter belts can be made by planting two or three rows of evergreen trees placed about ten feet apart, with a distance between the rows of five feet. They should be planted so as to break the spaces between the trees in the rows. A shelter belt planted in this way with two rows on the north and west sides of a square ten-acre field would require two hundred and sixty trees. The best trees for this purpose are the Norway Spruce, the native White Spruce, White Cedar and the European Larch. The last named is not an evergreen, but it throws out a great number of small interlacing branches which afford good protection.

Generally speaking, evergreens require more care in handling and set-

(Continued on page 528)



AN ORCHARD WINDBREAK

THE APIARY

Inspectors of Apiaries

The following are the inspectors of apiaries appointed by the Government to act under Mr. Wm. McEvoy, Woodville, Ont., the permanent inspector; Messrs. M. B. Holmes, Athens, H. G. Sibbald, Claude; J. Alpaugh, Dohlington, and Jas. Armstrong, Cheap-side. The province will be divided into districts and a systematic fight made against foul brood, which has lately worked considerable mischief, and has been in part responsible for the reduced honey crop.

Modern Bee Keeping

Only a few decades ago the bees used to store up their honey in rough boxes, hollow trees, or straw hives, necessitating their destruction with brimstone fumes before the owner could obtain the sweets, now they make their homes in machine-prepared hives, store their honey in machine-made frames, build their combs on machine-made bases of wax, prepared to save them work, and, if they are kept for the production of "strained" honey, are robbed regularly of the combs, which are emptied of the honey in an extractor, a metal invention of machinists of recent years. "Hand-made honey" is a thing of the past.

Constant improvement in the management of bees is being made. Before the introduction of the movable comb honey was out of the question, being produced in an old box placed on top of the body of the hive. Practically all hives now are of the same general construction, the lower part being box-like, about twenty inches long, fifteen inches wide, and eleven inches high, with a movable bottom projecting as an alighting board for the bees. In this box are hung eight frames, on which the bees build their combs. A frame from one hive may be placed in any other.

The equipment for securing comb honey for sale consists of a box set on top of the body of the hive and containing twenty-four sections or frames four and one-fourth inches square, in which the combs are built. Each of these will contain a pound of honey. Rows of four each are set lengthwise of the hive, in racks, and to secure straight combs wooden partition boards—a recent invention—having holes at the corners for the bees, are put between each row.

The most important invention, which has increased the yield of first-class honey at least one-half, is "comb foundation," which now is used by almost every apiarist. This consists of thin sheets of wax run between steel die rollers, which stamp upon them the bases of the cells and make them of the same thickness, shape, etc., as the base of the comb built by the bees themselves. The labor expended by the bees in making a pound of wax for comb has been found to equal that which would be required in producing thirty pounds of honey, so the supplying of this foundation to the bees saves them an immense amount

of labor. Pieces of this prepared bees-wax, which is so delicate that a pound contains fifteen square feet, are attached to the inside of the sections or boxes of comb honey, and are called "starters." The bees extend the bases of the cells and the foundation insures straight combs.

In handling the bees their owners use several of other recent inventions, among them the "smoker." With a silk veil over his face and armed with the "smoker," the apiarist can overcome the most pugnacious colony of bees which ever existed. The smoker consists of a tin firepot with a nozzle, attached to a bellows. The apparatus is about eighteen inches long and is arranged so that whenever the bellows is pressed a stream of smoke issues from the nozzle. Rags, corn-cobs, and the like are used for fuel, and when the smoke is blown into the entrance of the hive the bees immediately are terror-stricken and begin to gorge themselves with honey. Their idea, it is supposed, is that they will be driven out of their home and that they must provision themselves for their wanderings; at any rate, while they are eating they cannot sting, and they will not stop eating.

Queens may be grown at will—through recent inventions and discoveries—and thousands are sent by mail from apiaries to bee-keepers who wish to improve their stock, for there are thoroughbred bees as well as horses or cattle and a fine queen of the Italian variety, coming from a strain whose ancestors made 200 pounds of honey per hive per annum, was sold last summer for \$500. Fortunes have been made in queen rearing.

An invention of great value to the industry is the queen excluder, one of the most ingenious of all. Queens, often, when they have filled with eggs the combs in the body of the hives, ascend to the sections above and lay eggs there. As a bee will hatch where every egg is laid, and as the presence of the larvae will prevent the sale of the honey, the owners place between the body and the upper part of the hive a zinc screen of sufficient mesh to allow the workers to enter, but which excludes the queen.

Another invention and one of the most valuable, is the honey extractor. Before it was devised "strained honey" used to be produced by cutting out the combs, and melting them and the comb, which required so much labor on the part of the bees, was destroyed. Now the apiarists take the frames from the hives, cut the cappings from the combs, and place the combs in a centrifugal machine, the whirling motion of which drives all the honey from the cells, but leaves the comb uninjured, ready to be filled again. Under this system the bees often fill the combs as many as half a dozen times in a season, and as they are spared the labor of setting or producing the wax, the production of extracted honey amounts to several times the output of comb honey.

In the old days the bee-keeper used to stay away from church on the ground that he "expected his bees

would swarm" and had to be there to watch them. He need not deprive himself of spiritual instruction longer on that score, as for ten years automatic swarm hives have been in successful operation everywhere—almost—where bees are kept. These consist of a trap or box made of zinc with meshes large enough to prevent the queen from passing out when the trap is placed at the entrance to the hive, but allowing the workers to pass freely. The swarm will issue as usual, but soon will discover the loss of its queen. Contrary to general belief the queen does not lead the swarm, but is almost the last to leave. When the bees discover they have broken home ties without the presence of their queen, they will return to the hive. Meanwhile the queen, unable to get out doors, has passed through a cone in the zinc screen, and finds herself imprisoned in a compartment a few inches square.

The life of the swarm is the queen, for she alone lays eggs, her output often being 20,000 a day. The worker bees, which constitute the bulk of the swarm, are less developed females, and in the summer each colony has a few hundred drones or males.

A number of other inventions are used by up-to-date apiarists, and twenty factories, one of them employing 400 men, are kept busy the year round turning out supplies for bee-keepers.—(Echelonage).

The Garden

(Continued from page 516)

The Flint or Yellow varieties of corn may be sown early, but cucumbers, squash and melons, except in a few favored localities, are best left until the first week in June.

The duties of the next two weeks are close attention to weeding, or, rather, the prevention of weeds, watering in dry weather, watching out for insect pests and making war on the first comers, and in putting out plants to shift them so they will be checked as little as possible in growth, as was explained in the last article.

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Not from his head was Woman took
As made her husband to o'er look;
Not from his feet, as one designed;
The footsteps of the stronger kind;
But fashioned for himself, a bride;
An equal, taken from his side.

—Charles Wesley.

EDITORIAL

The month of June has become famous as the month of weddings—and truly it seems a fitting time to take up the new life.

The world is then so fresh and lovely—The flowers speak of beauty, the birds sing their song of love and hope, the bloom-laden trees and the tender green of the growing grain give promise of the bountiful harvest. All Nature throbs with life and interest and promise—And the heart of man in sympathy with the great heart of Nature goes out to seek and find that "The world well tried—the sweetest thing in life is the unclouded welcome of a wife."

It is always pleasant news to hear of the approaching marriage of acquaintances or friends. It is following the proper order of things. Marriage makes better citizens of our men and more womanly women of our girls. It lessens the possibilities of becoming selfish and self-centered in our interests, for there must be much giving up as well as getting in married life. It tends towards greater industry and steadiness in habits, for there is a household to be maintained and this means work, and constant work.

A report on Public Morals in Massachusetts has the following: "The ambitious standards of social life and the increased cost of living are largely responsible for the postponement of marriages, and late marriages are in part answerable for immorality. The average age of the first marriages of men has within a century changed from 22 years to 27 years. Public sentiment should honor young people who are willing to endure comparative poverty and privation in order to establish a home."

The crying evils of the time is that the girls demand too much of the young men. They want a fine large house, well furnished and having all the most modern conveniences. In fact they feel they are entitled to step into a home equal to the one they have stepped out from, forgetful of the fact that the parents have been 30 or 40 years in establishing that home.

This Department is edited by Miss Laura Rose. All communications referring to "The Home" should be addressed to her at Box 25, Guelph, Ontario.

'On Getting Married' 'Heart and Hand.'

As I look over my notes I find a record of a lecture, given by my friend, when he was in London, on "Marriage." It was a lecture given at the Young Men's Institute, and I remember it well. There was a great deal of fun in the room before the lecture, and we young fellows were handing about all sorts of jokes at each others' expense, and settling who should marry next, and what girl was to be married, carrying on the usual 'chaff' when matrimony is talked of.

By the time the lecturer came, we were in a very lively state, prepared for an amusing description of married life, with side hints to young bachelors of a coming character. We were surprised at the different turn the evening took. The lecturer began by repeating a collect and the Lord's Prayer. He then read in his impressive way, a few verses from the nineteenth chapter of St. Matthew's Gospel, and then he gave us his lecture. It was not dull, and we were not disappointed, but we were greatly surprised. The whole tone of the lecture was so lofty, the manner so serious, the subject from beginning to end was treated as one of the most solemn matters, we had to do with. Gradually the room quieted down, and nobody felt at the close inclined to 'chaff.' Personally, I never realized the sacredness of marriage as I did then; and when our friend finished I felt I had learned a lesson I should not forget. Many fellows afterwards said the same, and the warmth with which we thanked the lecturer was marked.

This lecture reminds me of a talk I had with my friend some time after, when he had gone to the country. I had ridden down to the village, and found a wedding taking place. It was a pretty sight to see the procession walk away from the church down the road across the common, guests, and friends, and onlookers taking part in the line that followed the bride back to the village. No London street crowd was standing by to stare and jeer, and watch the bride and bridegroom squeeze, with two bridesmaids and the 'best man,' into a stuffy cab. The wedding was a village festival, and everyone took part. It struck me as quite an idyllic scene.

But I was most of all struck by the quiet behavior of the congregation in church. My friend, I remember, said, before he commenced the service. "Good Christian people, you are come here to witness a solemn sight; the pledging of these persons to each other while life lasts. I pray you to help them by your reverent behaviour to realize what a solemn vow, promise, and profession they are here about to make. At once you the church

The young men too are proud and over-ambitious in this same respect. They too want to make a show, and so the marriage is deferred, and the glow of youth passes, and the lamp of love burns low, and many never marry at all.

The following article "On Getting Married" I have had in my scrap book for a long time, and it so expresses my views that I am glad to have an opportunity of having it reprinted. It is mostly directed to the young men, but why should it be, since they are the ones who are expected to do the wooing. Shakespeare says: "That man that hath a tongue, I say, is no man, if with his tongue he cannot win a woman."

I have met in my travels many old bachelors, and without an exception it has been their regret that they had not married. A word to the wise is sufficient.

On Wedding Superstitions

Marry when the year is new,
Always loving, kind and true;
When February birds do mate,
You may wed, nor dread your fate.

If you marry when March winds
blow,
Joy and sorrow both you'll know,
Marry in April when you can,
Joy for maiden and for man.

Marry in the month of May,
You will surely rue the day;
Marry when June comes blow,
Over land and sea you go.

They who in July do wed,
Must labor always for their bread;
All who wed in August be,
Many a change are sure to see.

Marry in September's shrine,
Your living will be rich and fine;
If in October you do marry,
Love will come, but riches tarry.

If you wed in bleak November,
Only joy will come, remember;
When December's snows fall fast;
If you marry love will last.

was quiet; I never saw a wedding congregation behave better. After the service I came across to the vicarage, and when I found my friend he was in the old study, taking off his robes.

"Weddings are plentiful just now, sir," I said; "Dove is going to be married. Did you know?"

"Yes, I had after from him only to-day; and I declare it is one of the most delightful letters I ever had."

My friend put on his coat, left in his pocket, drew out a letter, and handed it to me.

"There," he said, "read that."

It was from an old Institute fellow, saying he was going to be married, and telling my friend that he could not take the step without writing to thank him for a lecture delivered at the Institute in London some years ago. It made a deep impression on him. Dove said, and if he had made a good choice in his future wife, it was largely owing to that lecture.

As I looked at the vicar I saw he was lying back in a deep armchair, and looking serene and happy.

"Now, do you know," he remarked, "that letter gave me as much pleasure as any letter I ever had. To think of Dove remembering what I said so long ago, and writing to tell me about it! I call it very pretty of Dove. I sometimes think," continued my friend, "that the clergy don't breathe openly enough on this matter. Young men are not taught to regard marriage as a solemn matter, and young girls only look upon it as a means to secure a home. And what a home they secure, I don't know!"

"But then," said my friend, "turning round at me with a merry twinkle in his blue eyes, 'what young man is ever persuaded by a sermon that he is not making a good choice?' However, Dove seems to have done so."

"I don't know, sir, that Dove has chosen a beauty." The words came out a little sharply.

"Ah, you foolish man, there you betray your folly. It is the folly of many young men. They begin by thinking the happiness of married life consists in getting what is called a pretty girl. That is the first thing that strikes them as necessary; whereas, according to a wise philosopher, given seven parts in an ideal wife's choice, four go to good temper, and only one out of the seven parts goes to personal appearance.

"The fact is—my friend lifted a finger solemnly at me—if you have a beautiful character in your wife, it transfigures her; but if her beauty is in looks. You, when you have really known her (and you don't really know her till you marry), you see in her face the character behind the face. If it is beautiful, her beauty always looks beautiful to you. If there is no beautiful character the prettiest face grows wearisome. I wish I could make all you young fellows realize that. A sweet temper is the first thing to look for in a girl you would think of making a wife."

My friend continued, after a pause: "Then how many fellows find out if the girl has any intellectual sympathies with them, or whether (most vital question) she is likely to help them on the road to heaven? They seem to think that, for some magic, marriage will make both their own character and the wife's character exactly what each ought to be. They find out the mistake too late. They have a wretched sort of life, and they blame marriage for all their misery."

"Now, I'll give you a wrinkle," said the vicar, and he laughed quietly.

"When I was thinking of a certain young lady I found out that she was a good daughter and a good sister. I felt safe after that discovery. I took my observations, and saw that the servants all were fond of her. I made an excuse to call early one morning, and I found her as fresh and as neat as a new pin. I watched her at church, and saw how reverent she was. Little by little I learnt her unselfishness, and then her face, which always looked sweet grew sweeter still. The beautiful character shone out of it. It was gone on shining."

"But, sir, you were a regular spy," I said, laughing.

"Of course I was. Don't you think I was wise? Had we not got to live with one another for life if we married, and was it not the best thing to find out if we could live together? I tell you again, you young men don't take enough pains to find out a girl's character. The fact is, you don't think enough about it, because you don't realize what a great deal it means. I asked an old bachelor once why he had not married. Replied the old gentleman, "I have seen many ladies I admired, but when I said to myself, 'Could you endure to have any of them sitting opposite you at table with a right to sit there always,—you, one side, the lady the other, and you not able to turn her off, however tired you were of her,' then I said to myself, 'No.' So I never married."

Now, if you take my advice, be sure you choose some one whom you won't want to change at the end of a year. It is many years since that conversation, but I will tell you a secret, my patient reader,—I found the girl; yet it was because of my friend's earnest words. Whether she found a worthy husband I have great doubts, but I have no doubt I found a perfect wife, so far as perfection is to be found on earth. At any rate, I have, thank God, a happy home. Some times I tremble at my happiness, when I see the sad sights round me, and read still sadder notices in the papers. I was mercifully led to think seriously about the matter: let me hand on to you my friend's wise counsel. Have a high ideal. Pray for it. Strive for it. And—one whisper in your ear—don't be in a hurry."

Editor's Note.—Don't put it off too long.

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THE BOYS AND GIRLS

I Killed a Robin

I killed a robin. The little thing
With scarlet breast on glossy wing,
That comes in the apple tree to sing.

I flung a stone as he twittered there;
I only meant to give him a scare,
But off it went—and hit him square.

A little flutter—a little cry—
Then on the ground I saw him lie;
I didn't think he was going to die.

But as I watched him I soon could see
He never would sing for you or me
Any more on the apple-tree.

Never more in the morning light,
Never more in the sunshine bright,
Trilling his song in gay delight.

And I'm thinking every summer day,
How never, never I can repay
The little thing that I took away.

Sidney Dayre, in Youth's Companion

Manners on the Street—No. 3

Our manners while on the street are especially important, for many see us there who never see us anywhere else, and so have only our conduct there to judge us by.

Rude and noisy conduct on the street is always unbecoming. No well-bred boy or girl will ever try to attract attention there. Although we often do it, still it is not proper to shout or call across the street to a person. If we wish to talk to them we should cross over and quietly speak to them.

If we wish to look behind us we should not twist the head around, but turn the whole body. Three or four persons should not walk abreast on the street or stop to talk on the corner and so block the way.

In meeting persons we must turn to the right, and in passing people we should be careful not to crowd or jostle them. It is better to step off the sidewalk than to do this.

A boy should be as careful as a gentleman to give a lady or girl the inside of the walk, and even little boys should learn to lift their hats or caps when bowing to a person.

If we have occasion to ask a direction of a stranger, we should say, "Will you please tell me if this is the road to Elora," rather than, "Say! is this the road to Elora," and we must never fail to thank the person kindly for the information given.

It is not good manners to ebb while on the street, and we should be careful not to throw rubbish such as orange or banana peel, paper, etc., in the street or on the roadside. If each of us took more pride in our streets and country roads we could greatly improve their appearance.

It is wrong and exceedingly ill-considered to write upon or in any way injure or deface the fences or property of another.

Very often boys and girls make remarks about people who pass by, or even as so rude as to call at them, especially if there be anything peculiar about them. This is most unkind and rude, and such children little think how much they hurt the feelings of

some poor unfortunate person in this way.

Be kind in all you say or do—
That others may be kind to you,
L. R.

How a Bird Protects Her Young

"The love of a bird for the treasures of her nest is one of the most beautiful things of this world. Mother-like, the parent bird will be almost anything for the sake of her little ones. Who has not seen the 'killed-deer' strive, with all the tact of her clever little soul, to allude away from her nest of precious young some big giant of a human being, who has wandered into her neighborhood. Many a time, when a boy on the farm, I have followed one of these birds, limping, and trembling and fluttering along on the ground, a few feet ahead of me, utterly disabled, as I supposed, but always managing to keep just a little beyond the reach of my eager hands. And, when the artful mother had led me far from the sacred spot where lay all there was in the world of value to her, how triumpantly she lifted herself on her unharmed wings, and, to my utter astonishment, soared away."

"If there was no birds, man could not live on the earth."

The Red Squirrel

A. B. C.

Just a tawny glimmer,

A dash of red and gray,—

Is it a fitting shadow,

Or a sunbeam gone astray?



It glances up a tree trunk,

And from some branches, I know

A little spy in ambush

Is measuring his foe.

I heard his mocking chuckle;

In wrath he waxes bold,

And staves his pressing business

To scold and scold and scold.

How "Johnny" Got His Blanket

The pension examiners who are working all over the country pick up many little stories of the Civil War, some of which throw a pleasant light on those dark days. The following is an incident recently related by a Federal veteran:

Once we were camped in the mountains of East Tennessee. I didn't know it could be so cold down South till I tried it myself. One bitter night I was on picket duty away off from camp, down in the edge of our some woods and close beside a little creek. I was tramping along through the snow, kicking my feet and beating my hands together trying to keep

warm, when I heard a voice somewhere off on the other side of the creek calling softly, "Yank! Yank!"

I knew the enemy was in camp not far away, so I raised my gun in an instant; but the voice called again, "Don't shoot, Yank! I'm all alone, and I don't mean any harm."

"Who are you, then, and what do you want?" I asked, as quiet as I could.

"I'm a 'Johnny,'" said the voice again, "and I want to see if you can't spare me a blanket."

"You are crazy," said I. "I'd be shot if they caught me giving you a blanket."

"There's no need for you to get shot," says Johnny, "and I'm bent to freeze, picketing out here in the snow. My uniform's nothing but rags, and I haven't got any overcoat or blanket or anything. Blankets are scarce over in our camp, and it's awful cold, Yank."

He said it solemnly in that soft voice of his,—the Southerners have a soft, easy way of talking—and, well, the upshot of it was that I promised him I would bring a blanket with me when I came back the next night and leave it to him to get it.

Next night when I went to saddle up,—our picket-line was so far from camp that we had to ride,—I got half a dozen blankets out of the commissary and put them under my saddle, and was just about to get away with them when the sergeant spied me.

"Hello, there!" said he. "What you going to do with all those blankets?"

"My heart was in my mouth, but I knew he couldn't see how many I really did have, and so I answered back, cool enough, "You don't suppose it's warm out there picketing a night like this, do you?" and with that he turned away.

I tell you I was glad to see his back!

Well, I got pretty safe out to the woods with my blankets, and pretty soon I heard the same voice calling again, "Yank, Yank, have you got that blanket?"

"Yes," I said. "I have, six of them, and I came near getting caught, too."

"Glory!" said Johnny. "Glory! Now you just slip down to the creek and unfold them a little, and give them in one at a time, and I'll do the rest."

I did just as he told me,—I didn't have to get off my beat to do it,—and he went a little way down the creek and fished the blankets out as the current brought them along.

When he'd got the last one out, he fell down on his knees—I could see him in the dim moonlight,—and I never heard anybody pray such a prayer as that Southern soldier prayed for me, kneeling there in the snow in his ragged old uniform. I took off my hat and stood there still till he was through, and then he faded away in the darkness.—Youth's Companion.

A physician of large reputation tells a good story about himself. "During my absence," he says, "my two youngsters got into my consulting-room, when they began to play at being doctors." Presently one of them unlocked a door and disclosed a terrified gaze to his playmate, "Pooh! What are you 'fraid of? he asked. 'It's nothing but an old skellington.' 'Wh-wh-where did it come from?' asked the other, with chattering teeth. 'Oh, I don't know. Papa's had it a long time. I expect it was his first patient.'"

Health in the Home

Think Lightly of It

The road to home happiness is said to lie over small stepping stones. So small sometimes are the causes of our unhappiness that we wonder the consequences can be so great. One great palliative is the determination by every member of the family not to dwell on the circumstances whatever they may be, which are alike sad to all. If it be poverty, let it be cheerfully and silently borne; if it be the ill temper of grandpa try to make a joke of it. If it be something infinitely worse and also hopeless, accept it bravely; do not talk of it. Try in the family circle to ignore it. Accept every little enervating circumstance. Let in all the sun and air. Work on cheerily and hopefully, knowing that there is the ray of sunshine somewhere that has only to be looked for to be found.

To Remove Splinters

The following is clipped from the London Times. It is well worth remembering to try in case of emergency: When a splinter has been driven deeply into the hand, it can be extracted without pain by steam. Nearly fill a wide mouthed bottle with hot water; place the injured part over the mouth and press it slightly. The suction will draw the flesh down, and in a minute or two the steam will extricate the splinter and the inflammation together.

Forming the Baby's Character

One would hardly expect to find marked traits of character in a very young infant; nevertheless, they are there, and show themselves very strongly, often when the infant is not more than twenty-four hours old. This, then, is the time to commence your training. Begin the moulding process right now. It is for you to make the child what you will, and if begun now the task will not be a difficult one. I have often seen the most stubborn and even vicious children in a marvellously short time succumb completely to good influence, becoming sunny-tempered, obedient, and lovable.

Infants are helpless, consequently they require our care, and it is a matter of duty that this should be our intelligent best. Do not depend on guessing in this important matter; it is not safe. Children require love, sympathy, companionship, and amusement just as much as the adult, probably more; but remember that a surfeit of good things has the same effect upon the young as it does upon an older person. A mother who seems ridiculous, does it not, to think of a child, and a very young one at that, becoming blasé—tired of the good things offered? But it is true. We do not have to look very far to see children, even infants, turn away their heads with a shriek of disapprobation when well-meant, but constant, demonstrations of affection are thrust upon them. This open rebellion goes to show how distasteful it is to the child. Occasionally children of not over-robust constitutions become so wearied and weak with handling, hugging and kissing, that like a sensitive plant they wilt, and with pathetic patience submit to the inevi-

table because they are too weak to resist.

A selfish, nervous, unhappy child is invariably the result of over-indulgence on the part of the parent, and not infrequently the parent reaps a bitter reward in utterly failing to hold the respect, love and obedience which are due the parent from the child. Children who are over-indulged lack self-control, and self-control taught at a very early age soon ceases to be self-control. It becomes a habit of trust in the mother—confidence in her discretion, love and judgment. If this early training is delayed, almost before the mother realizes it she finds a willful and stubborn child; then if she tries to correct the faults she has nourished she will realize that the remodelling process is a far more difficult task than the moulding would have been in the beginning. If you commence to humor the child early in life by walking, rocking or some other form of entertainment he will have a right to expect to be humored in other things, and he usually is humored until he becomes the autocrat who holds sway over every one with whom he comes in contact.—Dr. Marianna Wheeler, in Harper's Bazaar.

Nursery Notes

Irritation on the baby's scalp can be greatly helped by frequent applications of a saturate solution of boric acid.

To keep a baby covered at night sew a large button to each corner of

the coverlet and attach a long white tape—this should form a loop—to each corner of the bedstead. Then, after the baby is comfortably tucked in, fasten the loops to the buttons on the coverlet.

CANADIAN PACIFIC IRRIGATED FARMS IN SUNNY ALBERTA

Before deciding where to locate in the West, let us tell you about these lands. The best wheat fields—the richest grazing land—are in this Province.

Write us for full information about crops, climate and special railroad rates, etc.

Local representative wanted in each county.

Telfer & Osgood

Eastern Selling Agents

250 CORISTINE BUILDING

MONTREAL



Turn On The Rain When You Need It

IF YOU are a farmer you have seen your crop suffer for lack of moisture.

Did it ever occur to you when the drowsy come that a fine thing it would be to have a stream of water running through your field, which could be turned onto the thirsty ground.

If this thought never did occur to you just stop and think a minute—water always there no danger from dry spells—no possibility of crop failure, for when you have good land, good seed and warm weather all you need to get a perfect crop is moisture. We furnish the moisture and there is absolutely no failure in the supply.

You believe in irrigation—you can't help it, for it marks the difference between absolutely sure crops and uncertainty. Certainty is always to be preferred—therefore you believe in irrigation.

That being the case it only remains for you to choose the best spot under irrigation in which to invest your money and make your home.

All things considered, Sunny Southern Alberta is the best district in the world for the man seeking sure returns.

In the first place, the Canadian Irrigation laws are the best on earth—in the history of

Canada there has never been a suit over water rights—the Government stands behind the farmer and settles disputes free of cost in case there should be any, but there are none because the Government sees to it that no irrigation ditches are built unless there is ample water to supply them.

To the farmer who has had endless water litigation this means much.

The land is good in Alberta—there is no better and the constant deposit of silt and other suspended matter continually improves it.

Southern Alberta is without question or doubt the finest live stock country on earth—the summers are grand and the winters are mild as those of the Central States.

Almost any crop can be raised in Southern Alberta. It is the coming wheat, alfalfa and sugar beet country of the continent, and the markets for beef, mutton, pork, grains and all other farm products are better than those of the western states.

If you want to verify what we say by seeing Sunny Southern Alberta, we will be glad to make the trip cheap and easy for you—send your name and address and learn how to get here the best way and how to get the best land on earth in the LAST GREAT WEST at prices so low that they are hardly to be considered. Address,

THE CANADIAN PACIFIC IRRIGATION COLONIZATION CO.,
108 8TH AVE. WEST, CALGARY, ALBERTA, CANADA.

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IN THE KITCHEN

Fruits

It must not be forgotten that fruits are valuable for other reasons than the nutrients which they furnish. They contain acids and other bodies which are believed by physiologists to have a beneficial effect on the system and, doubtless, very often stimulate the appetite for other food. They are also useful in counteracting a tendency to constipation. Another point—and one entirely apart from food value—should not be overlooked. That is, fruits add very materially to the attractiveness of the diet. It is not easy to estimate their value from this standpoint, since often the appearance of food has a value which cannot be measured in dollars and cents.

Rhubarb

There is no more welcome and wholesome addition to the table in spring than rhubarb. It is appetizing and acts as a tonic on the system. Rhubarb may be prepared in so many ways that it should be frequently served when it first comes in. The following well-tried recipes may be found useful and suggestive.

Rhubarb when young does not need to be skinned. Whether for sauce, pie or pudding, it is a good plan to cut the rhubarb in inch pieces, sprinkle over it a teaspoonful of baking soda, cover with hot or boiling water, let stand some minutes, then drain well. The soda neutralizes some of the acid and less sugar is required—the flavor is improved. Rhubarb should always be cooked and kept in earthenware or porcelain dishes.

Rhubarb Sauce

Prepare the rhubarb with the soda as given above, add the sugar, let stand for half an hour or more, then put over the fire and simmer until done.

Rhubarb Pie

Prepare the rhubarb with the soda and drain well or toss in a cloth to remove all extra moisture.

Take 1 lb. flour, 1-2 lb. shortening, one teaspoonful of salt, one teaspoonful of baking powder. Sift the flour, baking powder and salt well together, roll in the shortening. Moisten with enough cold water to make a stiff dough. Sprinkle a little flour over the pie tin (this does instead of greasing it), line with the pie paste, put in a generous layer of the rhubarb, a tablespoon of sago, and a cup of sugar. Cover with the paste, pinch well around the edge and have plenty of holes in the upper crust so the steam may escape and the pie will not be so likely to run over. The sago absorbs the juice, thus hindering the running out of the pie.

Steamed Rhubarb Pudding—No. 1

Make a nice biscuit dough rather soft. Prepare the rhubarb the same as for pies and place it in a pudding dish with a generous cup of sugar. Drop the dough in tablespoonfuls over

the fruit. Steam three-quarters of an hour. Serve with sweetened cream.

Rhubarb Pudding—No. 2

Two eggs, small cup of sugar, two tablespoons of butter, half a cup of milk, a little grated nutmeg, two teaspoons of baking powder. Sufficient flour to make a stiff batter. Pour over the prepared rhubarb and sugar and steam or bake half an hour. Serve with cream.

Canned Rhubarb and Pineapple

Take equal parts of rhubarb (the white stalks) and pineapple and steam or simmer till the pineapple is tender. Allow half a pound of sugar for each pound of fruit. Boil for a few minutes and seal while hot in gem jars.

Canned Rhubarb

Cut the rhubarb when it is young and tender. Wash it thoroughly; cut into pieces about two inches long. Pack in sterilized jars. Fill the jars to overflowing with cold water, and let them stand ten minutes. Drain off the water and fill again to overflowing with fresh cold water. Seal with sterilized covers. When required for use treat the same as fresh rhubarb. Green gooseberries may be preserved in the same way.

Wedding Cake

1-1/4 lbs. butter; 1-1/4 lbs. light brown sugar; 1 doz. eggs; 3 lbs. raisins, stoned; 3 lbs. currants, washed and well dried; 1-2 lb. mixed peel; 1-2 lb. almond nuts; 1 lb. flour; 1 teaspoon white pepper; 1 teaspoon grated nutmeg; 1 teaspoon ginger; 2 teaspoons cinnamon; 2 tablespoons good syrup. Beat butter and sugar to a cream. Add eggs, beaten separately. Sift the spices into the flour, dust the fruit with some of the flour and mix all together, stirring well. The proper form now is to have one large square cake. A baker will lend you a tin, and it is best to have him ice and decorate the cake.

Lemon juice and salt will remove rust stains from linen without injury to the fabric. Wet the stains with the mixture and put the article in the sun. Two or three applications may be necessary if the stain is of long standing, but the remedy never fails. Lemon juice (outward applications) will allay the irritation caused by the bites of gnats or flies. Lemon peel (and also orange) should all be saved and dried. It is a capital substitute for kindling wood. A handful will revive a dying fire and at the same time delicately perfume a room.—Everyday Housekeeping.

Are you fond of greens? If so, try dandelion tops. Boil till tender and season with butter, pepper and salt.

L. R.

When the Butter is streaked, you may be sure it was not

Windsor Dairy Salt

that was used to salt it —for Windsor Salt gives an even colour.

All grocers sell Windsor Salt.

HALF-A-TICK

is the least amount time in which to make a cup of "CAMP" Coffee, the best of all Coffees. There is no waste with

Camp COFFEE

that's why it is so economical. There is no disappointment with CAMP Coffee. It pleases everybody.

Only "CAMP" when buying Coffee, and don't sign having it.

—PATENTED & SOLD BY

COFFEE SPECIALTIES, LONDON



No bride or bridegroom should be given a telegram on the way to church. It is positively a sign of evil.



Treats Life

OXYDONOR is not a drug for a medicine, nor does it operate on any principle known to medication.

OXYDONOR causes disease to disappear because IT TREATS LIFE. By its application, the human organism is fortified to any degree necessary to rid itself of disease, as long as the vital organs can play their part.

Oxydonor

is the cheapest as well as the best way out of disease. It is not difficult to apply. It can be carried in the pocket and used any time. In every form of disease, the action of the OXYDONOR is the same—it inflicts no vital force.

Mr. W. R. Raymond, Halifax, N. S., writes Dec. 20, 1906: "I consider your Oxydonor a little wonder. After using it a few weeks, Rheumatism, from which I was suffering for a year or more, entirely left me. No person afflicted with Rheumatism should be without one."

OXYDONOR is a necessity for every man, woman and child on earth. It will serve the family, and last a lifetime. Write for descriptive literature. It is important you should have it. SWABER OR PATRIDENT IMITATIONS. There is BUT ONE GENUINE Oxydonor—and that has the name of the originator—Dr. H. SANCHEZ—engraved in the metal. Look for the name.

Dr. H. Sanchez & Co.

302 St. Catherine St. West.

MONTREAL 13

615 Ave. Detroit,

Mich.



In the Sewing Room

A friend of mine keeps a piece of sandpaper on the table near her when she is working on silk of any kind, and whenever her hands stick to the silk she rubs them over the sandpaper. A.P.E.

Everyone knows how hard it is to turn a very narrow and perfectly even hem in table napkins. Put the hemmer attachment on your sewing machine but do not use any thread. Just run the napkins through the hemmer without sewing them, and they are creased as narrow as desired and are all ready for hand sewing. J. E. H.

Onion Brown and White

Onion brown and white is the color scheme of many new silks, the brown sparingly introduced so that it does not look warm for summer wear. While the brown had to be encountered on every side, still the fact must not be lost sight of by the woman of moderate means that brown is a warm color and must be used with discretion.

The New Mohairs

The fine worsteds and new mohairs make ideal travelling suits for summer wear, when utility must be the first consideration, and decidedly smart effects may be evolved, especially in the striped designs.

Hints by May Manton

HOUSE GOWN OR WRAPPER 5047

Such a graceful and charming house gown as this one deserves a place in every wardrobe and renders its wearer so dainty and attractive that it is sure to find an enthusiastic welcome. It is so simple that it quite easily can be made from washable material, but it also can be made from challis, from albatross and from any similar



6056 Girls' Dress,
6 to 12 years.

6047 House Gown or
Wrapper,
32 to 42 bust.

fabric while trimming always can be varied to suit individual need and taste. In the illustration dotted Swiss is trimmed with lace and with ribbon.

The gown is made with fronts, back and centre front. The centre front is gathered and the fronts are arranged over its edges, the closing being made invisibly at the left side. The back is laid in the box plait at the centre

that is always graceful and becoming. The sleeves are in bell shape, gathered at their upper edges.

The pattern 5047 is cut in sizes for a 32, 34, 36, 38, 40 and 42 inch bust measure and will be mailed to any address by the Fashion Department of this paper on receipt of ten cents. (If in haste send an additional two cent stamp for letter postage which insures more prompt delivery.)

SEVEN GORED PLATED SKIRT 5011

Perforated for Walking Length.

Every variation of the plated skirt is to be worn throughout the coming season and new ones are constantly appearing. Here is an eminently graceful and altogether attractive model that can be made either in round or walking length and that consequently suits the entire range of seasonable materials. In the illustration



5011 Seven Gored
Plated Skirt,
22 to 32 waist.

it is made of chiffon Panama cloth trimmed with braid and stitched with holding silk, but if designed for house wear it would be appropriate for voile, for pongee, foulard and all materials of similar weight. Later it will make an excellent model for the linen suits that will be in demand.

The pattern 5011 is cut in sizes for a 22, 24, 26, 28, 30 and 32 inch waist measure.

GIRL'S DRESS 5055

The dress that is made with a slightly open neck and short sleeves is both an eminently satisfactory one for warm weather wear and one that is charmingly attractive and picturesque in effect. Here is one that is made of ring dotted batiste with trimming of embroidery and that is daintiness itself yet absolutely simple as all girls' dresses should be. The full frills over the shoulders form epaulettes and give the broad effect that is so becoming to unformed figures and the lines of the entire dress are of the best possible sort. All the pretty seasonable materials are appropriate, colored and figured, the frock becoming more or less dressy as one or the other is chosen. In this instance the epaulettes are of embroidery, but these could not be made of the material, so producing a plainer result, and stitched bands can be substituted for the ornamental ones if chambray, percale or other sturdy material is chosen.

The pattern 5055 is cut in sizes for girls of 6, 8, 10 and 12 years of age.

The price of each of the above patterns postpaid is only ten cents. Send orders to the Farming World, Temple Building, Toronto, giving the size wanted.

A bride who finds a spider on her wedding dress may consider herself blessed.

The bride who dreams of fairies the night before her marriage will be thrice blessed.



TAKES
ALL
THE
WORK
OUT OF
WASH
DAY

Get out your old chair and a book-fill the tub half full of hot water-put in the clothes-and start!

The New Century Washing Machine

police, block and read and wash the clothes. Isn't that a luxury after the hand-chopping, back-breaking rub, rub, rub over the wash board?

Sold by Most Dealers at \$8 50

Write for free catalogue about the new and better way to wash clothes at home. The Downwell Mfg. Co. Limited Hamilton, Canada



Gallery Use

Many "Rifle Shots" have become converted to Dominion Ammunition by noting the accuracy, freedom from miss fires and absence of fouling in 22 Cal. Cartridges in Galleries.

A "less the duty" price is a consideration for those who use a large amount of Cartridges.

The trademark guarantees quality.

DOMINION CARTRIDGE CO., LTD.
4-07 MONTREAL.

If the wedding ring is dropped during the ceremony the bride may as well wish herself unborn, for she will always have ill luck.

HINTS ON HOME BUILDING.

The man who is thinking of building a home (and who is not, in these prosperous times) must have prominently in mind, economy, durability and appearance.

The wise builder will select materials that are good and inexpensive, as well as handsome in appearance. Take the roof, for instance. It should be proof against lightning, fire and water, and should also possess a handsome appearance.

Wood shingles have had their day. As now manufactured, they soon rot and crack, thus making it necessary to reshingle.

"Safe Lock" Galvanized Steel Shingles solve the problem in every way. They lock at the top, bottom and both sides, so that they are absolutely proof against every element. Being heavily galvanized, they cannot rust and are practically indestructible. Moreover, the smooth surface of the shingle will not permit dust or dirt to lodge on the roof, and defile the rain water.

The Metal Shingle & Siding Co., Limited, of Preston, Ont., offer to send you, free, their literature containing names of those who have used "Safe Lock" Shingles in your own locality. 47

HELL

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HELPFUL AND RESTFUL**How Does It Seem to You ?**

It seems to me I'd like to go
Where bells don't ring, nor whistles
blow,
Nor clocks don't strike, nor gongs
don't sound,
And I'd have stillness all around.

Not real stillness, but just the trees'
Low whisperings, or the hum of bees,
Or brooks' faint babbling over stones
In strangely, softly tangled tones.

Or maybe a cricket or katydid,
Or the songs of birds in the hedges
hid,
Or just some such sweet sounds as
these
To fill a tired heart with ease.

If 'twere't for sight and sound and
smell,
I'd like a city pretty well,
But when it comes to getting rest
I like the country lots the best.

Sometimes it seems to me I must
Just quit the city's din and dust
And get out where the sky is blue,
And, say, now, how does it seem to
you ?

—Eugene Field.

A Parable

Now there dwelt in a certain city
a woman who was called Martha, and
this woman was troubled with many
cares. She rose up early and toiled
all day, giving neither sleep to her
eyes nor slumber to her eyelids, until
she had given meat to her household
and a portion to her maids, and
provided for them clothing of purple
and fine linen. Neither was any dust
found in her carpets nor webs in her
corners. Her tapestries and Matten-
bergs were the envy of all the women
round about, and her cooking was
famed throughout the city.

Howbeit in her tongue was not the
law of kindness, for her whole body
was weary from her head even unto
the sole of her feet, and her whole
heart faint.

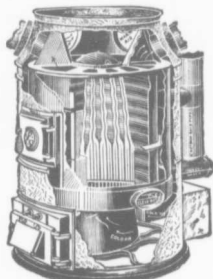
When her husband and children
returned at night, her soul was dis-
quieted within her lest they should
soil her clean floors or seek repose
upon her sofa pillows. So it came to
pass that they more and more sought
rest and companionship and good
cheer among their neighbors and
acquaintances.

Now Martha, being laden with bur-
dens grievous to be borne, began to
was old in spirit, albeit she was not
old in years. Her countenance was
no longer comely, but wrinkled and
careworn, and her hair whitened, yet
not from age or early piety.

And when I saw this woman's toil
and vexation of spirit, I said in mine
heart, "Go to, now : this toil should
be lightened, for behold it is all
vanity and hath no profit under the
sun."

Now behold there dwelt in the same
city another woman, who was called
Mary, and she set her heart to know
wisdom. She perceived that a light
heart and a cheerful spirit are of
more value than many Mattenbergs,
and that dust in the corners dis-

**A HEAT MAKER
A FUEL SAVER**



**KELSEY WARM
AIR
GENERATOR**

(Pat'd)
More Than 30,000
Pleased Users

The Beatty Hardware Co., Norwich, Ont., writes: "In reference to the Kelsey Generator, one good recommend we can give is we have some fifteen placed during the last few years, and in no case have we as yet had to replace any part in any of them."

James Smart Mfg. Co., Brockville, Ont. :

Dear Sirs,—I presume you would like to know how we liked the No. 24 Kelsey Warm Air Generator you installed in our new store last fall. Well, it has more than met our expectations, by doing the work on less fuel than we figured on. It warmed 57,000 cubic feet for 41-2 months on 8 tons of coal. We purchased six tons, thinking it little enough, and have about one ton left. I do not think there is another heater made that will do the work on as little fuel. I might add, the No. Twenty-one put in my residence about twelve years ago has been just as satisfactory in every way.

Yours truly

(Signed) J. D. Wagar, General Merchant.

"THERE'S ONLY ONE WARM AIR GENERATOR"

↳ DIRECT CONTRACTS MADE—PROPER RESULTS GUARANTEED

Sole Kelsey Makers for Canada :

THE JAMES SMART MFG. CO., Limited
WINNIPEG, MAN. BROCKVILLE, ONT.

**KELSEY WARMING AND VENTILATING FOR
HOME=CHURCH= SCHOOL**

Kelsey Economy

Mr. W. H. Tate, Mgr. Excelsior Life Ins. Co., Ottawa, writes, Feb. 11th, 1907: "The Kelsey Generator placed last August has given first-class satisfaction. No trouble in keeping our house at 70 degrees with less coal than used in our old furnace, getting 80 degrees or 80 degrees."

Chas. Duncan, Commission Merchant, Winnipeg, writes, March 1st, 1907: "The No. 18 Kelsey Warm Air Generator installed in my house last fall by the Campbell Heating Company has given us every satisfaction. We have had an unusually severe winter, but had no trouble in keeping our house comfortable. No fuel consumed, this has been less than we expected, and much less than some we know who live in similar-sized houses."

Kelsey Efficiency

Rev. C. O. Carson, Rectory, Wales, Ont., writes, Feb. 9th, 1907: "Enclosed please find payment in full for Kelsey Generator No. 30, installed in the English Church. It has given us perfect satisfaction, heating every part of church and basement during coldest weather."

Secretary Merrickville, Ont., Public School, writes, March, 1st, 1907: "Enclosed herewith you will find checks in payment for Kelsey Generators. The system has proved satisfactory in every way. We have had no trouble in heating our school this winter, and this has been a very fair sample of Canadian winter weather, so we do not anticipate trouble in the future."

Kelsey Durability

gracely not a woman, neither shall it turn one hair white or black. So she determined within herself to be satisfied with the work of her hands, before she was overcome with weariness, though she wrought but one hour, though her rugs were not beaten as often as her neighbor's, and though she went to them that sold and bought bread and cakes for her household.

And it was so; and it came to pass as year followed year that this woman's heart waxed not old, neither was her spirit broken. Her step became not feeble, neither was her natural force abated. Her eye retained its brightness and her countenance its comeliness. A companion and a counsellor was she to her children, and their hearts turned to her whether in joy or sorrow. The heart of her husband safely trusted in her and found rest and joy.

Whether of these twain, think ye, was the wiser in her generation?—Lillian Gist, in Union Signal.

Think Before You Speak

If you are tempted to reveal

A tale some one has told
About another, make it pass
Before you speak three gates of gold.
Three narrow gates—first, "Is it true?"

Then "Is it needful?" In your mind
Give truthful answer, and the next
Is last and narrowest, "Is it kind?"

And if to reach your lips at last,
It passes through these gateways
three,
Then you may tell the tale nor fear
What the result of speech may be.



Cost Less than Stoves

A Hecla Furnace, installed on Hecla principles, will keep your house comfortable throughout the winter at less fuel expense than it would cost you for stoves. It is the old story, of course, of concentration meaning power. In a Hecla, you get all the heat from the coal you burn and where you want it. The whole house is comfortably, and evenly heated and ventilated.

Hecla Furnaces

are equally adapted for mild or severe weather—always ready for any demand made on them. They are the only hot air furnaces that are absolutely healthful and sanitary.

No other furnace is made with the Fused Joints that patented feature of the Hecla which makes the escape of gas, dust or smoke into the house an impossibility. Let me tell you about these Fused Joints and about other features of the Hecla in which you will be interested.

See your nearest dealer or write "Clare's Furnace Builder" for new illustrated catalogue and estimates. 50

Clare Bros. & Co. Limited, Preston, Ont.

Farming in Bartle isn't half as hard work and it is twice as profitable as it is in Canada.

WHY are you farming in Canada?

When you figure it down to a fine point, isn't it to make a living for yourself and family?

Well, if there was a land whose soil was so rich, crops so bountiful, market facilities so good and climate so delightful that it would produce for you and your family a better, surer income, give you more of the joy of living, with less labor and worry. If there was such a land, I ask you, wouldn't it pay you in health, wealth and comfort to go there?

There is such a land.

It is Bartle. Let me tell you about it.

Bartle is in the eastern end of the Island of Cuba. It covers 25,000 acres, through which Sir Wm. Van Horn's Cuban Railroad runs, and where they have built the finest station on their line.

The city of Camaguey, with 50,000 population, is just 50 miles from Bartle, and Nipa Bay, the terminus of the railroad, the only port on the island where the cargoes can be transferred direct from the cars to ocean liners, is but 120 miles away.

Bartle is situated on high land, constantly fanned by cooling breezes, the climate is delightful—never warmer than 98 nor colder than 47. Neither mosquitoes nor epidemic diseases are known in this part of the island.

The soil is so rich that it requires no fertilizer, and produces three crops of garden truck a year—corn, potatoes, cabbage, etc.

I can tell you of seven distinct crops you can

raise that will net you over \$200 an acre the second year. I can show you how a few hundred dollars and a little work will pay you big wages the first year you move there.

Why, a 10 or 20-acre farm at Bartle will produce more cash returns than the best hundred-acre farm in Canada.

You can get good prices in Camaguey, too—cabbages 40 cents each, eggs 50 cents a dozen, butter 50 cents a pound, and milk 15 cents a quart.

With half the work you are doing on your Canadian farm, and the same invested capital, you'll make double the money, enjoy better health, get more out of life.

I want to tell you all about Bartle. I want to show you the kind of farm we sell at \$50 an acre and make the payments to suit you.

I want to tell you of the Canadians already there—happy and prosperous.

I want to tell you all about Bartle—and prove my every point.

Write me to-day—now, while it is in your mind. Write to me personally, and I'll see you get all the information you want.

DUNCAN O. BULL

General Manager

Cuban Realty Co.

Limited

Dept. K, Temple Building

TORONTO - CANADA

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The Women in Ont. 17th, it division nounced

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Women's Institutes and their Work

Women's Institute Meetings

The following is a list of the Women's Institute meetings to be held in Ontario from June 10th to July 17th, inclusive. The speakers for each division will be the same as announced in last issue:—

DIVISION I.

St. George, June 10; Paris, June 11; Glen Morris, June 12; Transville, June 13; Cainsville, June 14; Onondaga, June 15; Ohsweken, June 17; Mohawk, June 18; Burford, June 19; Cathcart, June 20; Hatchley, June 21; Courtland, June 22; Simcoe, June 24; Tyrrell, June 25; Nanticoke, June 26; Cleapside, June 27; Selkirk, June 28.

DIVISION II.

Decewsville, June 10; Canfield, June 11; York, June 12; Blackheath, June 13; Binbrook, June 14; Tapleytown, June 15; Stoney Creek, June 17; Winona, June 18; Hannon, June 19; Glanford, June 20; Amnaster, June 21; Jerseyville, June 22; West Plamboro, June 24th; Waterdown, June 25; Rockton, June 26; Westover, June 27.

DIVISION III.

Rellesay, June 10; Shelbourne, June 11; Whittington, June 12; Laurel, June 13; Corbetton, June 14; Horning's Mills, June 15; Honeywood, June 17; Fern, June 18; Everett, June 19; Avington, June 20; Southampton, June 21; Duntroon, June 22; Battean, June 24; New Lowell, June 25; Sunnidale Corners, June 26; New Flos, June 27; Philipston, June 28; Midhurst, June 21; Elmvale, July 1; Wyebridge, July 2; Wyevale, July 3; Laoutaine, July 4; Orilla, July 5; Churchill, July 6.

DIVISION V.

Arthur, June 10; Damascus, June 11; Kenilworth, June 12; Mt. Forest, June 13; Coan, June 14; Cedarville, June 15; Hopeville, June 17; Dromore, June 18; Fricewick, June 19; Fisherton, June 20; Badgeros, June 21; Maxwell, June 22; Vandeleur, June 24; Kimberley, June 25; Ravenna, June 26; Heathcote, June 27; Temple Hill, June 28; Williamsford, June 29; Chatsworth, July 1; Desboro, July 2; Annan, July 3; Bothwell Corners, Meaford, July 4.

DIVISION VI.

Braemar, June 10; Hickson, June 11; Cassel, June 12; Innerkip, June 13; Drumbo, June 14; Bright, June 15; Tavistock, June 17; Stafia, June 18; Bayfield, June 19; Clinton, June 20; Holmesville, June 21; Goderich, June 22; Wingham, June 24; Kincardine, June 25; Walkerton, June 26; Paisley, June 27; Port Elgin, June 28; Tara, June 29; Allenford, July 1; Kilsyth, July 2; Brookholm, July 3; Kamble, July 4; Forwich, July 5; Gorrie, July 6; Molesworth, July 8; Ethel, July 9.

DIVISION VII.

Breslau, June 10; New Hamburg, June 11; Haysville, June 12; New Dundee, June 13; Avr, June 14; Branchton, June 15; Galt, June 17; Preston, June 18; Hespeler, June 19; Mannheim, June 20; Kilham, June 21; Guelph, June 22; Eden Mills, June 24; Streetsville, June 25; Brampton, June 27; Snelgrove, June 28; Cheltenham, June 29; Campbell's Crossing, July 1; Ingleswood, July 2; Alton, July 3; Mono Road, July 4; Bolton, July 5; Newmarket, July 6; Schomberg, July 8; Vanorii, July 9; Belhaven, July 10.

DIVISION VIII.

Port Alma, June 10; Wheatley, June 11; Quinn, June 12; Tilbury, June 13; South Woodslee, June 14; Essex, June 15; Oldcastle, June 17; Wyoming, June 18; Osborne, June 20; Old Springs, June 21; Shetland, June 22; Appin, June 24; Napier, June 25; Stratroy, June 26; Coldstream, June 27; Lobo, June 28; Beechwood, June 29; West McGillivray, July 1; Ailsa Craig, July 2; Mooreville, July 3; Sylvan, July 4; Forest, July 5; Hampstead, July 6; Milverton, July 8; Listowel, July 9.

DIVISION IX.

Linden Valley, June 10; Cambray, June 11; Lindsay, June 12; Fenelon Falls, June 13; Bobcaygeon, June 14; Onnense, June 15; Mt. Pleasant, June 17; Springville, June 18; Millbrook, June 18; Bailichoro, June 19; Garden Hill, June 20; Lakefield, June 21; Warsaw, June 22; Springbrook, June 24; Wellman's Corners, June 25; Tweed, June 26; Queensboro, June 27; Exbridge, June 28.

DIVISION X.

Castleton, June 10; Brighton, June 11; York Road, June 12; Wooler, June 13; Harder's, June 14; Frankford, June 15; Wallbridge, June 17; Turner's, June 18; Foxboro, June 19; Spencer's, June 20; Adolphustown, June 21; Stella, June 22; N. Williamsburg, June 25; Brinston's Corners, June 26; South Mountain, June 27; Chesterville, June 28; Douglas, June 29; Foresters' Falls, July 1; Beachburg, July 2; Westmeath, July 3.

FARMERS' AND WOMEN'S INSTITUTE JOINT MEETINGS.

Series 1.

Tarantorus, June 10; West Korah, June 11; Bass Line, June 12; Goulais Bay, June 13; East Korah, June 14; Paipoonge, June 17; Nolalu, June 18; Hymers, June 19; O'Conner, June 20; Stanley, June 21; Murrilo, June 22; Dryden, June 24; Oxdrift, June 25; Eagle River, June 26; Kenora, June 27; Rainy River, July 2; Rapid River, July 3; Pinewood, July 4; Stratton, July 5; Barwick, July 6; Emo, July 8; Devlin, July 9; LaVallee, July 10;

Series 2.

Hillside, June 10; Novar, June 11; Callender, June 12; Powassan, June 13; Nipissing, June 14; Restoule, June 15; Loring, June 17; Arntstein, June 18; Golden Valley, June 19; Granite Hill, June 20; Front Creek, June 21; South River, June 22; Sundridge, June 24; Burk's Falls, June 25; Maganetawan, June 26; Midlothian, June 27; Doon Lake, June 28; Emsdale, June 29; Four Mile Lake, July 1; Wildfield, July 1; Woodlands, July 2; New Liskeard, July 3; Hillview, July 4; Milberta, July 5; Uno Park, July 6; Hanbury, July 8; Thornloe, July 9; Barton, July 10; Heaslip, July 11; Hilliardtown, July 12; Judge, July 13; Tomstowen, July 15; Charlton, July 16; Hailebury, July 17.

Series 3.

Ice Lake, June 10; Gore Bay, June 11; Gordon's School House, June 11; Barrie Island, June 12; Poplar, June 13; Evansville, June 14; Silverwater, June 15; Richard's Landing, June 18; Kentdale, June 19; Carterton, June 20; Marksville, June 21 and 22; Alma Heights, June 24; Little Rapids, June 25; Livingstone Creek, June 26; Sowerby, June 27; Goldenburg, June 28; Iron Bridge, June 29; Walford, July 2.

Vegetables

Vegetables are an important article of diet, and on account of their value as such, we must have some definite knowledge of their preparation, cooking and care that we may obtain the greatest amount of nutriment from them.

We have two classes of food. One that builds up the bone, nerve, tissue and blood, and the other that gives us heat and strength. In the first class, among the tissue-building foods we have old peas, beans, lentils, nuts and cereals. In the second class are rice, white bread, sweet and white potatoes, macaroni, winter squash, tapioca, etc.

There is a great diversity of opinion as to the best way of cooking and preparing vegetables. Many people simply follow the rules followed



A TYPE OF FARM HOUSE THAT IS FAST DISAPPEARING

by their mothers and grandmothers and will not listen to any new departure, but we find the majority of people eager to get the best results and willing to try any approved methods. To be quite perfect, all vegetables should be put to cook in boiling water. Not water that has boiled and cooled, but water boiling quickly when the vegetables are dropped in. Salt should be added to such vegetables as spinach, cabbage, onions and potatoes. Turnips are one of the daintiest and most delicious of vegetables when cut in dice form and cooked in unsalted water. Boiled in salted water, they are coarse, punk in color and unpalatable.

Some vegetables are better eaten raw, such as lettuce, celery, cress, cabbage, etc. Cabbage is less digestible when cooked than raw, and eaten with salt or French dressing, prevents constipation. In order to have these vegetables crisp, they should be put in water, with salt added, as cool as possible for at least one-half hour before using.

Later in the season we find that potatoes, carrots, etc., have lost a considerable amount of water and in order that they may regain this loss, a good plan is to thoroughly wash them and put in cold water for an hour or two before preparing for cooking. Carefully cooked potatoes are a wholesome and easily-digested food. They should be kept sparingly, as just under the skin there is a layer containing nearly as much nourishment and mineral matter as the remaining portion of the potato. Sweet potatoes may always be substituted for white potatoes, but they are more difficult to cook on account of their sugar.

New peas, young beets and green corn contain sugar which is prone to fermentation and makes them so difficult to can. The sweetness of both peas and corn depend on careful cooking. Throw both into boiling water. Salt the peas but not the corn. Serve both quickly and never allow to stand in water.

All pickled vegetables, such as cucumbers and beets, are indigestible and salads should be used in their place. Peas and corn lend themselves easily to combinations of milk and stock for making cream soups. The water in which spinach, cabbage, carrots, potatoes, etc., have been boiled should be saved for soups.

To remove strong flavor from cabbage or onions, to which so many object, add a little baking soda and boil five minutes, then drain and add boiling water to cover and cook at simmering point until tender.

As soon as vegetables are taken from the garden to be stored for winter use, they should be kept in a cool, dark, dry place, or piled up to exclude the air, or packed in dry sand. Squashes and pumpkins need to be spread out in a rather warm, dry place.

Vegetables and fruits which contain acids are good summer foods. They have a tendency to cool the blood. Roots which can be more easily preserved take their place in winter. Nature gave us not only food, but medicine, and most of it do not use her remedies enough. During summer and fall we live naturally on fresh vegetables and fruit, sunshine and air. But not so in winter, and, consequently, when spring comes we need a tonic. Nothing will do the place of vegetables and fruit in our diet,

and it is due to ourselves and our families that we have a good supply put away in the fall.

MRS. R. M. HAZLEWOOD,
Bruce Co., Ont.

Farm Windbreaks

(Continued from page 517)

ting out than deciduous trees, though as a rule they may be planted earlier in the autumn and later in the spring than the latter.

The best time for planting depends on climatic and soil conditions. Fall planting has its advocates, but the writer's experience is altogether in favor of the spring, before or just when the activities of the trees are being renewed, the end of May and first half of June having usually proven the most favorable time of the whole year.

Special care must be taken in handling evergreens to prevent their roots from drying in the least, for if this occurs it is impossible to save them. The young trees should be packed with damp moss when taken out of the nursery, and as soon as received the roots should be puddled in liquid mud and heeled in, under shade. The heeling in requires to be carefully done, fine soil being worked in well around the roots. When planting, it is a good plan to carry the trees in a bucket with just enough water to cover the roots.

No tree should be placed much deeper in the ground than it stood before; this is especially important in the case of evergreens.

The best age at which to plant out pines and cedars is when they are from three to five years old, and spruces when from four to six years, and the more frequently the trees are set out permanently, the better they will be, as frequent transplanting at this stage greatly stimulates the growth of fibrous roots.

All children from their infancy should be bathed daily—quite tiny babies in the morning and rather older children at night.

WELL DRILLING MACHINES

Over 20 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on skids. With engines of horse power, ranging from 1/2 to 10. Simple and durable. Any mechanic can operate them easily. Send for catalogue.

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Send us your address and we will mail you a book which tells you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once.

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Income and Funds, 1905

Capital and Accumulated Funds	\$46,560,000
Annual revenue from Fire and Life Premiums and from Interest on Invested Funds	8,100,000
Deposited with Dominion Government for the security of Policy-holders	328,238
G. E. MORRILL, H. F. PEARSON, Inspector, Agent	
ROBY W. TYRE, Manager for Canada.	

GILSON Gasoline Engine and Pumping Jack

JACKS TO FIT ANY STYLE PUMP.

\$75.00 Complete. Every country home has water. Will run ice cream freezer, churn, washing machine, etc., etc.

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TUDHOPE No. 52

Is daily adding fame to the Tudhope Carriage Makers. Cornish body. Six spring gear—double reach with full length steel shafts. Bell collar steel axles. Dayton 5 1/2 wheel. Quick shifter. Double bar dash rail, seat handles, and hubcaps nicely plated on brass. Write for free illustrated catalogue.

THE TUDHOPE CARRIAGE CO., Ltd. ORILLIA, Ont.

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ARE CHEAPER IN THE END THAN CEDAR. WILL NOT HEAVE WITH THE FROST AND ALLOW THE FENCE TO SAG. EASILY AND CHEAPLY ERECTED—LAST FOR EVER.

Write for Descriptive Booklet and prices. Agents wanted everywhere.

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QUESTIONS AND ANSWERS

Registering Clydesdales

How many straight crosses are required before a mare or stallion will register in the Clydesdale Stud Book? Must each cross be from imported stock, or will Canadian-bred stallions answer the purpose?

WM. THOMAS.

Wellington Co., Ont.

A filly must show four certified crosses and a stallion five, which means that a stallion must have a recorded dam. It makes no difference whether the recorded animals are imported or Canadian-bred so long as they are eligible.

Horse With Sore Leg

I have a horse that had a sore leg, and from continually holding it up the cords shrank so much that the leg is now short and does not reach to the ground. Can you tell me of anything that will lengthen the cords? Elgin Co., Ont. G. H. K.

If the sores on the leg have healed, a good hand rubbing might help some. The tendon may, however, have been injured in some way and it might be well to call in some qualified veterinary surgeon to examine it. Try the rubbing in any case.

Sick Mare

I have a mare five years old, not in foal. She is in fairly good condition. I noticed her getting weak about ten days ago, but paid no attention to it at first. On going to town with

a load she played out, staggered for a piece, fell, and stretched out for about five minutes. She seems to be all right when standing, but is not able to work in the field. A veterinary surgeon who examined her said that she had stomach staggers and gave her some powders, but she is no better. She is a hearty eater. When pinched behind the withers, she will bend her back right down. She gets very cross when she begins to play out. Kindly tell me what is wrong and prescribe a remedy. Red Bay, Ont. G. W. B.

It would be difficult to say without an examination what is the trouble. The weakness shown by the mare before playing out does not indicate that the trouble is staggers or

epilepsy, though a qualified veterinary surgeon who made an examination of the mare should be better able to say what the trouble is than we could without such examination. We cannot say from the description given what the trouble is, and therefore cannot prescribe a remedy.

Horse With Swelled Leg

I have a horse that four weeks ago had a swelled hind leg. After ten days the swelling left excepting at the knee, which is breaking out in sores that give forth a bloody substance. What is the cause, and can you give a remedy? Calumet Island, Ont. G. B. C.

The swelling might arise from so many causes that it is hard to pre-

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I also hereby positively agree to return you your dollar willingly if you yourself don't find them to be the most perfect-fitting, clearest and best you have ever bought anywhere, at any price. Send for my free Eye Tester today. Address, **DR. HAUX SPECTACLE CO., St. Louis, Mo.** *s-I WANT AGENTS ALSO.*
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4% Compound Interest has earned more millions than speculation. A Savings Account with The Union Trust Company is a better investment even than high grade stocks or bonds, because it earns as much as or more than those carrying the same margin of safety, and the value of the principal does not fluctuate, but is always worth 100 cents on the dollar. Then, too, your funds are available at all times. Deposits are subject to cheque without notice.

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scribble a remedy. Too high feeding and but enough exercise would cause it, in which case the remedy would be more exercise and lighter feeding and some loosening medicine. The sores might, however, arise from other causes, such as larcy or glanders, though this is not likely. They might also be caused by a direct injury or some depressed condition of the system. It is hard, therefore, to say what is the cause and the remedy to be applied, as the treatment will depend upon the cause. Try bathing with warm water and apply an antiseptic lotion to the sores such as 1 part of carbolic acid to 80 parts of water. If this does not help, a qualified veterinary surgeon should be called in to examine the horse.

Breast Swelling

My large work horse has a swelling between his front legs and on his breast; the horse is otherwise healthy. Can you tell me the cause of the lump?—I. B. Wilson, Green River, Ont.

It is impossible for us to tell the cause of the trouble without further information.

Borers

I have an orchard of fine trees about six or eight inches in diameter. They are dying off. The cause appears to be at the base of the tree, level with ground or below. The bark drops off all around the tree at this part. Some tell me that it is caused by borers, others say not. I would like to hear through your columns, from some of the apple growers, the cause and remedy. Would like the life history of the borer family; also any information on this line will be appreciated.

GEORGE COLEMAN.

Durham Co., Ont.

If borers are affecting your trees, you should readily be able to discover evidence of their work. In our next issue we will comply with your request for life history of these insects. We assume the trees are apple; if not, please let us know.

Clover Sickness

I note the following advice in a Province of Quebec paper: "What shall we do to prevent clover from dying out? Don't sow it too frequently." Would you consider this sound advice, as a general rule, to the average farmer? A reply in your next issue will oblige.

S. F.

Too frequent sowing sometimes causes clover to die out or make the land what is called "clover sick." This is an important subject and requires more space in dealing with it than we can afford in this issue. In our next we hope to be able to take it up and deal with it fully.

The Hoover Digger

Clean, fast work. It stands the wear and tear.



Favorite in every great state to provide the best of work making.

The Hoover-Font Co., Lock Box 12, Avery, O.

Well Drilling & Prospecting Machines.
Fastest drillers known. Great money earners.
LOOMIS MACHINE CO., TIFFIN, OHIO.

Rural Law

In this column will be answered for any paid, free of charge, questions asked. Make your questions brief and to the point. This column is in charge of a competent lawyer who, from time to time, publishes herein notes on current legal matters to farmers under the heading of "Legal Column." The Farming World, Toronto.

Difficulty over Lease

A rents a farm to B. The lease provides that "the lessor reserves the orchard out of the one hundred acres." The house is in the corner, the outside walls being in a line with orchard fence. (1) Has A or B the right to use the house? (2) Could B allow hogs to run in the orchard during the time of picking apples or at any time, as the lease reads that he is not to suffer or permit horses, cattle or sheep to have access to the orchard.

ONTARIO.
In order to express a conclusive opinion in regard to the rights of the parties, we would require to see the lease or a copy of it, as the question may have overlooked some words in it which have an important bearing on the matter referred to. We would also wish to know what the understanding between A and B was at the time the farm was rented as to which of them should have the use of the house. There must have been some understanding between them, and this would have an important bearing on the subject. Neither do you say whether the house is in the corner of the orchard or in a corner of the farm next the orchard. In regard to your second question, if A reserved the orchard absolutely, B has no right to have hogs or any other animals run it nor to make any use of it whatever. He could only use it or have animals run in it with A's permission.

No School Near

Myself and others live over three miles from any school by the nearest road. Our children cannot walk there. We have been complaining to our authorities about the matter for about two years, but nothing has been done in the matter? Our children have never been to school and we have taught them at home. Can we charge for the same?

Muskoka.

T. W.

"The Public Schools Act" (Revised Statutes of Ontario, Section 11) provides "that the Municipal Council of every township (except where township boards have been established) shall sub-divide the township into school sections so that every part of the township may be included in some section, and shall distinguish each section by a number; provided that no section formed hereafter shall include any territory distant more than three miles in a direct line from the schoolhouse." It is also provided that "no section shall be formed which contains less than fifty children between the ages of five and twenty-one years, whose parents or guardians are residents of the section, unless such section is more than four square miles in area, except in cases where such area cannot be obtained because of lakes or other natural obstacles."

Section 12 of "The Public Schools Act" provides that "in unorganized townships in any county or district, the public school inspector of the county or district may form a portion of a township, or of two or more adjoining townships, into a school section." No such section

shall in length or breadth exceed five miles in a straight line, and subject to this instruction, the boundaries may be altered by the inspector from time to time, to take effect as in the Act provided.

It is also provided in the same section of this Act, that "any person whose place of residence is at a distance of more than three miles in a direct line from the site of the schoolhouse of the section shall be exempt from all rates for school purposes unless a child of such ratepayer attends such school; but this exemption shall not apply to lands liable to taxation for school purposes owned by such person within the distance of three miles."

The parts of the Act we have quoted will give you the necessary information in regard to the forming of school sections and the size of same. In unorganized townships the size may be greater than in organized, but where the property on which a person resides is more than three miles away from the site of the schoolhouse and his children or some of them, do not attend the school, such property is exempt from payment of school taxes. If his children, or any of them, attend the school, he must pay the school taxes even though he live more than three miles away. And whether any of his children attend school or not, he must pay school taxes on any property he may own in the section within three miles of the site of the schoolhouse, even though he live on other property more than three miles away. Under such circumstances he cannot claim payment for teaching his children at home. The relief accorded him is that he does not have to pay school taxes on any property he may own distant more than three miles from the schoolhouse site where he lives more than that distance from the school and his children do not attend same.



Boy's Spavin
Cure the lameness and remove the bunch without scarring the horse—has the best looking result at it before the bluish can be put on.
Boy's Spavin Cure (Liquid)
is a special remedy for soft and semi-solid blenishes—Boy's Spavin, Thoroughbred, Blood, Cob, Calf, and other breeds. It is superior to all other remedies, but a remedy which is not a matter of doubt and is in fact. Easy to use, only a few drops, and your horse is all right.
Fleming's Vest-Pocket Veterinary Adhesive
describes and illustrates all kinds of blenishes, and gives you the information you might be interested in regarding any kind of a remedy. Mailed free if you write.
L. E. FLEMING, Chemist,
71 Church Street, Toronto, Ont.

An Infallible Cure

For Sprains, Ringbone, Splint, Curb, Swelling, Lameness and Soft Bunches, Kendall's Spavin Cure has no equal.

MONTREAL, P. Q., Sept. 12, '06.
"I have cured a number of horses and have used your remedies, which always proved infallible." D. Ballenger.
Be prepared—keep Kendall's always in the stable. Our book "Treatise on the Horse" free from dentists or

\$1 a bottle—6 for \$5.

Dr. B. J. Kendall Co.,
Enochburg
Falls,
Vermont,
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Twelve Y months old, choice lot o spare. Non satisfaction

CANNON

PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of the stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The Editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

The Farming World Man on the Wing

The residence of Messrs. Hodgkinson & Tisdale, known as Simcoe Lodge, is a fine farm property, beautifully situated on the shore of Lake Simcoe, a short distance from the busy town of Beaverton, on the lines of the G. T.R. and C.N.R. The land is slightly rolling in character with a good clay loam soil eminently adapted for growing heavy crops. Under the present management, however, it is essentially a stock farm, and its stables have for many years afforded shelter for some of the finest Clydesdales on the continent, more than one or two of the champions of America's leading shows being numbered among them. It was here that the great colt, Baron Sterling, breathed his last, a horse which was the sensation of a year. Here, also, stood such others as Foremost, a noted winner and sire in his day. At the present time at the head of a choice stud stands Royal Baron, repeatedly a winner at America's leading shows and now giving promise of proving himself to be one of the best breeding sires ever imported into Canada. He is a son of the great Baron's Pride, and on his dam's side a grandson of the famous Mount Royal, a great sire himself and sire of the equally great Royal Garty. In the same stable, and safe in foal to Royal Baron, is Pishire Lass, three years of age, and champion of the horse show of February, 1907. She is a grand, big, drafty filly, of good conformation, great quality and fine action. Her breeding shows a wealth of the best Clydesdale blood in Scotland. Sired by Time Enough, a good breeding son of Sir Everard, her dam is by the great Mares of Aries, and she boasts of such names as Prince Lavender, Lord Erskine, True Blue, Crown Prince, Young Lofty, Sir Colin and Superior behind that. Among the stallions standing for service at Simcoe Lodge are such individuals as Baron Stewart, a good, big drafty son of Lord Stewart, and on his dam's side shows such names as Crusader, Lord Lothian, Prince Henry, and Glancer as the sire of five worlded maternal ancestors. The promising horse MacKenzie is a son of Foremost, and his dam is the well-known Royal Princess, sired by the Royal Standard. Moss Rose is a fine aged brood mare, which has contri-

buted her share to the young stock of the farm, a daughter of Imp. Blucher.

In Hackneys are to be seen a good crop of youngsters sired by Storm King, a well-known winner and grand breeding stallion for a number of years at service at Simcoe Lodge. Will Cherry, and Cherry Blossom, sired by Storm King, are a pair of breeding mares with fine colts at foot sired by Storm King. At the present time there is standing for service at the farm, the smart and handsome Hackney stallion, Lynden Renown, now six years of age. He is a son of Daneleg's Son, and on his dam's side he shows the best blood of the Performers. A horse of all-round high class, he should prove a success in the stud.

The firm of Hodgkinson & Tisdale are all-round and enthusiastic horse-men. The horse that is not good enough to get a place in the best company is not good enough to stay at Simcoe Lodge. For many years only the highest class goods have been handled by the firm, and their reputation and connection in the horse business is as well founded as it is widely known.

The Dunrobin Stock Farm of D. Gunn & Son is another of the interesting spots of Beaverton. Some 500 acres of good land, kept to a queen's taste in point of tidiness, with its fine buildings, make a few hours spent at the place a treat of the most enjoyable kind. Mr. R. E. Gunn, the junior member of the firm, is a young man of good taste, skill and judgment, and during his course at the O.A.C. was a distinguished student. His work since taking up farming for himself has been characterized by enterprise and energy. Clydesdale horses, Shorthorn cattle, and improved Yorkshire swine have been specialties with him. In 1906, he imported from Scotland a large consignment of Clydesdale fillies, and their character bears testimony to his judgment. The firm are well prepared at the present time to meet the large and keen demand for breeding Yorkshire swine. They have seventy-five brood sows on hand, and have to offer about one hundred and twenty-five young sows and boars. The prices are right for the goods, and purchasers can make no mistake in or-

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.
A Safe, Speedy and Positive Cure For
Curb, Splint, Sweeney, Capped Hock,
Strained Tendons, Founder, Wind
Tuffs, and all lameness from Spavin,
Ringsbone and other bony tumors.
Cures all skin diseases or Parasitic
Thrush, Diphtheria. Removes all
Juncos from Horns or Cattle.

As a Human Remedy for Rheumatism,
Sprains, Sore Throat, etc., it is invaluable.
Every bottle of Caustic Balsam sold is
warranted to give satisfaction. Price \$1.00
per bottle. Sold by Druggists, or sent by
mail, charges paid, with full directions for
its use. Prepared for domestic markets,
Sydney, Australia. Sole Address
The Lawrence-Williams Co., Toronto, Ont.

Tuttle's Elixir



cures nearly all common horse ailments. When we say cure, we do not mean relief, we mean cure. No hair gone, yet. Get free "Veterinary Experience," 100 pages. Also the name of horse ailments and diseases. Write for copy.

Tuttle's Elixir Co.
120 Broadway, N. Y.
CANADIAN BRANCH
224, Market Street, Toronto, Ontario.

Seldom See

a big knee like this, but your horse may have a hunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.


ABSORBINE

will clean them off without laying the horse up. No blister, no hair gone. \$2.00 per bottle, delivered. Hook 8-C box. **ABSORBINE, JR.**, for man, \$1.00. Removes Soft Blisters, Cures Varicose Veins, Varicose, Hydrocele, Enlarged Glands, Ailays Pain. Mfd. only by

W. F. YOUNG, F. D. F.,
71 Monmouth Street, Springfield, Mass.
Canadian Agent:
LYMAN BONE & CO., Montreal.

Ontario Veterinary College, Ltd.
Most successful Veterinary Institution in America.
Prof. A. Smith, F.R.C.V.S., Principal.
Temperance St., Toronto, Ont.

Cattle and Sheep
Wanted. Give your name and address for material and sample. It costs nothing. Write to-day. F. G. JAMES, Bowmanville, Ont.



WEST MICHIGAN FARMS OCEANA
is the most profitable county in Ohio. Trade, Groceries, Cattle, Poultry, Stock, Poultry: \$10, \$20, \$50 to \$200 per Acre will produce 100 bushels corn, 100 bushels clover and for list. J. D. S. HANSON, HART, MICH.

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 some bred and ready to breed, boars fit for service, and younger ones of both sexes. Pairs and trios not skin.

J. W. BOYLE, Woodstock, Ont.

Oak Lodge Yorkshires

A large herd of choice Pigs of all ages on hand, quality guaranteed. No other herd has such a record in the show ring, covering several years. Oak Lodge type of hogs are profitable breeders and ideal bacon hogs. Correspondence solicited.

J. E. BRETTHOUR, Burford, Ont.

NIGHTSIDE FARM HERD

OF

LARGE ENGLISH BERKSHIRES

Twelve YOUNG BOWEN from five to eight months old, also Young Boars fit for service. A choice lot of Silver Grey Dorking Cockerels to spare. None but first-class stock sent out, and satisfaction guaranteed.

E. E. MARTIN,

CANNING P. O. - Oxford County,
Paris Station G.T.R.

dering what they want from this reputable firm.

Mr. John T. Gibson, of Denfield, Ont., has recently sold to Mr. Peter White, of Pembroke, a number of very fine Shorthorn heifers and young bulls bred by him. The prices paid were fancy ones for these days, but, as is well known, Mr. Gibson breeds and handles only high-priced stock. Mr. White is also to be congratulated upon the success which he is meeting with in the Shorthorn business. He is building up both a reputation and a trade of the highest character.

Gossip

Mr. L. O. Clifford, Oshawa, Ont., has recently sold a fine young Hereford bull to Mr. John Found, Durham Co., Ont.

For over 20 years, Mr. Thos. Baker, Elmdale Farm, Solina, Ont., has been a breeder of shorthorn cattle and an importer and breeder of Shropshire sheep and Welsh ponies. He has twenty-two head of shorthorns of high quality. His stock bull, Heather Prince 6392, was recently purchased from John Dryden & Son, Brooklyn, Ont., and is doing well. He was a winner at Toronto and West. Among the females are Village Fairy Vol. 21, and Missie of Avondale 2nd 449941, with others of equally good quality. The youngsters are an up-to-date lot. One of the bunch, Bedford Lad, 85231, will doubtless give a good account of himself in the show ring, as he is a very promising youngster.

Mr. Baker's Shropshires number 60 in all, both imported and home bred. The imported animals were selected by Mr. Baker himself from the best flocks in the old land.

The Board of Agriculture of Georgetown, Demarara, British Guiana, has purchased, through the Dominion Department of Agriculture, some Canadian pure-bred stock that should give a good account of itself in that colony. A six-months-old Berkshire boar has been selected from the herd of Thos. Teasdale, Concord, Ont. At the Sittyston Grove dispersion sale, the Shorthorn bull, Rosebud Champion, bred by W. C. Edwards & Co., and sired by Missie Champion, was purchased for this shipment. Mr. J. B. Spencer, Assistant Live Stock Commissioner, made the selections. A pair of yearling Shropshire rams are yet to be selected. These will probably be purchased in Nova Scotia. The lot will be shipped from Halifax, as there is direct boat connection between that port and Georgetown.

Messrs. D. O. and B. A. Bull, of the well-known firm of B. H. Bull & Sons, Brampton, Ont., attended the famous annual sale of Jerseys of T. S. Cooper & Son, at Coopersburg, Penn., on May 30th.

In sending in their advertisement for this issue, Messrs. Bull & Son state that their herd of Jerseys has wintered well and that they never had such large returns in milk yields as this season. They have a four-year-old cow, Brampton Monarch Pet, just freshened, that is giving 45 lbs. of milk per day. This cow, after milking seven months, won a second place in the three-year-old class at Toronto Exhibition in 1906. They have bulls from such cows as this that intending purchasers would do well to inquire about.

...NOTICE...

Owners of imported Clydesdale Stallions or Fillies, not yet recorded in the Clydesdale Stud Book of Canada, are urged to do so at once, as under the new regulations regarding the registration of imported Clydesdales, only those bearing registration numbers in the Clydesdale Stud Books of Great Britain and Ireland, and whose parents and grand parents are similarly recorded, will be eligible for registration in the Clydesdale Stud Book of Canada, after July 1st, 1907. Address

ACCOUNTANT—NATIONAL LIVE STOCK RECORDS,
DEPARTMENT OF AGRICULTURE,
OTTAWA, ONT.

J. W. SANGSTER, Sec'y.,

Clydesdale Horse Association of Canada.



CLYDESDALES SORBY - GUELPH

I HAVE SOME FINE
BREEDING HORSES FOR SALE
INCLUDING THE FOLLOWING
TWO GOOD YOUNG CLYDESDALE STALLIONS
(BY HIAWATHA GODOLPHIN)

HACKNEY STALLIONS 1 Three-year-old, by Mathias; 1 Four-year-old, by Gaiymaster; 1 Five-year-old, by Duke of Richmond; 1 Three-year-old, by Administrator
Some very choice Hackney Mares, by Edinmar, Polonais and Duke of Richmond.
Clydesdale Mares by Mareuil, Baroness, Sir Ronald and Cathusiae.
A car load of Clydesdale Fillies and the grand Clydesdale stallion, BARON KITCHENER, will also be landed shortly.
Write for particulars.

W. E. BUTLER, Ingersoll, Ont.
LONG DISTANCE PHONE



Unreserved sale of Messrs. Rawlinson Bros. Hackneys
CALGARY, ALBERTA, CANADA

The proprietors having sold their Ranch and intend leaving the country the entire stud will be sold by PUBLIC AUCTION, on JULY 24th, 1907 at the Ranch 11 miles west of Calgary, Alta. The stud includes—Imported and home bred Stallions, Brood mares, yearling, two, three and four year old colts and fillies.
Nearly all the best mares the champion "Robin Adair" ever got in this stud are included in this sale together with full sisters to "Saxon" Pricilla and Minnie who won everything in sight at all the Eastern Shows including the championship of both sexes at the St. Louis World's Fair. Catalogues will be ready for distribution on June the first, which may be had together with full particulars from

JORDISON BROS., Auctioneers P. O. Box 1172, CALGARY, Alta.

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Maple Hall Shorthorns

The preface to the catalogue of the famous Maple Hall herd of Shorthorns, owned by Mr. David Birrell, of Greenwood, Ont., contains some interesting reading for breeders. It is a valuable piece of Shorthorn literature, recounting as it does the establishment in this country of the Crimshaw Flowers and other families which have done so much to improve the quality of Canadian-bred Shorthorns. Nearly forty years ago, says the writer, the present proprietor, with Mr. Arthur Johnston, invested in a few choice females and began the breeding of Shorthorns at Maple Hall Farm.

Early in the life of the herd it became the aim of the proprietors to keep at its head the best bull obtainable, and this principle has been adhered to up to the present day. Sometimes, without any warrant that the prevailing prices would justify the outlay, the firm believed that now more than ever certain that the best to make a fair return for the cost of production, encouraged the proprietors to stick firmly to their purpose. Sometimes this determination, together with the desire to add to the female part of the herd when a choice cow, either imported or bred in America, was available, made demands on the treasury that only were justified by a faith in the future of the policy and the breed that could not be shaken.

The policy outlined has long since proven to be the only safe one, and results have been accepted by Shorthorn breeders in America as justifying the means that have been adopted in making the Maple Hall herd.

The proprietor is essentially a breeder and not a speculator in Shorthorns. The herd is still largely composed of the same blood upon which it was founded, reinforced by a list of sires which will be remembered by those who have watched the development of the herd as being without an exception of the very highest class in Shorthorn character, constitution and feeding qualities.

While the first consideration has always been individuality, the belief has for many years been well grounded, that when seeking individuality it was nearly always found in the greatest perfection where the breeding was of the kind favored by the keen business Shorthorn breeders in Aberdeenshire.

No herd has ever been bred with less prejudice or preference in any line of breeding, yet in seeking the individual we have found with it such breeding that the herd may be considered as straight Scotch, in the strictest sense of the term.

Imported Crimshaw Flower was one of the first imported cows to be chosen, and she was one of the early members of the herd. From her have been bred several animals that have won the greatest achievements in the show yards of Canada and the United States. But the greatest triumphs of this grand family have been in the array of sires and grand breeding matrons which they have given to the breed. She was a wonder in money-making, and her descendants have been of the kind that would make great profits if given half a chance.

Blythesome Girl 2nd, whose sire and dam were imported, ranks next in the list so far as numbers of her progeny go, there being five females and one bull in the herd. They are of Cruickshank Butterfly family, as bred by the late W. S. Marr, and known in his herd as the Blythesome family. There can be no better breeding, and they promise to do as well for the Maple

Hall herd as they have done for others.

Of the Cruickshank Duchess of Gloster family, there are two females and one bull. They are the straightest bred Duchess of Glosters in the world and are very much appreciated.

Two Shepherd Rosemarys have given promise of paying their way since they were added to the herd some little time ago. This has been a very prolific and valuable family in the hands of Mr. Shepherd, in Aberdeen.

Two Lavinia females, five of the old favorite family called the Munies, with two bulls of this latter family, make the herd, with the exception of the great sire at its head.

Royal Prince—26675—(71490) is a Golden Drop without an objectionable feature in his breeding, either in pedigree or individuality. His sire was a successful show bull and his dam a successful show cow. He is a wonderful sire and a great bull. His calves in 1905, when the herd in which he had been in use was dispersed, sold

for a higher price than the calves from any sire in Canada during that year. They have won a great many prizes and are unsurpassed as breeders.

The herd is not kept in show form, but their natural form shows them to be thick and valuable cattle.

Millcrest Clydesdales

We have now for sale 8 imported fillies, sired by such sires as Royal Favorite, Giant Chaitan, Sir Hugo, Baron Mitchell and Marmon, etc. Seven being 3 years old and broken to harness. Long Distance Phone. Manchester P.O. and Station, G.T.R., Myrtle, C.P.R.

R. M. HOLTBY.

GRAIGIE LEA STOCK FARM

HIGH CLASS

Hackneys and Clydesdales

Some fine performers for sale. Apply

H. J. SPENCLEY, Box Grove, Ont.

DUNROBIN STOCK FARM

Clydesdales Shorthorns Yorkshires

Booking Orders Ahead

Order your young large Varkshires from the choice of the fillies of our seventy-five brood sows to farrow in a few weeks 125 young boars and sows now on hand. Pairs not akin a speciality. Write for prices. Inspection invited. Customers met at G.T.R. or C.N.O.R. stations on notification.

DONALD GUNN & SON, Beaverton

Long Distance Phone,

P.O. and Sta.

SMITH & RICHARDSON

IMPORTERS OF

HIGH CLASS GLYDESDALE HORSES

We have now on hand only the choice imported cuts, Dashing King 3 years old, and Baron Columbus, the Toronto winner, as a 2 year old. Also a couple of good Canadian 7 and 3 year olds.

Come and see them at their stables at

COLUMBUS, ONTARIO

Oshawa Station, G.T.R.

Myrtle Station, C.P.R.

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 loan from any one wanting a rare good one. Terms to suit. Long Distance Phone.

LISTOWEL P.O. AND STATION

Graham & Renfrew's

CLYDESDALES and HACKNEYS

Our Clydes now on hand are all prizewinners, their breeding is gilt-edged. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Yonge Street cars pass the door every hour. Phone North 4483.

GRAHAM & RENFREW, Bedford Park, Ont.

Dalgety's Clydesdales

I have at the present time to offer a few splendid individuals that combine weight, size, conformation, quality and style with soundness and unexcelled breeding. My prices are right for the goods, and terms reasonable. Come and see my latest importations at their stables, London, Ont.

JAS. DALGETY, Fraser Hotel, LONDON, ONT.



Guelph Fat Stock Club

The twenty-sixth annual meeting of the Guelph Fat Stock Club was held on May 18th, when the following officers were elected—President, A. W. Tyson; Vice-President, W. R. Elliott; Second Vice-President, A. E. Meier; Secretary-Treasurer, J. M. Duff; Auditors, W. W. White and C. L. Nelles; Honorary Presidents, James Millar, J. M. Duff, R. Cunningham, A. F. H. Jones.

Montreal Horse Show

The eighth annual "Horse Show," held the middle of last month, equaled all previous ones and was the most successful from all standpoints. A few years ago it was of interest to only a few local horsemen, but it has grown steadily in importance and is looked forward to with interest by Montrealers. It has become a great social function as well as an exhibit of horsemanship and horse education, and to spend an evening at the "Horse Show" is accounted among the most delightful experiences of the season. There was a distinct gain in attendance, and a higher standard of quality in the entries.

The Arena was dressed in its very best. Who would have recognized the great "hall of hockey" in that dreamland of color and incandescent lights every evening? The plain interior disappeared under the magic hand of the decorator, and it looked a fairy palace indeed, where to the music of a hidden band, gallant horsemen carved past the rows of fair women, and bowed beneath the applause.

Then the entertainment itself carried its weight of interest. The spectacular being truly in evidence each evening, yet the interest was thoroughly maintained up till the close of the show, especially in the final event of the program, the Corinthian class, where nearly an hour and a half was taken to reach a judgment.

Although this is not considered a "farmers' show," farmers and their boys were there in large numbers. Excursions were run on all the railroads, thus allowing them the privilege of travelling on reduced rates, and although many of them realized that they could not come up to the exhibitors in horsemanship and performance, yet the show was an educator, in that it gave them an idea of the style of horse that was required for use in the city.

Space will not permit of going into the details of all the classes, but it will be in place to mention a few of the most important to this part of the world. In the Clydesdale class, open to stallions any age, standing in the Province of Quebec, 1st prize went to Baron Silloth (imp.), owned by Robert Ness & Son, Howick, Que. They also won 2nd on Vanderbilt, (imp.), while the 3rd prize went to Sweet Everard, owned by Harold M. Morgan, Ste. Anne de Bellevue, Que.

Standard-bred Roadster stallions, standing in the Province of Quebec, 1st, King Antidote, owned by Jas. S. Row, Bourdeaux; 2nd, went to J. B. Ethier, of St. Alex, for his chestnut, Frank Muscovite; 3rd to Geo. Jordan, Westmount, for a brown horse, Eli Alerton.

The Hackney class had five entries, and they were excellent specimens of this popular breed of horses. As this event also was open only to stallions standing in the Province, and the competitors being all from out-of-town points, it is assumed that the

Hackney is becoming very popular in our country districts. The winner of the blue ribbon was the handsome dark chestnut, Duke of Blackpool, standing 15 3/4, very blocky outfit, with great knee action, and showing good speed to the halter. He is owned by Dr. John Watson, Howick, Que. 2nd place went to a splendid brown 4-year-old owned by A. & J. Hay, of Lachute, Que.

But it was in Class 8 where interest was displayed. Nine horses entered to compete for the Governor-General's prize, for best mare or gelding bred in the Province of Quebec, suitable for saddle or cavalry purposes. After looking the lot over carefully, the judges decided that Mr. John Brodie's bay mare, Norma, was the best of the bunch, with Mr. David Brown's Victoria a close second.

Possibly the largest class was the exhibit of Polo ponies. Eighteen grazed the tan-bark. In the heavy-weight qualified hunters' class there

was some magnificent jumping. The ladies' saddle events brought out some attractive mounts and witnessed some splendid riding.

The children's performance on the morning of the show furnished the youngsters (and the older ones as well) with a sport that appealed to them as ideal. The manner in which the little ones handled their horses is to be commended. Possibly the youngest driver ever seen in the showing was Master Lothar Reinhardt, only five years of age, who piloted the bay mare, Strawberry, and captured 3rd place. And the youngest rider was Miss Evans, daughter of Capt. Evans, only 12 years of age.

No Canadian Horse Show would be complete without the Hon. and Mrs. Adam Beck, of London, Ont., who had a number of entries and captured a round dozen of blue ribbons, besides a number of second and third prizes. Mr. Geo. Pepper, of Toronto, carried off a share of the prizes, as also

did Dr. S. Ont. and Among the Quebec w. tague All Alex. Ste- W. Evans Lewis, W. Lett McLee McCaig, I

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BRAMPTON JERSEYS

CANADA'S PREMIER HERD

Strengthened regularly by importations from United States, England and the Island of Jersey.

We have animals of all ages and both sexes for sale, and the largest herd in Canada to choose from.

Write for prices and particulars.

Long Distance 'phone at farm.

B. H. BULL & SON, Brampton, Ont.

Clydesdales, Hackneys



I have just landed a splendid shipment of Clydesdale Stallions and Fillies, and several very fine, flashy and good going Hackney Stallions. The Clydesdales include horses sired by Baron's Pride, Hiawatha and Marcellus and other noted sires.

Parties desiring something choice can find it at right prices at my barns at Millbrook, Ont., or at Regina, N. W. T.

**T. H. HASSARD, V.S., Proprietor,
MILLBROOK, ONT.**

**J. C. FYFE, V.S., Manager,
REGINA, N.W.T.**

Maple Cliff Dairy and Stock Farm

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Clydesdale Horses Berkshire and Tamworth Pigs

FOR SALE—Two Imported Clydesdale Stallions, six years old; one Imported Hackney, five years old; five Berkshire Boars, fit for service.

R. REID & CO. Hintonburg, Ont.

BURNSIDE AYRSHIRES.

My new importation comprises a number of the deep, smooth, stylish cows, with dairy qualities strongly developed. I can furnish showing cattle and grandly bred bulks and heifers of the right kind at a reasonable price. If in want of something good and something useful drop me a line.

R. R. NESS, Howick, P. Q.

THE

L. O. CLIFFC

PURE-BR
Five young bulks
sale. Correspond

DAVID McRAE,
importer and breeder
Clydesdale horses &
animals for sale.

did Dr. S. H. McCoy, St. Catharines, Ont., and Dr. W. A. Young, Toronto. Among the successful exhibitors from Quebec were A. E. Ogilvie, Sir Montague Allan, Mrs. Colin Campbell, J. Alex. Stevenson, James Ross, Capt. W. Evans, W. R. Miller, F. Orr Lewis, W. R. Nette, M. F. H., Barrett McLeaman, Montreal, and J. R. McCaig, Huntingdon, Que.

"HABITAT."

Sittytown Grove Sale

The sale of the Sittytown Grove herd of Shorthorns on May 24th was a notable one. It was record-breaking in some respects, the average price realized being in advance of that of any recent sale of Shorthorns in Canada. Col. Bellows, Maryville, Mo., Capt. T. E. Robson, London, and Geo. Jackson, Port Perry, were the auctioneers, and it is needless to say, did their work well.

It is now nearly half a century since the Sittytown Grove herd was founded by the late James I. Davidson. He had but one aim at that time and that was to found a herd of Shorthorns that would be money-makers, good cattle of the easy-feeding early-maturing sort. The production of such cattle was adhered to and real worth accompanied every pedigree. From the first the herd paid its way. In the early seventies importations from the original Sittytown began to reach to new Sittytown. Absolutely useful became the motto, instead of absolutely pure, and a new ideal was set up before the Shorthorn breeders of America. This was partly brought about by the introduction of Crickshank cattle to Sittytown Grove, but more through the success of their progeny in the shows of Canada and the United States. So marked was the change in public opinion that new and different blood was needed by Shorthorn breeders, and Sittytown Grove became the centre of attraction amongst breeders in America, and the good that resulted from visits of the leading breeders to the mecca cannot be estimated.

Between the proprietors of the Old and the New Sittytown, there existed a feeling of confidence and esteem that would more properly be described by the use of the word "affection" than "friendship." Opinions were freely exchanged, advice was asked of and cheerfully given by the sage of the older Sittytown, and this advice, coupled with the skill and knowledge of the local situation, possessed by the late proprietor of the newer Sittytown, worked together for the good of the Shorthorn and its owners on this continent.

Circumstances over which human beings have no control, made it necessary to sell the herd, and the work of a lifetime turned over to the care of those who buy the cattle.

The son and namesake of the founder of Sittytown Grove offered everything without reserve, and that

such good prices were received is a guarantee that he has closely followed in the footsteps of his honored father in building up and maintaining the herd. Forty-eight heads, including a large number of calves, were sold. The highest price was \$910, paid by J. T. Gibson, Denfield, Ont., for the fine three-year-old bull, Village Secret, of Pine Grove breeding. Mr. James I. Davidson is to be congratulated upon the success of the sale. It was a success in every way. The following is a list of the sales.

FEMALES.

Ruby of Pine Grove, cow, to Thomas Johnson, Columbus, Ohio,	\$400
Village Fairy, 7th, 4 years, to F. W. Harding, Waukesha, Wis. 335	
Heifer calf of same, to F. J. Johnston, Ohio,	105
Village Fairy, 6th, 3 years, to Earles & Stanton, Milwaukee, Wis.	295
Bull calf of same to W. J. Shean, Owen Sound,	130
Village Beauty, 11th, 1 year, to Thomas Johnson,	235

PINE GROVE STOCK FARM

Breeders of High Class Scotch Shorthorns, Choice Shropshire Sheep, Clydesdale and Hackney Horses.

James Smith W. C. Edwards & Co.,
Superintendent. Proprietors.
Rockland, Ont., Canada.

MAPLE LODGE STOCK FARM

Scotch Shorthorns, Choice Milk- ing Strains. Prize-winning Leicester. Young Stock for sale—imported and home bred.

A. W. SMITH, Maple Lodge P.O., Ont.

Maitland Bank

STOCK FARM

Choice bred Shorthorns. A fine crop of young stock bred on choicest lines to choose from. Can supply a number of fine young bulls at square prices.

D. MILNE & SON, Label P.O. and Sta. G. T. R.



HOLLYMOUNT STOCK FARM

MITCHELL, ONT.

A choice lot of young bulls for sale—promising herd heading off the most desirable breeding.

W. J. THOMPSON,
Mitchell, Ont.

SHORTHORNS

so Imported and Canadian bred. Young stock always for sale, male and female, top crossed by such bulls as Baron's Heir (imp.), Derby (imp.) and Golden Abel (imp.). The imported Bruce Mayflower bull Royal Bruce 5508, heads the herd.

R. J. DOYLE, Owen Sound, Ont.



THE YOUNG BULLS FOR SALE AT

MAPLE SHADE

are the most uniform lot that we ever offered. They have the best breeding, which is shown in the catalogue, where you can see the ruckshank bulls used in the herd. The value of this good breeding is best shown by a look at the animals.

Come and see them. Ask for a catalogue.

JO N DRYDEN & SONS, Brooklin, Ont.

Maple Avenue Stock Farm

SHORTHORNS, LINCOLNS, TAMWORTHS

A few fine young bulls fit for service. Choice breeding and character.

Some fine Lincoln, Cotswold and Shropshire sheep for sale.

Two grand young Shire Stallions and a number of Welsh Ponies for sale.

Will buy any quantity of Canadian pure bred Shropshire, Hampshire, Lincoln and Cotswold rams.

F. H. NEIL & SON

Phone at Residence

Lucan P. O. and Sta. G. T. R.

MEADOWVALE FARM

High class Shorthorns from recent imports. Fines Tamworth Swiss bred from prize winner Toronto, London; prize winning Leicester Shires, Toulouse cows. For Sale 1 Bu 1 three-year-old 7 Bull Calves. Heifers, all ages, Cows in calf, 1 Tamworth hor., and young stock.

L. E. STAPLES, Ixa, Ont.

12 Shorthorn Bulls

FOR SALE

from 16 months to two years old. Several of their dams of grandams winners in Toronto. Prices very moderate.

J. & W. RUSSELL,
Richmond Hill, - Ontario.

Shorthorns and Yorkshires

your choice IMPORTED BULL

COWS AND HEIFERS.

A fine lot of in-pig YORK SOWS and BOARS fit for service. Also a grand lot of YOUNG PIGS for hipment in March. Write for what you want.

H. J. DAVIS, Woodstock, Ont.

SHORTHORN BULLS FOR SALE

"Gold Mine (imp.)" - 80342 - cot Archer 89003. Bred by Scottish Prince, winner of sealor championship Toronto Exhibition, 1906. Dam, Scotch Thistle Second, imp.

F. A. GARDNER,
Britannia, Ont., Peel Co.

R. A. & J. A. WATT

offer for immediate sale to clear this season's offerings of bulls

Two High Class Red Bulls

bred in the purple

For a quick sale they will be sold below their value.

Salern, Elora Sta., G. T. R. and C. P. R.

JOHN GARDBOUSE & SONS, Highfield, Ont.

Breeders of Scotch and Scotch-topped Shorthorns, Shire Horses, Lincoln and Leicester Sheep. A good selection of young stock of both sexes for sale.

Farm 2 1/2 miles from Weston station, G. T. R. and C. P. R., and electric cars from Toronto.

ELMDALE STOCK FARM

THOS. BAKER, SOLINA, ONT.

Breeder of Shorthorns, and Importer and Breeder of Shropshire Sheep and Welsh Ponies.

Young stock for sale.

Long Distance 'Phone

THE MAPLES

L. O. CLIFFORD, OSHAWA, ONT.

PURE-BRED HEREFORDS

Five young bulls and a few choice heifers for sale. Correspondence solicited.

DAVID McCRABE, Janefield, Guelph, Canada, Importer and Breeder of Galloway cattle, Oriskany horses and Cotswold sheep. Choice animals for sale.

Breeders' Directory

CARDS under this head inserted at the rate of \$3.00 per line, per year. No card accepted under two lines, nor for less than six months.

Horses

- SMITH & RICHARDSON**, Columbus, Ohio.
See large ad.
- J. M. GARDHOUSE**, Weston, Ont.
See large ad.
- THOS. MERCER**, Markdale, Ont.
See large ad.
- R. E. NESS**, Howick, Que
- HODGKINSON & TIDALE**, Heaverton, Ont.—
Clydesdale—Stallions and fillies for sale.
- JOS. EADY**, Vore P. O. and Stratton, G.T.R.—
Clydesdale stallions and fillies, imported and
Canadian bred. High prices for the goods.
- ALEX. McREGGOR**, Ukridge, Ont., Import-
ers of Cycle Stallions and Fillies for sale.

Sheep

- LLOYD JONES**, Burford, Ont. A fine selec-
tion of choice home-bred and imported
Shropshire Sheep.
- J. A. JULL**, Burford, Ont. Oxford Downs
About 25 head of choice young lambs. Also
a few breeding ewes. All by Imported Rams.
- J. C. ROSS** Jarvis, Ont. Cotswold Sheep.
Prize-winners at America's leading shows.
Imported and home bred. Also some good
Clydesdale Horses.
- JOHN GARDHOUSE & SONS**, Highfield, Ont.
See large ad.
- J. M. GARDHOUSE**, Weston, Ont.
See large ad.
- JOHN DYDEN & SON**, Brooklyn, Ont.
See large ad.
- GEO. B. ARMSTRONG**, Bowhill Stock Farm,
Leicester, Ont.—Leicester breeding ewes.
Prize winners.
- PETER ARKELL & SONS**, Teeswater, P. O.
and sta. C.P.R. Midway, G.T.R. Oxford
Down Sheep, showing and breeding stock,
imported and home bred.
- THOS. ARKELL**, Teeswater, Ont., sta. C.P.R.:
Midway, G.T.R. Choice breeding stock,
Oxford Down Sheep.

Swine

- JOHN ELLENTON & SON**, Horkby, Ontario.
Choice young Yorkshire and Berkshire Swine.
- P. O. COLLINS**, Rowsellville, Ont., breeder of
Yorkshire Swine, Good Young Stock for
sale.
See large ad.
- E. BRETHOUR**, Burford, Ont.
See large ad.
- JAS. WILSON & SONS**, Fergus, Ont., breeders
of Yorkshire Swine. Young Boars and
Sows of choice breeding for sale.
- J. COWAN**, Donagat P. O., Atwood Sta., G.T.R.
Choice breeding stock in Leicester Sheep
and Berkshire Swine.
- D. N. GLAZIER**, Marshall, Ont., Yorkshire
Whites and Holsteins. Young stock for sale.

CATTLE

- PURE SCOTCH-TOPPED SHORTHORNS**.
Young stock of both sexes for sale. J. MAE-
SHALL, Jackson P. O., Ont. Tars Station, G.T.R.
- ROBERT SHAW**, Brantford, Ont., breeder of
Galloway Cattle. Young stock of both
sexes for sale.
- W. J. THOMPSON**, Mitchell, Ont.
See large ad.
- JOHN DYDEN & SON**, Brooklyn, Ont.
See large ad.
- HENRY REED**, Mimosa, Ont.—Herefords.—
Young stock for sale. Write us.

- THOS. ALLEN & BROS.**, Okawa, Ont. Short-
horns—Glacier, Hamlets, Normans families.
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- M. ACDONALD COLLEGE**, Ste. Anne de Belle-
vue, Que.—Ayrshire.—The famous Reford
Herd at Ste. Anne de Bellevue, Que., now owned
by Sir William C. Macdonald. Several yearling
bulls for sale; also a number of bull calves.
Quality and appearance general; bred from
the best milking strains, noted for robust con-
stitution and large tests. Write for particulars.
- H. SMITH**, Exeter, Ont.
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- JOHN BRYDON**, Milverton, Ont., G. T. R.—
Breeder of Shorthorn cattle.
- GEO. B. ARMSTRONG**, Bowhill Stock Farm,
Leicester, Ont.—Imported and Home-
bred Short horns for sale.
- W. F. STEPHEN**, Box 163, Huntington, Que.
Young stock, both sexes.
- JOHN DAVIDSON**, Ashburn, Ont.—Myrtle,
L.E.C. and C.P. Some grand breeding
young stock, sired by Village Secret and other
toppers. Prices right for the goods.
- GLEN GOW SCOTCH SHORTHORNS**, from
such choice strains as Imp. Westing Gift.
Young stock sired by Killbuck Hearty bull, Imp.
Ben Lomond and Imp. Joy of Morning. Some
fine young bulls from six months to months
of age; also some very fine females. Prices right.
Wm. Smith, Columbus, Ont.

Miscellaneous

- JAMES DOUGLAS**, Galesden, Ont.—Short-
horn cattle, Leicester Sheep. Stock for sale.
- J. T. GIBSON**, Denfeld, Ont., Sta. G.T.R.—
Imported and Home-bred Scotch Sheep.
Choice breeding stock in Lincoln Sheep.
- RICHARD GIBSON**, Delaware, Ont.—Short-
horn cattle and Clyde Horses, Yorkshires.
We guarantee satisfaction to all small orders.
- Lavender Beauty, 4th, 2 years, ... 285
to R. E. Johnston, Regina.
- Lavender Beauty, 5th, 2 years, ... 430
to Barles & Stanton.
- Joyce, 6th (imp.) with calf, to
John Miller, Brougham, Ont. ... 290
- Joyce, 7th, 2 years, to George
Miller, Brougham, ... 110
- Juanita, 10th (imp.) 6 years, ... 260
to W. J. Shean.
- Her Red, bull calf, by Village
Secret, to Thomas Johnston ... 380
- Blue Bell (imp.) and calf, to
John Miller, ... 410
- Roan Missie, 3 years, to Earles
& Stanton, ... 360
- Cherry (imp.) and calf, 7 years,
to John Bright, Myrtle, ... 210
- Sittytown Fame, 2 years, to F.
R. Cromwell Cookshire, Que. ... 120
- Zoe of Pine Grove, 5th, 2 years,
to Earles & Stanton, ... 280
- Claret (imp.) to W. J. Abernethy,
Bond Head, ... 275
- Her bull calf, by Rosebud Cham-
pion, to G. G. Gold, Edgar
Mills, ... 125
- Rosebud Blossom, 6 years, to J.
M. Gardhouse, Weston, ... 195
- Roan Blossom, 6 years, to Wil-
liam Tink, Columbus, ... 110
- Her heifer calf, by Village Secret,
to Silas Buckler, Raglan, ... 110
- Golden Beauty, 2 years, to Er-
nest Beer, Bethany, ... 130
- Golden Flower, 1 year, to James
Watson, Sonya, ... 150
- Golden Rose, 1 year, to Earles
& Stanton, ... 110
- Golden Beauty, 4 months, to W.

- J. Shannon, ... 49
A full sister, 1 year, to J. M.
Gardhouse, Weston, ... 85
Royal Wimple and calf, 3 years,
to J. T. Gibson of Denfeld, ... 250
Wimple's Royal, 2 years, to
Earles & Stanton, ... 310
Beatrice, 8th, 2 years, to James
Miller, Ballantyne, ... 190
Her roan bull calf, by Cherry's
Prince, to J. M. Gardhouse, ... 60
Beatrice, 2nd, and calf, to W. M.
Oakes, Illinois, ... 135
Lovely of Pine Grove, 4th, 2
years, to Col. F. G. London,
Oregon, Ill., ... 270
Bloom, to Thomas Pilkey, Wex-
ford, ... 85
Lady Aberdeen, 2nd, 3 years, to
William Shannon, Oakwood, ... 220
Victoria Royal, 6th, and calf, 6
years, to William Tink, ... 200
Louisa of Ivanhoe, 2 years, to
W. H. Cassie, Ashburn, ... 105
Gloster of Ivanhoe, 1st year,
to Hon. John Dryden, ... 135

BULLS.

- Village Secret, 3 years, to J. T.
Gibson, ... \$910
Rosebud Champion, 2 years, for
British Guiana government,
by J. B. Spencer, ... 200
Claret's Prince, 1 year, to Thos.
Pilkey, Westford, ... 100
Village Captain, 1 year, to
James Wilkin, Balsam, ... 95
Cherrie's Choice, 2 years, to
Peter Christie, M.P., Manches-
ter, ... 215
Sittytown Monarch, 1 year, to
James Taggart, Sonya, ... 140
Sittytown Champion, 1 year, to
E. & C. Parkinson, Thornbury,
Ont., ... 135
Sittytown Fame, 1 year, Lister
Bros., Pontiac, Mich., ... 350
Koroska, 1 year, white, to H. E.
Reid, Vermilyea, ... 65
Mina's Secret, white, to Wil-
liam Corbett, Pontypool, Ont., ... 130

Average.
38 females sold for \$ 7,825... \$205.96
10 bulls sold for ... 2,350... 234.00
48 head sold for ... 10,165... 211.77

Cooper's Jerseys Make a Record

The annual sale of Jerseys held by
T. S. Cooper & Sons, Coopersburg,
Pa., on May 30th, was a record-
breaker so far as prices go. The im-
ported bull, Stockwell 75264, A.J.C.
C, sold for \$12,500, a price for Jer-
seys that has never been equalled on
this continent. A bull that not one
year old sold for \$10,200. The 124
head sold brought \$93,950, or an
average of \$757 each.

Fleming's Limp Jaw Cure
The first remedy to
cure Limp Jaw was
Fleming's Limp Jaw Cure
and it is now sold by the standard drug
stores with orders and money back if it
fails. Don't experiment with substitutes
but get the original Fleming's Limp Jaw
Cure over folks. Our fair plan of sell-
ing together with our money back guaran-
tee on Limp Jaw and its treatment, is given in
Fleming's Vets-Pocket
Veterinary.

Most complete veterinary book ever printed
to be given away. Describes bones (included
and illustrated). Write us for a free copy.

FLEMING BROS.
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Market Review and Forecast

The Trend of Markets—Supply and Demand—The Outlook

Toronto, May 31st, 1907.

The cold weather has had an injurious effect upon trade as well as upon the crops. The regular spring trade has been shortened, and wholesalers are now directing some attention to the fall trade, the prospects for which will depend a good deal on the outlook for crops. But should there be a lacking in the yield of crops, it may be compensated by the higher prices that are likely to prevail. Money is in keen demand for mercantile purposes, and discounts rule at from 6 to 7 per cent. Money is reported easier in New York and there are signs of improvement in the old land. The marketing of last year's western wheat, which is likely to follow the opening of navigation will relieve the money scarcity in Canada considerably.

WHEAT.

The advances in the price of wheat in the recent boom is somewhat sensational. At Chicago there has been an advance of 26 1/4c. per bushel in eight weeks. Speculators appear to have control of that market and are endeavoring to manipulate things to suit their own purposes, as the price will vary from 3c. to 4c. per bushel in as many days. But, outside of the speculative element altogether, there are good and sound reasons for the advance. Generally, the crop outlook is not bright, and unless good growing conditions prevail between this and harvest, there will likely be a big shortage in the coming crop. On the other hand, it is well to remember that the supplies of wheat in sight are in excess of what they were at this time last year. The recent fine weather has caused many western farmers to change their minds and sow wheat, so that the acreage may be a good deal larger than was expected. Wheat prices are firm. No. 2 red or white winter wheat is quoted at 88c., and mixed at 87c. to 88c., shippers' quotations.

COARSE GRAINS.

The oat market is very firm, and quotations here range from 44 1/2c. to 47c. at outside points as to quality. On Toronto farmers' market, oats sell for 49c. to 50c. per bushel. The barley market is quiet here, at 52c. to 54c. at outside points. Peas are quoted at 79c. to 80c. per bushel. The corn market is strong, due, no doubt, to the demand for feed owing to the continued cool weather. No. 3 American yellow is quoted at 62c. to 63 1/2c. per bushel in car lots Toronto. There has been an increased demand for bran for feeding purposes and prices have ruled firm at \$21 to \$22, and shorts at \$22 to \$23 per ton at outside points.

HAY AND STRAW.

Owing to farmers having to feed their stock a couple of weeks later than usual, the price of hay has advanced. At Montreal, halved hay is

quoted at \$16 to \$17; clover, mixed, at \$15 to \$16, and clover at \$14 to \$15 per ton. Here the market is firm at \$13 to \$14 for No. 1 Timothy, and \$11.50 to \$12.50 for secondary grades in car lots, Toronto. On the local market here, loose hay is quoted at \$15 to \$17 per ton for Timothy and \$10 to \$13 for mixed. The outlook for a big hay crop just now is not the brightest.

Baled straw rules steadily at \$6.75 to \$7 per ton in car lots, Toronto.

SEEDS.

Farmers who have clover seed are advised by certain circles not to sell as there is likely to be a dearth of clover seed this season. As to the truth of this we cannot say. On the farmers' market here, red clover is quoted at \$15 to \$17, alsike at \$10.50 to \$13, and Timothy at \$5 to \$7 per cwt.

EGGS AND POULTRY.

There is a good demand for eggs and prices rule firm. Values are too high for export, though there is some packing for future trade. Dealers are paying 16c. L.O.B. at country points for eggs, which means about 15c. to the producer. At Montreal, fresh eggs are quoted at 18c. to 18 1/2c. per dozen in case lots. Quotations here are 17 1/2c. to 18c. On Toronto farmers' market, eggs bring 18c. to 20c. per dozen.

On the local market here, spring chickens bring 30c. to 45c. per lb., and dressed turkeys, 16c. to 20c.

DAIRY PRODUCTS.

The cheese market continues high, with prices somewhat irregular. Country markets during the past ten days have been selling at from 12 1/4c. to 12 7/8c., which means from 12 3/4c. to 13 1/4c. laid down at Montreal, a figure which export values will not allow paying. And yet it is paid freely enough by country buyers, and rest assured these are not doing so of their own accord. They have orders or have been instructed by their superiors to pay the price. However, there are good reasons for these high values. The make of the cheese so far this season is fully one-third short of what it was last year for the same period, and as cows will not be onto full grass till well on in June, the supply of cheese will be short for some little time yet.

While the butter market is gradually receding to a lower level, the backward season has so shortened the output that prices are likely to remain at a profitable figure all season, as it will be hard to make up for what has been lost. Little or no export business is being done and there will not likely be any till the June grass butter is offering. At Montreal, choice creamery is quoted at 20 3/4c. to 21c. Here creamery supplies are little more plentiful and prints are quoted at 20c. to 22c., and boxes at 20c. to 21c. Dairy prints

bring 19c. to 20c., and solids 19c. to 20c. per lb.

WOOL.

The market is quiet and little wool is being marketed. What there is is unwashed, which is quoted here at 13c. to 14c. per lb., though we know of individual farmers who have contracted unwashed Shropshire wool at the mills this season at 17c. per lb. At Montreal, washed wool is quoted at 27c. to 28c., and unwashed at 18c. to 20c. a lb.

LIVE STOCK.

The run of live stock this week has been on the light side and consequently the market has ruled brisker. The quality of the cattle offering was fair. More good cattle are wanted. Few exporters are offering. Prices for choice ones range from \$5.25 to \$5.60. The medium quality is not wanted. Export bulls sell at \$4 to \$4.50 per cwt. Good hatchers' stock is in demand and prices rule firm at \$5 to \$5.25 per cwt. for picked lots, \$4.88 to \$5 for good cattle; \$4.60 to \$4.75 for medium; \$4.40 to \$4.60 for mixed, and \$3.50 to \$4.50 per cwt. for cows. Stockers and feeders rule on the quiet side, owing no doubt to the scarcity of feed. Feeders of good quality, however, are wanted, at from \$4 to \$4.50 per cwt. Stockers are quoted at from \$2.75 to \$3 per cwt.

WANTED

PERSONS having waste space in cellar, garden or farm, can make it yield from \$200 to \$250 per week. Write for Mushrooms for us. Send stamp for illustrated 16 page booklet on Mushroom Culture and full particulars. MONTREAL STRAW COMPANY, Montreal.



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Milch cows rule steady, at from \$35 to \$60 each, the latter for choice quality. Veal calves are quoted at \$3 to \$5.50 per cwt., with very choice ones bringing \$6 per cwt.

The sheep market rules steady. Choice export ewes sell at from \$5 to \$6 per cwt., and bucks at \$4 to \$4.50. Common yearling lambs sell at \$3.50 to \$4.50, and grain-fed ones at \$6 to \$6.50 per cwt. Spring lambs bring \$3 to \$6 each.

The hog market has advanced considerably since last writing, the packers no doubt realizing that there is not the supply in the country and that next fall's crop will be light. Select bacon hogs, fed and watered, are quoted at \$7.10, and lights and fats at \$6.85 per cwt.

HORSES.

The market is good for about all kinds of horses just now but they are hard to get in the country at this season of the year as farmers' wants here are as follows:—Workers, 1,200 to 1,350 lbs., \$150 to \$180; heavy drafters, 1,350 to 1,600 lbs., \$165 to \$225; expressers, \$150 to \$300, road-

sters, \$125 to \$200, matched pairs and carriage horses, \$300 to \$450; serviceable sound workers and drivers, \$75 to \$125.

A Farmer's Hog Pen

(Continued from page 599)

feed, labor and young pigs, to say nothing of the saving of worry and disappointment. With what little knowledge I have of the subject, I will try to describe my idea of a convenient, simple hog-house, suitable to the average farmer's needs. I might say here also that if I were building now, I would follow this plan instead of the high and more costly building I put up.

In the first place select a suitable location, if possible a spot convenient to the other farm buildings, either naturally drained, or that can be conveniently drained. The winter sun should have access to the south and west of the building, and if it can be protected on the north either by other buildings, or shade trees, without interfering with the hogs getting to pasture in summer, so much the better. However, to have easy access to a pasture is really more necessary than the protection other buildings might give from north winds. If from the building access can be had to running water, it will be found of great advantage.

Having chosen a suitable location, well drained and an unobstructed south view, we must arrange for a building into which will be admitted as much sunlight (Nature's disinfectant) as possible. We must bear in mind that it is chiefly on the floor of the pen and in the sleeping compartment, where we want the rays of the sun to shine, for as much of the winter day as is possible. (The sun can easily be shut out in summer by hanging a

curtain of sacking over the window.) The walls may be constructed of either frame, brick, cement, or logs, whatever material is most convenient and best suits one's pocket, and of whatever degree of proof against frost the climate may require.

The following is a description of a building to accommodate three breeding sows and litters. The building, illustrations of which appear also, stands lengthwise east and west, with the large windows in upper part on south side. It is 44 feet long, by 18 ft. wide inside, allowing for four pens 9 feet wide and 10 feet deep, one room for feed mixing and storage, 8 ft. by 10 ft., and a passage way 5 ft. in the clear, running full length, and 1 ft. for trough. There is a door at each end of this passage, one for main entrance, where the feed-room is. At the other door a loading chute is placed for loading and unloading hogs. The wall at the north side is 6 ft. high, and the part at the front of feed troughs is 11 ft. high. The south wall proper is 6 ft. high, thus leaving a clear space of 4 ft. between the two roofs on the south side for windows.

There should be in this space in a pen 44 ft. long, at least six windows 2½ ft. by 3 ft. These will allow the sun to shine into the pens, instead of into the passage, as would be the case if the windows were in the lower part of south wall. A few windows should also be placed in the lower wall, to permit of ventilation.

It will be noticed that there is no loft of any kind in this building. The rafters may be lined on the inside for warmth, but no straw nor feed should be stored above the hogs. Straw, chaff or dust form a harbor for disease germs, and are responsible for much disease and loss among hogs. There should be one ventilator for

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each pen, running from within three feet of floor out through the roof; a stopper may be placed in this to shut off when required. Some of the large upper windows should also be hinged, so they can be opened when desired. It will also be seen that by extending the south wall of the building back seven or eight feet, a row of pens for fattening purposes could be cheaply ad-

ded. The roof, however, would be very flat, and some special roofing material would be required to make it water-proof.

As to the inner fittings of the pen it is scarcely necessary to dwell. Everyone has his own way of arranging these. The cement floor has many friends, but for my part I prefer planks, and in any case, would cover

the sleeping portion of the pen with wood. The troughs here are of V shape, seven feet long, and at the end of each there is a two-foot short opening into the passage-way. The part of the partition directly over trough should be made to swing, so that the pigs can be shut back while feed is being put in.

F. W. S.

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We will prove to that man, beyond question, that the CAPITAL skimming device is the simplest, the surest, and the easiest to operate, day in and day out,—the easiest to clean, day in and day out,—the slowest to wear out.

That much we will do for anybody who will write and ask.

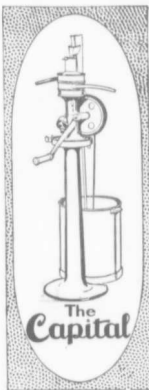
Besides that, we will teach the right man how to sell separators, and demonstrate to him why the CAPITAL Separator is the one to sell,—because it is the ONLY one any farmer can really afford to buy.

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Think it all over,—remember you are not called on to invest a cent,—we will show you how and where to sell the CAPITAL,—protect you in your district,—and hand you over a paying business that will profit you well for as much or as little time as you feel you can give it.

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