

# The Canadian Horticulturist

FEBRUARY, 1906



Peach Trees Sprayed with Whitewash for Winter Protection.

Peach buds are induced to swell during warm spells in winter and early spring, such as have prevailed this season. Whitewashing prevents this as whitened buds reflect heat rather than absorb it. The illustration shows a portion of the orchard of W. M. Orr & Son, of Fruitland, Ontario, protected in this way.

THE ONLY HORTICULTURAL PUBLICATION IN CANADA

Issued Each Month

Beihne Dr  
Canadian Horticulturist

ESTABLISHED 1856



IF YOU DO NOT GET

# SIMMERS' Seed Catalogue

For 1906

it is because your name is not registered on our list of customers. This large and beautiful book is being mailed without request to all customers. If you are not among them you can obtain the book *Free* merely by writing for it.

☐ SIMMERS' SEED CATALOGUE for 1906 is by far the most complete book of its kind, the most comprehensive Canadian list of Seeds, Bulbs, Plants, etc., published. Everyone with an interest in Gardens and Gardening, in fact anyone interested in Agriculture or Horticulture should have a copy of SIMMERS' SEED CATALOGUE for 1906

## J. A. SIMMERS

TORONTO, ONTARIO

# GRAPE VINES



Largest Stock in Canada  
SUPERB IN QUALITY

# CURRANTS

HIGHEST GRADE

Propagated only from bearing plantations, and not from non-bearing stools

Write for Prices—Special Terms to the Trade

Largest growers of Vines in Canada—28 years' experience

## JOSEPH TWEDDLE

FRUITLAND, ONTARIO

MY BUSINESS IS THE GROWING AND SHIPPING OF

# Choice Strawberry Plants

SEVEN years' experience has enabled me to ensure the entire satisfaction of many customers. My prices are right, my stock is excellent and my system of packing the best ever.

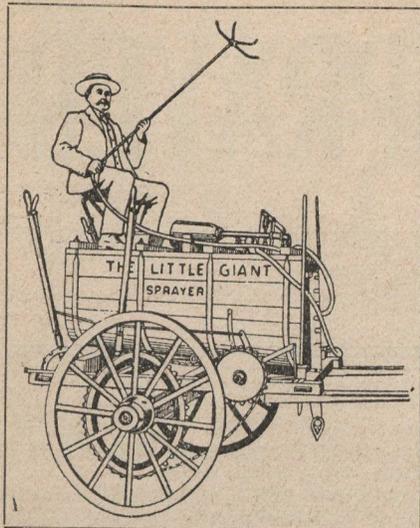
25 STANDARD VARIETIES  
GUARANTEED TRUE TO NAME

SOME OF MY LEADERS Extra Early, Johnson's Early, Early, Haverland, Bederwood, Clyde, Mid-Season, Sample, Dornan or Uncle Jim, Glenn Mary, Senator Dunlap, Wm. Belt, Late, Lester Lovett.

Send at once for my handsomely illustrated catalogue and comprehensive treatise on the culture of the strawberry. Mailed free on application.

## W. H. VANDERBURG

POPLAR HILL ONTARIO



# SIMPLEST, CHEAPEST, BEST

POWER FROM WHEEL

Operated by compressed air. Air chamber made to stand 200 pounds pressure

# THE LITTLE GIANT SPRAYER

## LIGHT BUT STRONG

BUILT FOR SINGLE HORSE OR TEAM

WRITE FOR PRICES AND CIRCULARS TO

# THE LITTLE GIANT SPRAYER MFG. CO.

41 COLBORNE STREET, TORONTO, ONT.

FACTORY, PORT DOVER

TELEPHONE MAIN 3112

The Perkins & Paine Mfg. Co.,  
Port Dover, Ont.

WINONA, July 18, 1905

Dear Sirs:

I have used your Little Giant Sprayer this season on nursery stock; one man can cover twelve acres in one day taking four rows at a time. It has worked without any hitches, which cannot be said of other sprayers I have tried, though no doubt experience will remedy the defects in other machines. This machine of yours is built strong, and is to look at very heavy for one horse, but in actual operation I find one horse under all ordinary conditions to operate it quite satisfactorily. I prefer a machine like yours, made to stand, to a lighter machine continually breaking something. I like your machine for another reason; it is Canadian invented and Canadian made, and I am particularly delighted on that account that it is a success. I have no fault to find with it, which is an unusual thing with a new machine.

I can safely and honestly recommend it to anyone wanting a strong, durable power sprayer, and every one having a large orchard should have a power sprayer, and why not horse power? It costs nothing; the horse that pulls the machine provides the power free.

Wishing you every success, I am,

Yours truly, E. D. SMITH.

Messrs. Perkins & Paine Mfg. Co.,  
Port Dover, Ont.

WINONA, January 11, 1906.

Dear Sirs:

The Little Giant Sprayer which I have used this season in my vineyards and orchards has given complete satisfaction, and I have much pleasure in recommending it to any one wishing a power sprayer.

Yours truly, J. J. FORAN.

WINONA, January 11, 1906.

Dear Sirs:

The Little Giant Sprayer I purchased from you last Spring has far exceeded my expectation, of which I am well pleased.

Yours respectfully, J. E. HENRY.

TO WHOM IT MAY CONCERN:—We will donate \$500.00 to any established charity upon application if we fail to furnish the originals of the letters given above.

LITTLE GIANT SPRAYER MFG. CO.  
Per OTTO G. PALM, Manager.



Special nursery style LITTLE GIANT SPRAYER at work on E. D. Smith's Nurseries, Winona, Ont.

A Handsome Premium will be Given Free to all Readers who buy Goods from Advertisers.

# THE NIAGARA GAS SPRAYER

NO PUMP, THEREFORE NO PUMPING  
THE POWER SPRAYER OF THE 20th CENTURY

ALWAYS THE BEST, BUT NOW  
BETTER THAN EVER



Kindly note particularly the following points which we are sure will commend the machine to any fruit grower, viz.:

**CONSTRUCTION**—Finest in every respect

**REPAIRS**—No machine made is less likely to need repairs.

**AGITATION**—Either hand or power. No better agitator made.

**SIZES**—50, 100, 150 or 200 gallons.

**CAPACITY**—Will supply four 100-foot leads of hose, each with four nozzles, if desired, and make a perfect mist.

**OPERATION**—NO PUMP, therefore NO PUMPING. Absolute power from Liquid Carbonic Gas. Easy to secure and maintain 100 pounds pressure. Abundant provision for safety.

**NOZZLE**—Our Nozzle Protector allows nothing to pass which can clog the finest nozzle. A VERY IMPORTANT POINT.

**ADAPTABILITY**—Wide range. Does anything any other sprayer will do and more. Sprays largest TREES down to smallest SHRUB. Does nursery, crop, truck and small fruit spraying. Is splendid for all kinds of white-washing.

**SIMPLICITY**—Any bright boy (a 12-year-old girl has done it) can drive team and attend to power. No skill required.

**ECONOMY**—Saves time, labor and material enough to more than pay for gas. Carbonic gas improves the spraying mixture.

We take pleasure in calling your attention to a few of the new features of our 1906 model.

**THE HAND HOLE** is much larger, making thorough cleaning easy.

**THE FILLING PLUG** is entirely independent of the hand hole.

**THE AGITATOR SHAFT** is horizontal instead of vertical.

**OUR NEW BAMBOO ROD** has  $\frac{3}{8}$  inch diameter aluminum lining instead of  $\frac{1}{2}$  inch brass and yet weighs  $\frac{1}{2}$  pound less than brass lined rod.

**HOSE COUPLINGS**—We have a specially designed connection with double clamp from which the hose cannot pull off.

**OUR NEW LEAKLESS ROD VALVE** cannot be beaten.

**ALUMINUM Y'S, ALUMINUM RODS, ALUMINUM NOZZLES—NO CLOGGED NOZZLES.**

HARRISBURG, PA., April 5th, 1905

*The Niagara Sprayer Co., Buffalo, N.Y.*

GENTLEMEN,—I think it is only fair that I should give you my opinion of your Sprayer after a thorough test extending over six days of continuous work. I cannot imagine anything simpler, more powerful, more easily controlled or less likely to get out of order. And your Nozzle protector entirely removes the greatest source of annoyance that I have found connected with every pump I have tried. I have yet to see the first clogged nozzle.

Yours very truly,

GABRIEL HIESTER

## The Niagara Sprayer Company

PIONEERS OF ALUMINUM FITTINGS

Write us for Information

MIDDLEPORT, NEW YORK

WYOMING, DELAWARE

FLORA DALE, PENNSYLVANIA

# The Greatest Strawberry Ever Produced

HEALTHFULNESS  
VIGOROUS GROWER  
GREATEST PLANT PRODUCER  
VERY PRODUCTIVE

## CARDINAL

LARGE SIZE OF FRUIT  
UNIFORMITY OF SHAPE  
FIRMNESS OF FRUIT  
VALUABLE FOR MARKET

**HISTORY**—"The Cardinal is the result of over 30 years' experimenting by an expert horticulturist of Ohio. During these years all the standard and new varieties, together with hundreds of seedlings, were grown. It is thought to be a seedling of the popular old Wilson's Albany. In 1903 and 1904 it was grown in comparative test, with 40 new and standard varieties, and it easily excelled all in vigor, healthfulness and productiveness."—*Geo. J. Streator.*

**DESCRIPTION**—"Roundish, conical, occasionally slightly compressed, rarely necked; medium to large; glossy bright crimson, not fading; ripens evenly; seeds small, compressed; calyx large, tenacious; flesh quite firm, salmon red, juicy; apparently a good shipper; flavor sub-acid, sprightly, with distinct aroma; quality good to very good, especially for canning; medium to late; a vigorous grower; foliage resistant to rust; an abundant plant bearer; blossoms imperfect; strong fruits talks; enormously productive."—*Year Book, U.S., 1903.*



HALFTONE FROM OHIO EXPERIMENT STATION BULLETIN, No. 154

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY,

Washington, D.C., Nov. 19, 1904.

THE TEMPLIN CO., CALLA, O.

Dear Sirs—"From what knowledge I have of the Cardinal Strawberry I think you have obtained a valuable acquisition to the list of choice strawberries which we are now growing. It was my privilege to examine specimens of this new variety in 1903, when I found it to be a berry of excellent quality, flesh quite firm, juicy, flavor sub-acid, sprightly, aromatic. It is evidently a good shipper, and in every respect a very promising berry."

Yours truly, G. B. BRACKET, *Pomologist.*

OHIO EXPERIMENT STATION

Wooster, Ohio, Sept. 10, 1904.

THE TEMPLIN CO., CALLA, O.

Gentlemen—"Regarding the Cardinal Strawberry I will say that we had fall set plants in fruit this season, and judging from what we saw here and at Mr. Streator's place, I am of the opinion that it is a very valuable variety, particularly because of its productiveness, fine appearance and firmness. We have a report on Strawberries in press—*Bulletin No. 154.* You are at liberty to copy whatever you choose from our report on the Cardinal."

Yours very truly, W. J. GREEN.

NOTE—In 1903, after seeing the Cardinal in fruit, we purchased the originator's entire stock with the right to propagate and disseminate.

Our Stock and Prices for 1906

Price 12 for \$1.00

25 for \$1.75

Our stock of Cardinal plants for 1906 is rather limited, but the plants are very fine. We are confident they will please our patrons.

100 for \$5.00

By Mail, Postpaid

OUR CATALOG (176 pages) contains many other things of special merit. Our prices are low considering the high quality of our goods. Catalog Free

ADDRESS THE TEMPLIN CO., CALLA, OHIO BOX 44

SEE OUR ADVERTISEMENT IN THE MARCH ISSUE

MENTION THIS PAPER WHEN WRITING



### Prize Ruffled Giants, Petunia Seed

**RENNIES' 1414.** It has taken many years hybridizing to produce this exquisitely veined and mottled deep fringed variety. Fresh seed for 1906, packet 25c.

**PANSY,** Perfection strain seed, 1356 mixed. Without a Rival, in form, size, and colorings, pkt. 25c.,  $\frac{1}{2}$  oz., \$1.00.

**MUSHROOM SPAWN.** "Now is the Time to Plant it." Genuine English Milltrack. "Fresh Imported." Brick, 25c., 5, \$1.15 postpaid.

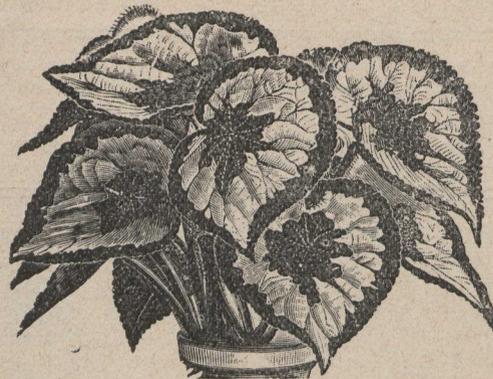
Spring CATALOGUE, Profusely Illustrated—FREE

**WM. RENNIE CO., Limited, TORONTO**

BRANCHES—WINNIPEG and VANCOUVER

## Steele-Briggs Seeds

Are known everywhere for their Purity and Reliability. Send today for our handsomely illustrated Catalogue for 1906. It is full of good things for the garden and farm.



Many new and reliable introductions

**Palms  
Roses  
Shrubs  
and  
Plants**

### POULTRY SUPPLIES

Agents for Genuine Cyphers Incubators and Brooders

**The Steele-Briggs Seed Co., Limited**

132 KING STREET EAST TORONTO, ONTARIO

## BANK OF HAMILTON

HEAD OFFICE, HAMILTON

HON. WILLIAM GIBSON, *President* J. TURNBULL, *General Manager*

PAID UP CAPITAL, \$2,400,000

RESERVE \$2,400,000 TOTAL ASSETS \$29,000,000

### BRANCHES

Abernethy, Sask.	Hamilton	Owen Sound
Alton	Barton St. Branch	Palmerston
Atwood	Deering Branch	Pilot Mound, Man.
Battleford, Sask.	East End Branch	Plum Coulee, Man.
Beamsville	West End Branch	Port Elgin
Berlin	Hamiota, Man.	Port Rowan
Blyth	Indian Head, Sask.	Ripley
Bradwardine, Man.	Jarvis	Roland, Man.
Brandon, Man.	Kamloops, B. C.	Saskatoon, Sask.
Brantford	Kenton, Man.	Simcoe
Carberry, Man.	Killarney, Man.	Southampton
Carman, Man.	Listowel	Stonewall, Man.
Chesley	Lucknow	Teeswater
Delhi	Manitou, Man.	Tiverton
Dundalk	Melford, Sask.	Toronto
Dundas	Miami, Man.	Queen and Spadina
Dunnville	Midland	Branch
Ethel	Milton	College and Ossington
Fernie, B. C.	Minnedosa, Man.	Branch
Fordwich	Mitchell	Toronto Junction
Georgetown	Moorefield	Vancouver, B. C.
Gladstone, Man.	Moose Jaw, Sask.	Wingham
Gorrie	Morden, Man.	Winkler, Man.
Grimsby	Niagara Falls	Winnipeg
Hagersville	Niagara Falls South	Grain Exchange Br.
	Orangeville	Wageter

Correspondents in Great Britain—The National Provincial Bank of England, Limited

Correspondents in United States  
New York—Hanover National Bank  
Fourth National Bank  
Boston—International Trust Co.  
Buffalo—Marine National Bank  
Chicago—Continental National Bank

Chicago—First National Bank  
Detroit—Old Detroit National Bank  
Kansas City—National Bank of Commerce

Philadelphia—Merchants Nat'l Bank  
St. Louis—Third National Bank  
San Francisco—Crocker-Woolworth National Bank  
Pittsburg—Mellon National Bank

Collections effected in all parts of Canada promptly and cheaply. Correspondence solicited. Savings banks at all offices.

### THE STRAWBERRY CULTURIST

By ANDREW S. FULLER

Will enable everyone to raise his own Strawberries.

PRICE, 25 CENTS

### FIELD NOTES ON APPLE CULTURE

By PROF. L. H. BAILEY, Jr.

A Most Useful and Thoroughly Practical Book.

PRICE, 75 CENTS

### FUMIGATION METHODS

By WILLIS G. JOHNSON

A timely up-to-date book on the practical application of the new methods for destroying insects with hydrocyanic acid gas and carbon bisulphide. Indispensable for nurserymen, farmers, etc.

PRICE, \$1.00

### THE NEW EGG FARM

By H. H. STODDARD

A practical, reliable manual upon producing eggs and poultry for market.

PRICE, \$1.00

### PROFITS IN POULTRY

Useful and ornamental breeds and their profitable management.

PRICE, \$1.00

**MORANG & COMPANY, Limited**

90 WELLINGTON ST. WEST, TORONTO

# The Canadian Horticulturist

Vol. XXIX

FEBRUARY 1, 1906

No. 2

## The Dominion Possibilities for Horticultural Development

Alex. McNeill, Chief of the Fruit Division, Ottawa

"Methinks I see in my mind a noble and puissant nation rousing herself like a strong man after sleep, and shaking her invincible locks; methinks I see her as an eagle renewing her mighty youth and kindling her undazzled eye at the full mid-day beam."—Milton.

THE problem of the twentieth century in the northern half of the American Continent is nation-building, and in this process Canadian horticulturists will have a prominent part. Fortunately our patriotism has a broad and substantial basis in the vast material resources that lie about us everywhere. Field, forest, fisheries and mines are yielding their increases lavishly, ministering to our physical needs and furnishing a generous foundation for the highest development of civilization. But this higher civilization has its beginning in the homes of the people. Love of country is but a broader love of home. The truly patriotic Canadian will not be content with simply sharing with his less fortunate brother the material blessings that lie thick around him, but will plant and water the land, making and keeping it beautiful—a land of homes.

Canadian fruit growers have every reason to be proud of the position that they have always taken in competition at fairs and exhibitions with growers from other countries. This success not only gratified our vanity, but proved an excellent drawing card for immigration purposes. At Chicago, Buffalo, St. Louis and many lesser fairs the Canadian fruit and flowers did as much as any other feature to direct attention to the youthful nation north of the lakes.

Within our own borders a healthy rivalry has developed between widely separated provinces. The result shows that trophies will not be allowed to rest anywhere without a struggle. Formerly Nova Scotia carried off the honors in quality; Ontario claimed first place in quantity and variety, if not in quality. Latterly British Columbia, with new-born enthusiasm, has pushed to the front in fruit products with an article that has captured the market with its beautiful finish and long keeping qualities. Quick to see an advantage, the fruit growers of British Columbia have adopted the packing methods and packages of the American Pacific coast, to perfect which the Californians spent years and a mint of money in experimenting. And thus the honors have

travelled from the Atlantic to the Pacific, showing that pre-eminence in horticulture is not confined within the narrow boundaries of a few counties in any part of this great land.

The Bureau of Statistics shows that the apple crop alone of Ontario amounted to 10,000,000 barrels this year. A normal crop should be at least half as much more. No official record has been kept for the other provinces. The possibilities of British Columbia in the near future may be gauged by the fact that about 500,000 trees were imported and planted this season, in addition to those of domestic origin. Nova Scotia exports 300,000 to 500,000 barrels of ap-

not enter to spur each province to do its best. Why cannot this be worked out for next year? Cold storage will enable us to hold our fruit so that we can assemble it at its best in one place. It would be a revelation to visitors, an advantage to the fruit growers of every province, and a lesson in patriotism many times more valuable than flag-waving or the resurrection of disreputable quarrels with our neighbors.

### CO-OPERATION NECESSARY

The commercial side of fruit growing will form a subject of increased importance to fruit growers as the years pass. The co-operative idea cannot legitimately end with work in any particular neighborhood. The whole trend of the movement looks towards a co-ordination of the different units, calling for strong organizing power that will strengthen the position of the fruit growers throughout the Dominion.

This question of markets lies at the very foundation of the industry, and the exploiting of new markets and the careful supplying of the old is a subject that must be handled definitely within the near future. British Columbia is competing with Ontario; Ontario is competing with Quebec and Nova Scotia; Prince Edward Island and New Brunswick are struggling for a position in the markets side by side with the other provinces. All these interests have a place, and there can be no proper division or co-operation in the supplying of these markets without a view that will embrace the whole of Canada. Some organization or medium is required through which fruit growers may speak, and thus be an active agent in so harmonizing the interests of the different provinces that they may pull together, securing for the fruit grower a proper reward for his toil. Without some method of harmonizing the different interests, it is probable that what should be simply a friendly rivalry between the provinces will develop into a destructive antagonism. Through all the diversity of soil, climate and situation there runs an identity of general principles under-

### A Credit to Canada

"I want to congratulate The Canadian Horticulturist on its first number for 1906. It is a credit alike to its management and to Canada. Every Canadian who prides in the intelligent products of his country should feel proud of it, and I know that every fruit grower, and every lover of Nature in her many and varied forms must be more than proud of it."

T. H. RACE, Mitchell, Ont.

ples annually. Prince Edward Island, according to unprejudiced judges, made the best exhibit of fruit in the Maritime Provinces this year. New Brunswick made successful shipments of Duchess apples to Great Britain for the second year. If this market continues there is no reason why the St. John Valley should not become as famous for the Duchess as the Annapolis is for the Gravenstein, the Province of Quebec for the Fameuse, Ontario for the Spy and British Columbia for the Newtown Pippin and Spitzenberg.

We have never yet had the different provinces adequately represented at one time at any show. The Fruit Division attempted last year to secure specimens of 10 varieties from each province and the result was a most interesting exhibit, but the competitive element did

lying the practices of fruit growers from Prince Edward Island to Vancouver. The details, however, may vary to a remarkable degree. In British Columbia clean culture is practised in the dry portions, but in the coast orchards it is not considered so essential. In south-western Ontario clean culture gives the best results, but in the north and east not infrequently sod orchards properly

managed succeed best. But the underlying principle is the same in sod or clean culture, viz.: regulate the moisture and plant food to the needs of the tree according to the supply from the soil from irrigation or from rainfall. Indeed the proper investigation of the practices in the semi-arid regions of some of the British Columbia valleys would enable orchardists in the humid climate of

Nova Scotia, with numerous running streams, to meet these conditions more intelligently.

By co-operating the fruit growers of our different provinces will be enabled to play a most important part in the wonderful process of nation-building, and will prove themselves to be true to all good words and works and to the heart Canadian.

## Best Varieties of Fruits for Ontario

A STATEMENT showing the varieties of fruit suitable for planting in the different sections of Ontario was prepared at a meeting of the Board of Control for the Ontario Experiment Stations, held January 8 and 9, and is here published in part. The selections have been made only after careful tests at the different stations. Lists have been made showing the commercial varieties or those most desirable for market purposes, and the domestic varieties or those of special value for home use, for cooking or for dessert. In almost every case the varieties are mentioned in the order of ripening. Many varieties not included in this list do well under special conditions, but they are not as desirable as those mentioned.

This action of the Board of Control was taken owing to the recognized disadvantages facing inexperienced persons who desire to engage in fruit growing for profit because of the large and confusing lists that they have had to select from. A bulletin containing this information in detail and dealing fully with the conditions in different sections of the Province will be published shortly by the Board.

In apples the following were selected as being the best for Ontario. In summer varieties, Astrachans are considered suitable for all except the northern sections, and Duchess is recommended for all parts of Ontario. Among fall apples Gravenstein does well in every district excepting along the St. Lawrence River and some northern sections. Wealthy and Alexander are specially adapted to northern parts, McIntosh and Fameuse of special value in the St. Lawrence River district, and Blenheim is suitable for the best apple sections of Ontario. These varieties are highly recommended. Winter varieties were recommended as follows:—King, adapted to the best apple sections and most successful when top-grafted on hardy stocks; Hubbardston and Greening adapted to the best apple sections; Baldwin not suited to clay land; Northern Spy satisfactory in the best apple sections and suited for the northern districts if grafted on hardy stock; Ontario, a short-lived tree, but an abundant bearer to be used as a filler among long-lived trees, and Stark.

The varieties specially suited for do-

mestic uses are as follows:—Transparent, Primate, Sweet Bough, Duchess, Chenango, Gravenstein, Wealthy, McIntosh Red, Fameuse, Blenheim, King, Wagener, Swaizie Pomme Grise, Greening, Tolman, Northern Spy, and Mann. Hardy varieties adapted for sections above North latitude 46 degrees, are given as follows:—Yellow Transparent, Charlamoff, Duchess, Wealthy, Hibernial, Longfield, Patten, Whitney, Hyslop and Scott's Winter. In crab apples, Whitney, Martha, Transcendent, and Hyslop are mentioned as being suitable for any part of the Province. The first mentioned is a large crab of high quality, suitable for dessert or cooking, and specially adapted to northern sections.

The experimenters at the various stations submitted lists of those varieties that are best suited for their respective districts. Mr. Linus Woolverton, of Grimsby, recommended the following for the Niagara district: Astrachans, Duchess, Alexander, Gravenstein, Blenheim, King, Greening, Baldwin, and Spy; and for domestic use, Harvest, Sweet Bough, Duchess, Chenango, Gravenstein, Shiwasee, Fall Pippin, Fameuse, King, Louise, and Spy.

For the Bay of Quinte section, Mr. W. H. Dempsey, of Trenton, recommended the following for commercial use: Duchess, Gravenstein, Trenton, Alexander, Wealthy, Fameuse, King, McIntosh, Greening, Baldwin, Ontario, Seek No Further, Spy, Tolman, Ben Davis and Stark; while for domestic purposes, Benoni, Primate, Gravenstein, Fameuse, McIntosh, Greening, Ontario, Spy, Tolman, Grime's Golden and Swaizie were said to be the best.

Varieties for the Burlington district, named by Mr. A. W. Peart, were, for commercial purposes: Astrachan, Sweet Bough, Gravenstein, Wagener, Seek No Further and Golden Russet.

From the Lake Huron district Mr. A. E. Sherrington, of Walkerton, recommended for commercial purposes: Astrachan, Duchess, Wealthy, Fameuse, McIntosh, Blenheim, Greening, Baldwin, Spy, Golden Russet, and Ben Davis; while for domestic use Transparent, Astrachan, Duchess, McIntosh, Grime's Golden, Blenheim, King, Spy, and Golden Russet are the best.

For the St. Lawrence district Mr.

Harold Jones, of Maitland, recommended for commercial use: Duchess, Alexander, Wolfe River, Pearmain, Scarlet Pippin, Fameuse, McIntosh, Milwaukee and Golden Russet. The best domestic varieties are Transparent, Brockville Beauty, Scarlet Pippin, Fameuse, McIntosh, Blue Pearmain, Yellow Bellflower and Golden Russet.

The general list of the desirable varieties of pears for commercial use is as follows: Gifford, Clapp's Favorite, Bartlett, Boussock, Flemish Beauty, Howell, Louise, Duchess, Bosc, Clairgeau, Anjou, and Kieffer; and for domestic use: Summer Doyenne, Gifford, Bartlett, Flemish Beauty, Sheldon, Seckel, Bosc, Anjou, Laurence, Josephine and Winter Nelis.

Hardy varieties of plums of the different classes were selected as follows: European—Bradshaw, Imperial Gage, Guei, Shipper's Pride, Lombard (liable to overbear, requires thinning), Quackenboss, Yellow Egg, Grand Duke, Coe's Golden Drop and Reine Claude (one of the best for canning); Japanese—Red June, Abundance, Burbank, Chabot, and Satsuma (red-fleshed variety suitable for canning); American—Extremely hardy and desirable where European and Japanese do not thrive, Aitkin, Cheney, Bixby, Mankato, Wolf, Hawk-eye and Stoddard.

The general list of cherries suitable for the different sections of Ontario is as follows: Orel 25, Orel 24, Early Richmond, Montmorency and Russian 207.

The following varieties of peaches were submitted for the peach districts: Sneed, Alexander, Hynes, St. John, Mountain Rose, Early Crawford, Champion, Brigdon, Fitzgerald, Reeves, Elberta, Oldmixon, Stevens, and Smock. The best varieties for domestic purposes were given as follows: Hynes, St. John, Early Crawford, Oldmixon, Longhurst, and Stevens.

The following grapes of the different colors were recommended for the commercial districts: Black—Moore, Campbell, Worden, Concord, Wilder; Red—Delaware, Lindley, Agawam, Vergennes; White—Niagara and Diamond. For the northern sections the varieties recommended were as follows: Black—Champion, Campbell, Worden, and Wilder; Red—Moyer, Brighton, Delaware, and Lindley; White—Winchell, and Diamond.



How is This for Quebec—16 Fameuse Apples, All of Good Size, and on One Branch a Foot in Length?

Such fruit as this, the illustration of which was furnished by Mr. R. Brodie, of Westmount, Que., proves that Quebec is capable of holding her own in the production of certain varieties of apples. These are limited to the most hardy varieties. Mr. R. W. Shepherd, of Como, Que., president of the Quebec Fruit Growers' Association, reports that the following well-known Ontario varieties are too tender for Quebec: Hubbardston, Wagener, Baldwin, Fallawater, Northern Spy and Ribston Pippin. Recommended varieties include Fameuse, McIntosh, Winter St. Lawrence, Canada Baldwin, N. W. Greening and Windsor Chief.

#### DESIRABLE BUSH FRUITS.

The following varieties of currants were recommended: Black—Victoria, Champion, Lee, Naples, Saunders; Red—Cherry, Fay, Pomona, Red Cross, Victoria, and Wilder; White—White Grape. Blackberries—Agawam, Snyder, Eldorado, and for southern sections, Kittatinny. Raspberries: Black—Hilborn, Older, Gregg, Smith's Giant; Purple—

Columbia and Shaffer; Red—Marlboro, Herbert, and Cuthbert; White—Golden Queen.

Experiments at the different stations show that many varieties of strawberries suitable for domestic use are very unsatisfactory for commercial purposes. Varieties marked (P) have perfect flowers, and those marked (I) are imperfect in the flower, and will not produce a crop unless some perfect variety is

planted with them. Those recommended for commercial purposes are as follows: Splendid (P), Bederwood (P), Warfield (I), not suited for light sandy soil; Grenville (I), Williams (P), Saunders (P), Sample (I), Irene (I), and Buster (I). Recommended domestic varieties are as follows—VanDeman (P), Splendid (P), Excelsior (P), Senator Dunlap (P), Ruby (P), Bubach (I), Irene (I) Wm. Belt (P), and Lovett (P).

## Fruits Suited to the Different Provinces

THE multiplicity of varieties of fruits recommended for planting in the different sections of Canada led THE CANADIAN HORTICULTURIST to gain the following information from growers competent to advise regarding the varieties specially adapted to the various climates and locations found in the different Provinces of Canada. The evils of having too many varieties is being felt more keenly as the fruit industry develops and it is now realized that it is best for growers to plant only a few tested varieties.

#### NOVA SCOTIA

The sorts best suited to the orchards of Nova Scotia are thus described by Prof. F. C. Sears, of Truro, N.S.: A selection of the best varieties for any one section is an extremely difficult question. It is a personal question and one cannot be sure that his selections will suit his neighbor. One man with a particularly well-developed conscience says that he has no use for poor quality sorts. He

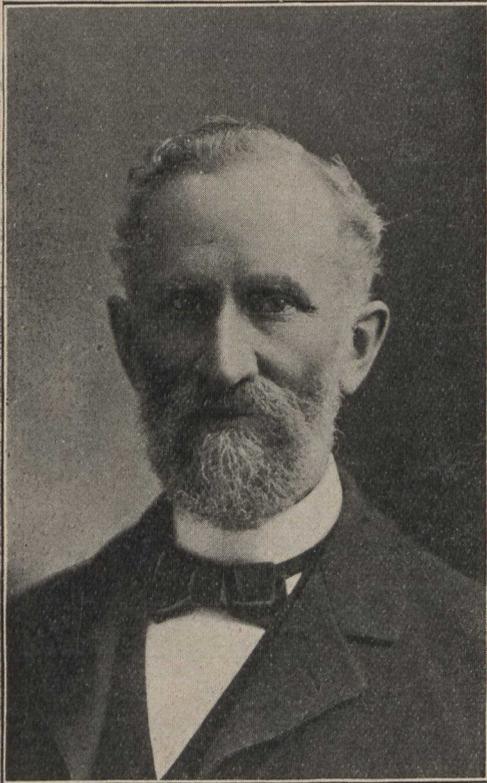
believes they damage the market and will eventually hurt the business, and anyhow he would not feel right to sell a man a barrel of Ben Davis if he knew his customer was planning to eat them. He, therefore, drops out of his list the above-mentioned variety along with the Gano and possibly the Baldwin and the Fallawater. He goes in for the Gravenstein, Ribston Pippin, Blenheim, King, Hubbardston, Northern Spy, Golden Russet and such varieties. His neighbor, with a little more of an eye for business, and a little less tender conscience, says, "If Ben Davis is what people want they ought to have it, and if I can make more money out of that variety, I am going to grow it." So he plants Ben Davis, Gano, Baldwin, Fallawater, and Stark. For these and other reasons it is difficult to say what are the best sorts for Nova Scotia or for any other section. Unless a comparatively long list is given one is going to leave out some sorts that are very popular with many growers.

At the Amherst winter fair in Decem-

ber last, the writer had the pleasure of assisting Mr. R. W. Starr to judge the fruit exhibit made by the three Maritime Provinces. A sweepstakes prize was offered for the best exhibit in the entire fruit show, and this was awarded to Mr. D. S. Collins, Port Williams, Kings Co., Nova Scotia.

We considered his the best collection of 10 sorts we ever saw staged. The varieties were well grown, well selected, well colored and probably the best 10 commercial varieties for the Province generally. The varieties shown were Gravenstein, Ribston, Blenheim, King, Spy, Stark, Baldwin, Golden, Russet, Nonpareil and Fallawater.

This presents the matter in a nut-shell so far as apples are concerned but there is a great deal that might be said in explanation, for while we think the above are "the best 10 commercial sorts for the Province generally" they nearly all have quite serious faults, and there are many other sorts (a half dozen at the very least) that come very close in point of



J. S. Scarf, of Woodstock, Ont.

The president of the Ontario Fruit Growers' Association, Mr. J. S. Scarf, has been prominent in horticultural affairs for many years. He was secretary of the Woodstock Horticultural Society, and by energetic work on its behalf made it one of the best in Ontario. He has also taken an active part in the municipal affairs of the city and was elected to the highest position in the gift of his fellow citizens for 1905.

popularity to some of those mentioned.

This secondary list would be—approximately in the order of their popularity—as follows: Wagener, which is the most popular sort for fillers or any method of close planting; Rhode Island Greening, which is coming more into favor again of late years, and which but for its unattractive color would be one of our best and most profitable sorts; Hubbardston, used on dry lands in place of Ribston which needs moisture; Ben Davis, very eagerly planted a few years ago but—fortunately for the fruit industry of the Province I believe—not nearly so generally set during the past few years, and Ontario, also popular as a filler.

There is also a third list including several of those mentioned in the two preceding lists that is planted largely in outlying parts of Nova Scotia where hardiness is a first requisite. This list would run about as follows: Wealthy, Wolfe River, Ribston, McIntosh, Baxer, Hurlbut, and Stark.

#### PLUMS

In the other fruits the selection is not nearly so well defined, because much less attention has been paid to their growth. Plums stand next to apples in importance though very much below them in that regard. The following list of 12 varieties includes the most popular and the most successful sorts, and I have tried to arrange them in order of value to the Province generally: Yel-

low Egg or Magnum Bonum, Grand Duke, Burbank, Bavay, Bradshaw, Washington, German Prince, Prince of Wales, Fellenberg, Lombard, Monarch, and Prince's Yellow Gage. I have omitted from this list the Damsons which really ought to be included, The French and Shropshire are probably the most commonly grown, though even these are not very plentiful, but coming late in the season they are very profitable to those who grow them.

Of the Japanese I have only included the Burbank for the reason that as yet it is the only one that merits a place among our most generally successful market plums. The Red June stands next. The Abundance bears poor crops too often; while the Wickson has been abandoned even in the Annapolis Valley



R. W. Shepherd, Como, Que.

The new president of the Pomological and Fruit Growers' Society of the Province of Quebec first planted an orchard in that province in 1874, and for some years afterward planted out 200 to 300 trees annually. He now has 50 acres in apple orchard and one in plums. He has introduced many varieties of fruit in the province, and his experience has been of great value to many growers. Fruit can be sent from his farm 30 miles west of Montreal, and the same day be put on board steamship at Montreal.

as too tender. From our experience with the Japanese plums in the model orchards I should advise anyone outside of the Valley and a few favored sections elsewhere to plant very sparingly of them and then only of the Burbank or some other of the hardiest kinds.

#### PEARS

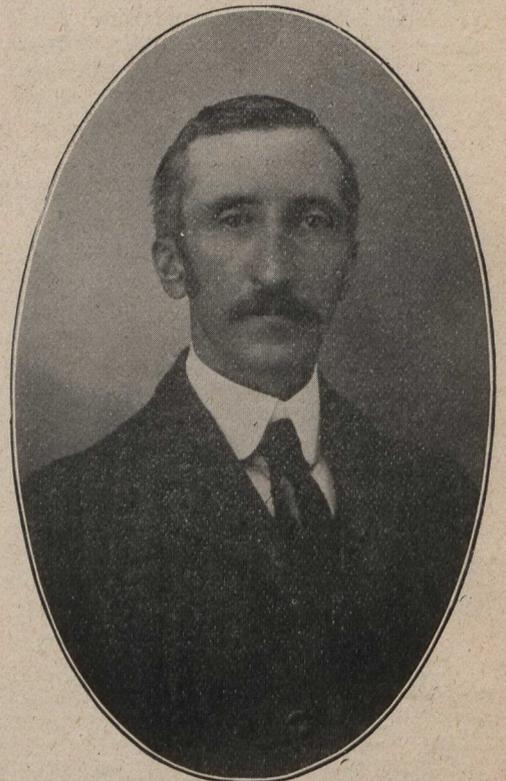
Pears follow plums in the order of importance, Bartlett and Clapp's Favorite being the two varieties most commonly grown and very generally successful. Of course, for market purposes the Bartlett stands far ahead of the Clapp, the

tendency of the latter to rot at the core being a heavy handicap. Following these are a half dozen others quite generally grown but only in very limited numbers: Beurre, Clarigeau, Anjou, Louise Bonne de Jersey, Vermont Beauty Sheldon and Flemish Beauty. Seckel and Keiffer, the best and the poorest of pears, are not successful with us.

#### CHERRIES

In cherries practically nothing is done beyond supplying the home market and even that is very poorly supplied. At Bear River and Digby, sections that seem naturally adapted to cherries and where they spring up of themselves along the roadsides, some little commercial growing is attempted, but the product would not nearly supply the local markets if these were developed. The most satisfactory varieties are, among the sweet sorts, Black Tartarian, Gov. Wood, Windsor and Schmidt and, among the sour varieties Montmorency, English Morello, and Wragg. In our work with "model orchards," that is, in sections outside of the Annapolis Valley, we have practically given up planting anything but the sour sorts, finding the others too uncertain, though no doubt there are favored spots in most of our counties where the sweet varieties can be grown.

I shall leave out of consideration peaches, quinces, and apricots, for while I have known of cases where they have



John Donaldson, Port Williams, N.S.

In their new president, the members of the Nova Scotia Fruit Growers' Association have selected a man who is not only a practical grower, but who has been connected with the Association for a number of years. Mr. Donaldson is one of those who have long had faith in the possibilities of the fruit industry in Nova Scotia, and his work as a grower and as a member of the Association has been of great value to the province.



Gathering Knowledge in Fruit Growing—Pupils at Work in the Agricultural School Nursery, La Trappe, Oka, Ont.

About 75 pupils yearly follow the course in horticulture at this institution, the work being in charge of Prof. G. Reynaud, who may be seen standing to the left. The trees at the left are Wealthy, and at the right Ben Davis. The young nursery trees are Yellow Transparent and Pewaukee. A feature of the course is regular practical work in the orchard.

been successfully grown in the valley and in some other sections, and while in some instances individual peach trees have proved very profitable, they do not give as good returns as the fruits mentioned, nor is the question of varieties sufficiently well settled to warrant one in making any general recommendations.

#### HARDY PLUMS FOR QUEBEC

At the Quebec experiment station at Village des Aulnaies, in the far northern part of the Province, Mr. Auguste Dupuis has been testing varieties of plums since before 1860. The varieties that have given good crops at the station have been grouped according to time of maturity. Those which ripen August 10 to 15 are:—Jaune très hâtive, Jaune hâtive, Mirabelle precoce and Favorite hâtive. Varieties maturing August 18 to 25 are: Precoce de Tours, Reine Claude d'Oullins, Monsieur Jaune, and De Montfort. From September 1 to 15 the following sorts reach maturity: Early Red, Washington, Bradshaw, Moor's Arctic, Green Gage, Smith Orleans, Reine Claude d'Ecully, Reine Claude Impériale, Mirabelle petite, Pé-

jonnières, Jefferson, Reine Claude Bryanton, Damson Blue, Reine Claude Montmorency, Yellow Meldowka (Russian), Imperial Gage, Island of Orléans Blue, Mirabelle parfumée Columbia, Mirabelle Grosse.

The following varieties mature September 15 to 30: Reine des Mirabelles, Duanès Purple, Lombard, Gros Damas de Septembre, Yellow Egg, Amaryllis, Shipper's Pride, Englebert, Reine Claude d'Althan, Reine Claude Diaphane, Reine Claude Razambault, Jones, Damas de Tours, Reine Claude Sagot.

During the last days of September to October 10, several varieties mature. These keep in good condition for market until November 1, but on account of hard frosts must be picked and packed in boxes about October 10. These are: Guei (Glass Seedling), Quackenboss, Hudson River Purple, Grand Duke, Pond Seedling, Reine Claude de Bavay, St. Catherine, Datte verte, Prune d'Agen, Coe's Golden Drop, Tardive de Chambourcy, De Norbert.

In recommending for a small family garden, in the north, Mr. Dupuis mentions Jaune très hâtive (yellow), or

Favorite hâtive, (blue) Bradshaw, Reine Claude Montmorency (greenish yellow), Washington (grafted on Green Gage is better than on Mirobolan), Blue Damson (on own roots), and Grand Duke. In addition to these, Coe's Golden Drop, a large fine and good plum, keeping till December if picked before frost, has given good returns.

#### APPLES FOR MANITOBA

Mr. A. P. Stevenson, of Nelson, Manitoba, who first planted fruit trees in the Prairie Province in 1874, has in his orchard individual hardy specimens from 500 trees consisting of 80 varieties of Russian apples planted in 1889. The varieties that have endured the western conditions are as follows: Summer—Blushed Calville, Charlamoff, Volga Anis, Repka Kislaga and Lowland Raspberry; fall—Anisette, Simbrisk No. 1, Kourisk Anis, Ukeraine, Anism and Gipsy Girl; late fall and winter—Hibernal, Cross, Wealthy, Peerless, Ostrekoff Glass, Heren and Antonofka. These varieties have given greatest satisfaction for the past ten years. The best of them were obtained from Dr. Saunders, of Ottawa.

## New Varieties of Strawberries Tried in 1905

E. B. Stevenson, Ponsonby, Ont.

OVER two years ago my attention was directed to a new strawberry for which very high claims were made. I found it was growing in the trial grounds of Mr. Geo. J. Streater, of Ohio. A dozen plants were kindly sent me by the originator. I was told by an extensive grower of strawberries in Ohio who saw the new variety growing on the grounds of the originator, that the long sought for "Perfect" strawberry had

arrived. This new berry was reported as creating quite a stir among berry-growers who had seen its fruit, as in plant, berry and fruit-stem it was, they said, perfect. I was anxious to see its fruit after hearing so much about it.

The Cardinal, the name of the new variety, Mr. Streater says, is the result of thirty years' experience in growing strawberries. During this period all the varieties, novelties, standard

varieties, and thousands of seedlings were grown. For this reason I was very much pleased to receive plants of it from the originator. I planted them in a trial plot, beside the old standards, and I am pleased to report that the Cardinal has come up to what was claimed for it. It is a great berry. It was said by one grower to be *the greatest all purpose strawberry yet produced*. It certainly made a very good showing with

me during the past season. I believe it will take a first place as a market berry when it is well enough known. A. W. Clark, of Rhode Island, says that with him "it is all that the originator claimed for it, it is a wonderful berry." Mathew Crawford, of Ohio, says of it, "It is a most wonderful strawberry." It is said to be a seedling of Walfield, and Walfield is claimed to be a descendant of Wilson's Albany. The new strawberry would appear to be akin to the Wilson that held the lead for over twenty-five years as the best market strawberry.

The plant of the Cardinal is large and strong, very healthy, very bright glossy green foliage. The fruit is held up on tall strong fruit-stems. The plant is very productive of large berries of good

quality, and firm enough to carry well.

"Wonder," a (*Perfect blossom*) originated by S. A. Sampsel, of Ohio, is also called "Sampsel's Wonder." It is a luxuriant grower. The plant is large, strong and healthy, a good runner, and very productive. The berry is large and conical, scarlet color and red seeds. The berry has a neck, and is of very good quality and well worth a trial. I was very much pleased with it. It has a long season, from mid season to late, and holds its size to the end.

Howard's No. 103 (Imperfect), the origin of 103 was grown from seed of a seedling of Crescent crossed with Clyde, by A. B. Howard, of Massachusetts. It has not been introduced. The plant is a good grower and makes a great many

runners, and is very productive. The berry is conical and of good color and size. It gave a yield second to no named kind. It is a good early berry, one of the best we had. It is pistellate and that is one reason for its great productiveness.

Early Hathaway (Perfect), originated by Hubachiand Hathaway, of Arkansas, and sent me two years ago. The plant is healthy and a good runner. The berry is conical, firm, of good color, red all through, acid, but of good quality, medium to large, very productive, a good early, well worth trying as an early market sort.

The foregoing four varieties took first place among the new kinds with me, and are equal if not superior to the old standards, but time will tell.

## Perennials for the Town Lot

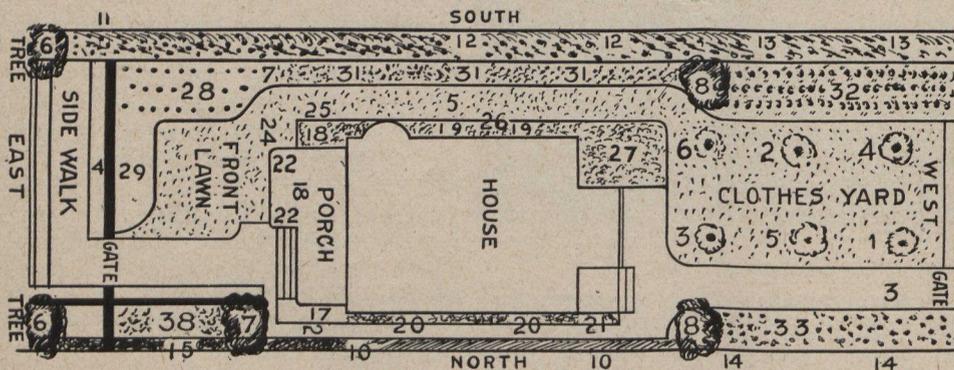
Roderick Cameron, Niagara Falls, South

MANY owners of a lot in a town or city are anxious to make the home surroundings more attractive but do not know how best to accomplish the task or what class of plants to use. In most cases perennials can be used to best advantage. The following specimens are most suitable for the average-sized lot, about 50x120 feet, giving a front yard 50x25 feet. By referring to the diagram here published an idea can be gained as to the proposed arrangement. The space available for gardening purposes being so small, care must be taken to utilize every inch.

plant vines against, which will cling to the netting by their tendrils, saving the time and trouble of tying. A fence covered with suitable vines, kept clean and trimmed properly, becomes more attractive and beautiful year by year. If the front fence is a wall, cut holes through it near the bottom and put in four or six inch tiles. Then close round the tile as before and plant inside the wall with ampelopsis. They will find their way through the tile pipe and cover the outside of the wall, at the same time covering the inside. In this way the danger of destruction of the vines by

Prairie, and do not forget to trim them now and again when needed, and at 14-14 plant Trumpet Creeper and the rose Acacia alternately. They must be kept close to the fence and trimmed occasionally or tied to the fence. At 16 may be used a cedar hedge as a screen to hide the alley at the back of the lot.

The lines for the house at 17 should be Chinese Wisteria and the golden-leaved Honeysuckle, or *Louicera reticulata*. The Wisteria climbs up and over the front veranda, while the Honeysuckle covers the bare stem of the Wisteria. At 18-18 plant *Akebia quinata* and *Clematis paniculata*. At 19-19 and 20-20 plant *Ampelopsis veitchii*, or Boston Ivy, to cover the wall. At 21 use Matrimony Vine or Staff Vine, *Lycium Chinensis* and *Celastrus scandens*. To the left of the front steps is a flower border three feet wide; the vines, 18, are planted at the back: their front row, 24, may be sown with Mignonette or Sweet Alyssum, or Madam Saleroi Geranium, or Golden Bedder Coleus may be used. Behind them 22-22, plant mixed Geraniums or Scarlet Salvia. At 25 may be planted dwarf Nasturtiums; at 26 pink Geraniums thinly, and among them in the open spaces Gladioli. At 27 dwarf Cannas bordered with variegated Stevias, Zinnias, French Marigolds or Coleus look well. Space 28 can be planted with roses such as General Jackminot, in the back row; the second row, Mrs. John Laing, and the front row mixed summer bloomers that must be laid down during winter. Throw a spadeful or two of soil close up to one side of the bushes to act as a pillow, and bend the branches over it. This will prevent a sharp bend in the branches, and keep them from breaking. Over the whole place a good-sized sod, grass-side under, to protect the plants over

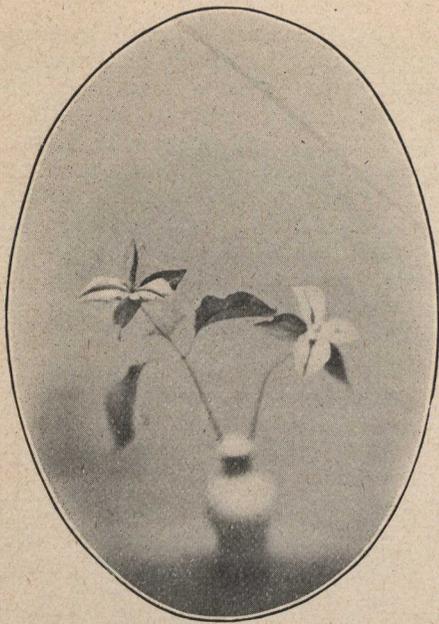


The paths are the first consideration. They must be convenient and spacious enough, particularly to the front door, for four persons to pass abreast without crowding each other on to the grass. It is best to adopt straight lines since the single lot does not permit of crooked ones without cutting up the lawn too much; in other words, we must make the best of the space at our disposal. On a larger space, say two lots, irregular lines would be better.

Lots are generally surrounded by a fence, and if one is used it is best to cover it with chicken-netting, which costs but a few cents a yard. It is then ready to

public works on the street is removed.

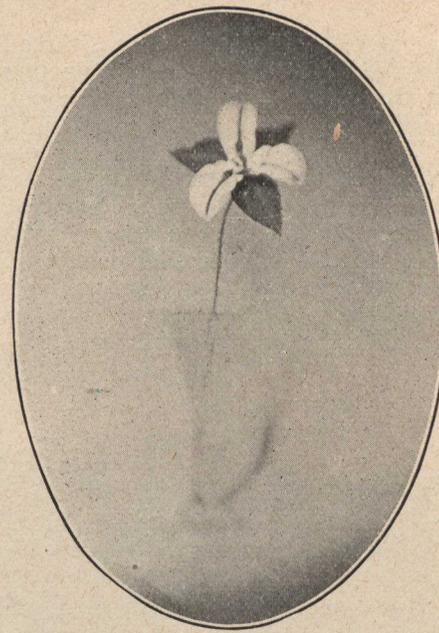
On the north side, from the front to the back door, plant Hall's Japan Honeysuckle, and trim it as you would a hedge each year, preferably in the spring. It is usually the lack of this trimming that makes these vines look so bare and scrubby. Trim them and see what a pleasure will be derived, not only in foliage, but also in bloom, and almost throughout the entire summer and fall. At 12x12 plant the tall Nasturtiums; at 11 plant *Clematis paniculata* and one or two *Clematis Jackmani*; at 13-13 set the different varieties of Rambler Roses and Queen of the



No. 1



No. 2



No. 3

### FREAKS AMONG THE TRILLIUMS

Dr. D. G. Storms, Hamilton, Ont.

During the last three or four years, in my rambles through the woods in spring, I have chanced upon a few specimens of trilliums such as the above, having the petals more or less splashed with green. In the spring of 1905, in a secluded ravine near Hamilton, my wife found the large cluster which had a dozen or more blooms, varying from pure green to merely a slender green strip down the midrib. In the same place, but possibly fifty or seventy-five feet away, the left hand bloom in No. 1 was found, and two or three hundred yards away, and on high, dry ground, that in No. 3 was discovered.

In the ordinary trillium the whorl of green leaves sits down upon the flower stalk, that is, they have no stems. You will see, in the left hand bloom of No. 1, the leaves have stems about as long as the leaves themselves. In No. 2 the stems were six or seven inches long and attached below the ground. In No. 3 the green leaves were absent. Another strange feature with No. 3 was that the bloom was double. This can be accounted for by each whorl being moved up one place, so that the whorl of green leaves form what looked to be the sepals, the sepals forming the petals and the petals proper forming the additional whorl of petals. These latter were white with a green stripe.

We carefully took up the cluster in No. 2 with all the earth about the roots, and planted it in our garden at home, where it was admired by many. It seemed to be perfectly at home. We are looking for the spring to see if it will appear again as we found it.

These rare specimens are found frequently near Galt, and in several places about Hamilton. We want to know why, and we invite opinions from those readers of "The Horticulturist" who have studied these beautiful and interesting plants.

winter. Among the roses may be planted Gladioli, Violas or Pansies to keep the plot bright.

At 2-2 may be used a Cut-leaved Weeping Birch and a Halesia Uraptera, or Snowberry tree, and next to each in their shade, plant on one side one or two Golden Bell bushes, Forsythea suspensa, and on the other Viburnum plicatum. The street trees, 1-1, may be elms or maples. Both are suitable for the purpose. At 29 plant Deutzia gracilis, Deutzia Lemoinei and Yucca filiamentosa, and border with Sweet William mixed. At 30 may be planted Tritoma Pfritzeni, Perennial Phlox, and Campanula salicifolia in twos and threes.

At 31-31-31 may be used as an edging Armeria, Maritima splendens, bright rosy pink flowers, and Alba, white. They may be mixed or planted in clumps of three or four. The rest of this border should be planted in clumps with no regard to order. The following plants will not rob one another since they are of about equal constitution. The best are as follows: Arabis Alpina, single white flowers, Var rosea, has pink flowers, and variety flore pleno has double white flowers, and begins to bloom after the single is done, thus prolonging the season of bloom; Dicentra eximia, a purple dwarf Bleeding Heart, blooming almost continuously during summer and fall; Iberis sempervirens, Evergreen,

Candytuft with white flowers, Alyssum saxatile compactum, also called Basket of Gold, a foot high, and producing golden flowers; Aethicum liliastrum, two feet high, pure white lily-white flowers; Montbretia in half-a-dozen varieties, growing two to three feet high, and resembling small Gladioli. Among these plants here and there may be planted clumps of Pansies or Violas, also called Tufted Pansies.

Plot 32 may be planted in a similar manner to 31, but more variety and larger plants should be used. The front row may be of Scotch Pinks in variety, and Tufted Pansies or Campanula carpatica. The rest of the plot may be planted in clumps with the following, keeping the tallest towards the back, Lythrum calicaria, or Spiked Loose-Strife, four feet high, purplish flowers in long wand-like spikes; Lysimachia clethroides, two feet high, and white flowers, Achillea ptarmica, the pearl, two feet, double white daisy-like flowers, Mertensia virginica, Virginian Cowslip, 15 inches, blue flowers, and Coriopsis grandiflora, two feet, yellow flowers, are all good. Delphinium in variety may be added if there is room. They can be had in many shades of color, and grow four to six feet high.

Plot 33 I would advise planting in the same way as 32, but with different specimens to give variety to the border,

and to have cut flowers for home use. The front row should be planted with Polyanthus, Cowslips and Primroses. Here and there among them may be planted Lychnis plenissima, Semper florens, growing about a foot high, and producing rose-pink flowers from spring to fall. Myosotis palustris makes a good subject for the front row; it is continuously in bloom from spring to fall. This Forget-me-not is also forced during winter by the florists. The remainder of this border may be planted in clumps with the following: Monarda didyma splendens, three feet high, scarlet flowers; Platycodon grandiflorum, two feet high, one blue and one white, and Saxifragas umbrosa, London Pride, or None so Pretty, a low-growing, spreading sort, that throws up stems a foot high with pink flowers.

A plant of each of the following gives much pleasure to the owner: Spiraea Chinensis, pink flowers, three feet high; S. filipendula, flore pleno, double white flowered, fifteen inches high; S. Japonica aurea reticulata, 15 inches high, with leaves beautifully veined with gold; Pentstemon barbatus Torreyi, 2 feet high, producing scarlet flowers on long stems from the base of the plant all summer, and good for cut flowers; Chrysanthemum maximum superbum, suitable for out-of-the-way corners at the back of the border, blooming all

summer; Clematis Davidiana, three feet high, and producing light blue flowers in the axils of the leaves; Campanula persicifolia gigantea Moerheimi, this is one of the best herbaceous plants grown, double white flowers on stems three feet high; Anemone Japonica in variety, to bloom when other plants are done, three feet high; Helianthus multiflorus florepleno, four feet, double yellow flowers, and Helianthus sparsifolius, six to eight feet high, with large golden-

yellow single flowers. These varieties are choice for cutting, and will make a fine display throughout the summer if cared for.

The clothes-yard posts should be red cedar. Place wire or netting on them, and plant beside 1, 2, and 3; the pink Everlasting Pea, Lathyrus latifolius, and on 4, 5 and 6 Lathyrus latifolius alba, they will cover the posts and produce excellent cut flowers for the table.

The walk from the gate to the front door is six feet wide and made of con-

crete. No. 2 is a two-foot path from the front to the kitchen door, also made of concrete. No. 3 is a four-foot concrete walk from the alley to the kitchen door. No. 4 is a gravel space in front of the cellar entrance. No. 5 is a four-foot wide grass path running from the clothes-yard to the front lawn. At No. 8-8, two small trees, one cercis Canadensis or Judas Tree, the other on the south side, Cercidiphyllum Japonicum, or Catsura Tree of Japan, are planted.

## Pleasing Floral Effects for the Table

NO matter how dainty the meal, or how elaborate the display of cutlery, glassware and china, the table is not complete without some form of plant life. Nothing is more pleasing than a few fragrant flowers artistically arranged. Even a small bouquet of some common flowers in a vase in the centre of the table makes a pleasing effect. In the summer no difficulty is experienced in getting a suitable supply for every occasion, but when winter comes the supply is somewhat limited and the cost considerably increased. It is at this season, however, that floral decorations on the table are most enjoyed and, for this reason, when friends are entertained, the expenditure of a few dollars for flowers for the table affords pleasure to all. These flowers may be arranged by one's self.

Persons who visited the recent Horticultural Exhibition in Massey Hall, Toronto, received an object-lesson in

artistic table decorations, if they but studied the different arrangements on the various tables in the competition. The table that won first prize was decked with orchids, lily of the valley and asparagus fern. Richmond roses, lily of the valley, and maidenhair ferns were on the second prize table. On the third prize table were Canadian Queen roses, violets and asparagus fern. In every case the display was more elaborate than can be expected in the average dining-room, but the different arrangements offered suggestions as to what might be accomplished with fewer and less costly specimens.

Various plants can be used to advantage, but those with a pleasing fragrance should be chosen. In an interview with the CANADIAN HORTICULTURIST, Mr. J. S. Simmons, of Toronto, whose table won third prize in the competition said: "There are many flowers that produce a pleasing effect on the

dining-room table in winter. Violets with yellow daffodils or yellow tulips are desirable. Roses are frequently used, and when combined with other suitable plants are among the best for decorating tables. Sunset roses and violets make a very pleasing effect. Meteor or Bridesmaid roses with lily of the valley can be arranged to give a fine display. Many people use the pink carnation, Enchantress, and violets to excellent effect. A centrepiece of Enchantress carnations and corner bouquets of lily of the valley are common table decorations.

"For the greatest show and to present a rich appearance the flowers are placed in a cut glass vase on a mirror base. A more natural effect is produced by placing a few flowers on the mirror loosely as if they had fallen from the centre bouquet. Other arrangements for display are made by having a centrepiece in basket form, or with a birch bark hamper. If the former is used, the willow basket can be screened with asparagus fern. In using daffodils and violets with the willow basket the appearance can be made much more attractive by forming ribbons of asparagus fern, and having them placed carelessly from the basket. All signs of stiff or set arrangement should be removed. In using daffodils it is common to form fans on the corners of the table. The flowers should be tied with ribbon to match. With carnations and lily of the valley in the basket a pleasing effect can be produced by forming a three-looped bow and placing a vase in each loop. The loose ends of the ribbon arrangement can be allowed to run to a prominent part of the table.

"When the birch bark hamper is used in forming the centrepiece, a more pleasing effect is made by having small birch bags on the corners of the table.

### LOOSE ARRANGEMENT BEST

"As a rule the flowers should be arranged loosely. Care should be taken not to obstruct the view across the table. It is not advisable to have the flowers stand up too high or to have them arranged compactly. Ribbons



The prize-winning decorated table exhibited by Mr. J. S. Simmons at the Ontario Horticultural Exhibition.

and dry goods are objectionable, and should be largely dispensed with.

"In many cases a corsage is left for each lady and a boutonniere for each gentleman. When the table is decked with carnations and lily of the valley, the lady should have a pink carnation and some valley tied with white cord,

while the gentleman receives only the valley. When roses and violets, or roses and valley are used, a rose is given to the lady and some violets or some valley to the gentleman."

If cut flowers cannot be secured, a nice pot plant of low growing habit is an excellent substitute. The dwarf

ferns are admired by many. A bushy specimen of geranium, or impatiens, or any plant that can be induced to bloom in winter, is preferred by others. Most of the common flowering house plants can be used for this purpose if the bloom is kept off during the late fall, and extra care given them.

## An Amateur's Greenhouse in February

A. Alexander, Hamilton, Ont.

THE prevailing color of the January house was white, from the predominance of Roman Hyacinths, Paper-white Narcissus and white Primulas—these are now in the background, and pink and yellow reign supreme. The pink from a large number of pink or rose-colored Begonias, and the yellow from scores of Daffodils, which, though bought for Von Sion from two different firms, have turned out to be "Trumpet-Major"—not one Von Sion bloom in the 150 bulbs! I am curious to find out if the experience of my brother-amateurs in this matter coincides with mine. I do not regret it, for they are very beautiful, and I am satisfied.

The following is a partial list of plants now in flower in addition to those mentioned:—

Poinsettia pulcherrima, Bouganvillea, Azalea, Begonias, Cyclamen, Frezias, Abutilon, Lantana, Geraniums, Dutch Hyacinths, etc.

Not alone for flowers is the Amateur's Greenhouse useful for keeping up a constant succession of beauty throughout the dreary months, but also in preparing for the coming work out of doors in

the garden, hence this month of February should see sundry boxes and pots containing seeds and cuttings standing about in, or on, the sand of the propagating bed. Neither should the kitchen garden department be neglected, for if a few tomato seeds are put in, and potted on, by the middle of May you will have plants with fruit set, ready to plant out.

Let me also recommend that now is a good time to put in sand, or moss, a few tuberous-rooted Begonia tubers just to start them off before potting. They are most desirable for the amateur's house; they are easily handled and give great satisfaction. I get a shallow box, two or three inches deep is enough, put in an inch of moist sand, lay the tubers on this and fill in between with the sand, just leaving the tops visible, but be sure it is the tops. Cover with a piece of glass to prevent too much evaporation, and shade with a piece of paper. As soon as the first signs of life appear remove the glass and, when the sprouts are about an inch long, put each in a suitable pot in good soil, and in about two or three months you will



Cypripedium Insignis as Grown in Mr. Alexander's Greenhouse.

be delighted with the resulting beauty.

There are also many hardy perennials that may be started this month, and which will flower the first year. As an example, about this time last year I sowed in a shallow box in the greenhouse a few seeds of perennial Delphinium or Larkspur, which planted out in June, about 100 plants. In September I had 70 of them in bloom—some of them quite new and valuable. Some of the spikes of bloom were three feet in length, of every shade of blue, from indigo to nearly white. With a small greenhouse and some bottom heat, all the annuals and other plants you need for outside may be raised.

Flowers are always a source of joy, whether we pluck them from our own little garden or whether we order them ready made from the florist.—Mrs. W. J. McLenahan, Appleby.

Do not be a back number. Improve your surroundings and keep up with the procession. Flowers will grow where weeds and thistles will grow.—N. S. Dunlop, Montreal, Que.



Another Corner of an Amateur's Greenhouse in February

## Winter Treatment of Bulbs and Tubers

Wm. Hunt, Guelph, Ont.

**A**MATEUR flower growers frequently make a mistake, when wintering their bulbs, in the care they give the Amaryllis.

These popular and gorgeous flowering bulbs should be divided into two classes, the herbaceous and the evergreen. The mistake is often made of treating these two distinct types in exactly the same way during the resting period. This sometimes happens because the characteristics of these two types are not understood. The herbaceous type of the amaryllis is very easy to detect. As soon as these have flowered and the flowers drop the foliage begins to show signs of decay. This is natural in the herbaceous type and is a sure sign of the natural and severe rest required by these bulbs. The proper flowering season of both the evergreen and herbaceous varieties is during the summer months. As soon as the herbaceous variety is out of flower and the foliage begins to decay, give the bulbs less water. When the foliage has died down give only sufficient water to keep the soil moist around the bulb. Remove them to a cool, shady position out of doors, bringing them in before frosts, and put them in a cool cellar or window in a temperature of 45 degrees. They can be kept here quite dry until February or March, when they can be brought out into a warm window, watered, and started into growth. Re-pot the bulbs if necessary at this time. A good top dressing of soil is, however, often to be preferred to re-potting them.

With the evergreen type of these plants no sign of decay will likely be seen in the foliage after flowering, as these do not require so decided a period of rest. The evergreen varieties can be kept in a cool window all winter, giving them less water, however, than during the summer. A temperature of 40 to 50 degrees will suit them in winter. The *Vallota purpurea* or Scarborough Lily is closely allied to the different varieties of evergreen amaryllis, and requires much the same treatment in winter.

Gloxinia bulbs should be gradually dried off after flowering as soon as the leaves show signs of decay. Very little water should be given them when once dormant. Light waterings may be necessary at times during the winter, so as to keep the soil from getting dust dry. This latter condition is too severe, and results in either dry rot or shrivelling of the bulb. A temperature of 45 to 50 degrees will suit them in winter.

### ACHIMENES

These pretty little flowering plants make very desirable window plants for summer flowering when properly

managed. If the small bulb-like tubers are started in April or May in pots in a hot-bed or in the window they give good results. They succeed best in hanging pots or baskets. A light compost of equal parts of potting soil, leaf soil, and fine sand will suit them, with plenty of drainage. Avoid giving too much water in the earlier stages of growth. A summer temperature and partial shade suits them best; sprinkle the foliage very seldom. When out of flower treat as recommended for the gloxinia, with the exception that achimenes will endure a drier condition of the soil when dormant than the gloxinia will.

Light soil, good drainage, heat and partial shade, with careful watering in the early stages of growth, are the essential points in the culture of both of these plants. I have been tempted to take this opportunity of giving a few cultural hints on achimenes from the fact that their usefulness as summer flowering window plants is not generally known by plant lovers, although they are favorites with many amateurs who often have great success with them.

### AMORPHOPHALLUS OR SNAKE PLANT

Not a very attractive name, but the growth of the plant is very pretty in summer. Their oddly formed leaves, together with the green and almost white blotches on its foliage, that has given it the name of the Snake Plant, and its easy culture when properly treated makes it a very attractive plant for an east or north window in summer, or even out of doors in July or August in a shady position. The treatment of the bulbs when dormant should be about the same as for the gloxinia and achimene. The cultural notes given for these last named plants will also suit the Snake Plant, except that the soil need not be quite as light in its nature. This plant usually flowers when the large bulbs are dormant. The flower should be destroyed as its odor is very disagreeable.

### TUBEROUS ROOTED BEGONIAS

The tubers of these should be kept dry during the winter when once the foliage has entirely dried off. A temperature of 40 to 45 degrees will suit these tubers in winter time. I prefer keeping all of the bulbs and tubers I have been speaking of in the soil they have grown in, and in the pots as well, without being disturbed while dormant. Dry sand or earth can be used to pack them in, but from experience I have had the best results from keeping them in the pots undisturbed. It is the most natural method to treat them, as the pots can be stood away in a cool cellar or room very easily when the roots are dormant.

## Grow Flowers for the Churches

A. K. Goodman, Cayuga, Ont.

**I**N the smaller towns it would be a good thing to plant gardens, especially for the purpose of supplying cut flowers for the decoration of the churches. Set these gardens apart from the formal beds and interest the children. Have them make the weekly cuttings



Gathering Flowers for the Church

and decorate the chancel. After the morning and evening services, have the flowers distributed among the sick in the locality.

This would have a wholesome effect in many ways, and be particularly a wise training for the young. It might even revive interest among the older members of society in church work,



Mr. Goodman's Garden where Flowers are Grown for Church Decoration

and check any tendency to atheism, that foul, unnatural vice, foe to all the dignity and consolation of mankind.

Pleasing results for this purpose may be had from asters and gladioli planted in masses. If the former are tried, note that asters feed near the surface of the ground and require the best of soil, in the open, good drainage, plenty of water, with a mulch of well-rotted manure just before or as the buds form.

For those horticulturists who have well-balanced minds and wish to have a real garden, a combination of floral effects is necessary. All are equally important in the making of a garden that will be interesting and useful, and if properly combined they will produce an effect at once striking, beautiful and artistic.

# The Lawn—An Important Part of the Home Surroundings

A. H. Ewing, Woodstock, Ont.

To have a nice even lawn the ground must first be properly prepared. This cannot be attained simply by levelling the hills into the hollows. If this is done, the places where the hills were will be

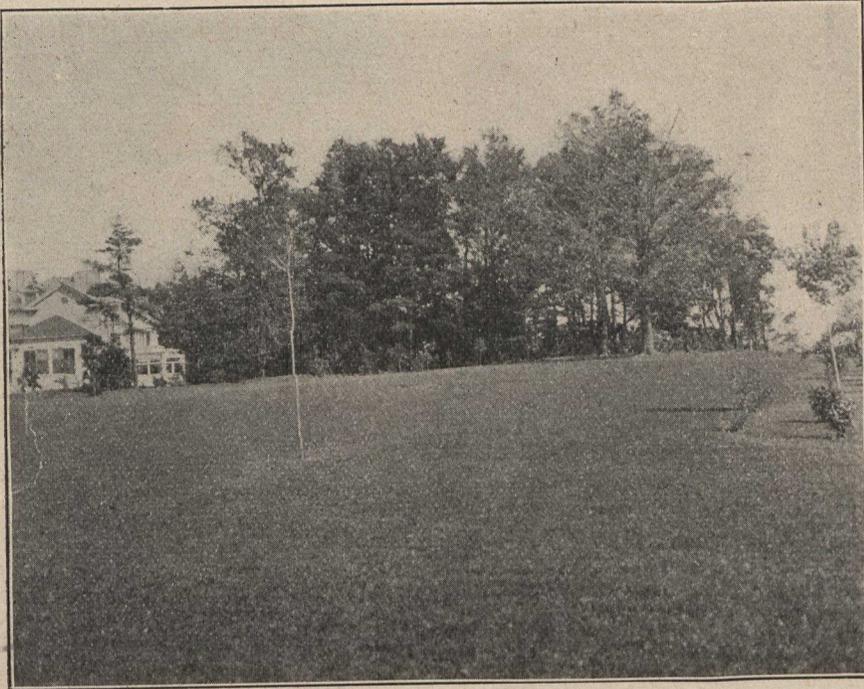
when you are finished without your spectacles. Forty or fifty pounds to an acre is said to be the right quantity, but that is rather indefinite to most people. Some rake the seed in, but I prefer

very sharp and in good order. It is better not to cut it until it is strong and has a good hold of the ground. After the first cutting, the grass plants (and clover, too, if you have sown it) will soon cover the ground and stand cutting whenever needed. The machine should not be set to cut too low the first year.

There are sure to be some weeds, but many of them will die after being cut off with the machine a few times. Dandelions, plaintain and ox-eye daisies can not be killed so easily. These must be pulled or spudded.

A good lawn can be obtained much more quickly if clean sod can be secured at a reasonable rate from a nearby pasture. Sodding can be done almost any season of the year (except winter) especially where plenty of water is at hand. Spring and early fall are the best times. The same preparation of the ground is necessary as for seeding. In cities or places where the plot is likely to be tramped, sodding is much the better way to start a lawn. Seeding is a precarious proceeding and not advisable.

There are many points in the making of a lawn that the uninitiated might want to know. Every place has its own particular points, and I propose, if the editor thinks I know enough about it, to write more on the subject in the near future. The keeping up of old lawns will be treated. In the meantime I shall be pleased to receive questions from anyone proposing to make a lawn and to embody the replies in my next contributions.



A Lovely Home Surrounded by Lawns

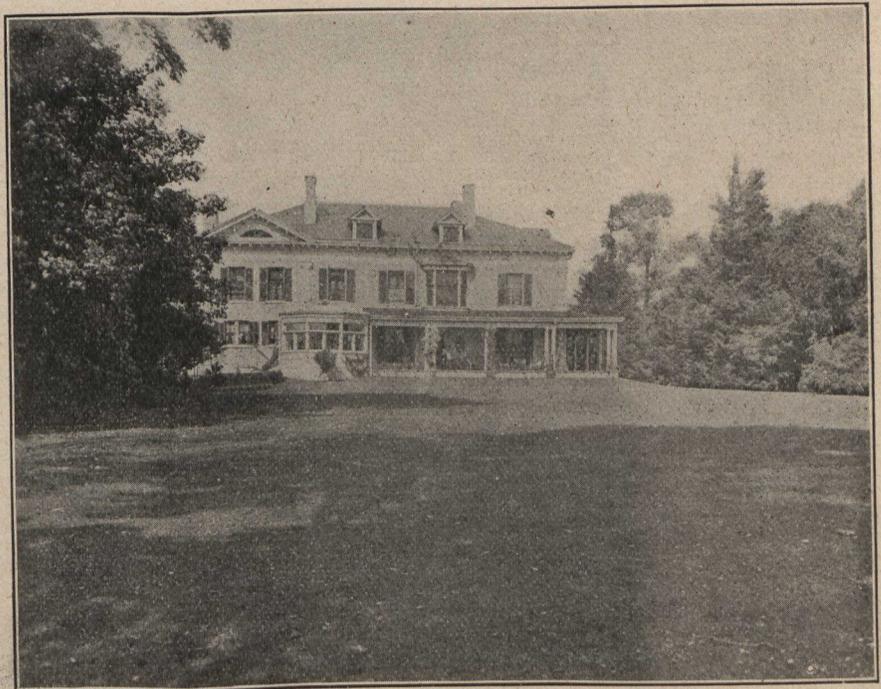
The west lawn at "Altadore," Mr. H. A. Little's residence, at Woodstock. One of Canada's handsome "country" residences.

poor soil and the grass when grown will look patchy and will wither much more quickly in dry weather than the grass where the hollows were and where there is a good depth of top soil. I have, in my mind's eye, a lawn where twenty years or so ago there were flower beds and cinder paths. These were dug and covered with a light coat of soil. To this day the pattern of those beds and paths is plainly visible, especially in dry weather.

The land should be ploughed or dug and levelled to the desired contour, ploughed or dug again, and well worked to an even depth, and give a good coat of old, well-rotted manure, especially on the poor spots. This should be well worked in. It is preferable to do this in the fall so that the ground may settle and be again levelled as early as possible in the spring and the seed sown at once. Before sowing go over the land with a rake and pull off all stones and lumps that cannot be broken. At the same time make the surface perfectly even.

Procure the best lawn grass seed from a reputable seedsman—be particular about this as it will save future trouble with weeds—and sow broadcast on some very still day. Early morning is generally the best time. Sow it thick, too, so that you can see it on the ground

leaving it alone. The best plan is not to touch the lawn the first time until the grass is long enough to be cut with a scythe, unless the mowing machine is



A Sweep of Lawn Like This Adds a Homelike Appearance

This illustration shows the south lawn of the residence of H. A. Little, Esq., of Woodstock, formerly owned by the late Hon. James Sutherland.

# Fertilizers for Vegetable Growers\*

Prof. R. Harcourt, O.A.C., Guelph, Ont.

UNTIL comparatively recently the fundamental principles underlying the use of fertilizers was not understood. Some of the questions which had to be solved first were: What is the food of plants? and, What is the source of that food? Further, in order that fertilizers be intelligently and economically used, it is essential that some definite knowledge be gained regarding the food requirements of different plants and the power which they possess of appropriating these food substances. It is also necessary that something be known regarding the quantity of food materials that are available to the plant, and the particular part each food constituent plays in plant development. These, together with an intimate understanding of the composition and availability of the constituents of a fertilizer, and many other points, must be, at least partially, understood before fertilizers can be intelligently applied.

Given that the soil is in fair condition and that the cultivation will be thorough, there are certain fundamental facts concerning the needs of the soil and crops and the nature of the fertilizers that are not difficult to understand, and attention to which will greatly increase the likelihood of success.

All soils will not contain or retain plant food to the same extent. As a rule, clay soils hold that which they receive better than sands, and thus do not suffer so much from the leaching action of water; on the other hand, the sands may be more liable to lose plant food in the drainage water, but they also give up that which they have to plants quicker than the heavy soils. In both classes of soils and all the intermediate types, an abundance of humus is essential.

Regarding the plants themselves they differ in the range of root, period of growth, purposes for which they are grown, and in their power of attacking insoluble constituents of the soil with which they may come in contact. As a general rule, the greater the depth and range of root a plant has, the less need there is of supplying the ash constituents for that crop, as it can gather its food over a very wide area. The length of the growing period also has a very marked influence on the nature of the fertilizer which a plant will require. A crop, such as barley, requires its food in a form more readily available than oats, for its period of growth is shorter and it

gathers its food almost entirely from the surface soil.

Such crops as the legumes have comparatively little difficulty gathering all the nitrogen they need, because, through the aid of certain minute organisms present in most solids, the immense supply of nitrogen in the atmosphere is available to them; but, on the other hand, they have difficulty in getting the amount of potash they require. Root crops, such as mangolds, turnips, carrots and beets cannot make ready use of the insoluble mineral constituents of the soil. Hence, in order to insure full crops, they must be supplied with available food in which phosphates should predominate for turnips and nitrogen for mangolds and carrots.

Another group of plants is distinguished as a class not so much because of their peculiar habit of growth as because of the objects of their growth. This class includes lettuce, beets, asparagus, celery, radishes, in fact all plants that are marketed in immature form. One of the most important points in raising these is to secure rapidity of growth, and thus to insure high quality, which is measured largely by their succulence. In order that this may be accomplished they must be supplied with an abundance of available plant food, and since nitrogen is the one element that more than any other encourages and stimulates leaf and stem growth, its use is especially beneficial to all of these crops. They must not lack this element in any of their growth, though, of course, a sufficiency of the ash constituents must be supplied in order that the nitrogen may be properly utilized. Because of their high commercial value the quantity of plant food applied may be greatly in excess of that for any other group of plants.

It is impossible to give general information concerning the use of fertilizers that will apply well under all circumstances. On soil in good condition, it is safe to apply good dressing of readily available nitrogen to all crops that produce large leaf and stem growth and are harvested in the immature state. For the legumes, which can gather their own nitrogen, and potatoes, which use up large amounts of potash, potassic manures can safely be recommended, and for roots, and particularly for turnips, phosphoric acid is the dominant fertilizer. It is not meant that only those particular constituents should be applied for the other fertilizer constituents are, up to a certain point, just as important.

If the soil is in a high state of cultivation or has been manured with natural products, as farmyard manure, they

may be used singly to force a maximum growth of the crops. For worn-out soils, possibly the best practice would be to apply with what farmyard manures may be available, a liberal supply of mineral constituents in the cheaper forms, such as ground bone, tankage from pork packing establishments, ground phosphates, and basic phosphate for phosphoric acid, and the crude potash salts, not forgetting wood ashes for potash. The phosphoric acid and potash forms fixed compounds in the soil, and are, therefore, not likely to be leached out, provided the land is continuously cropped. Nitrogen should be applied chiefly as nitrate of soda, because in this form it is immediately useful, and thus may be applied in fractional amounts, and at such times as to best meet the needs of the plant at the different stages of growth, with a reasonable certainty of a maximum use by the plants.

In conclusion, it cannot too strongly be urged that, while fertilizers intelligently used may be a source of profit to the fruit grower, and especially to the vegetable grower, carelessly used, they may be a source of great loss. They can never take the place of cultivation; in fact, it is only in conjunction with the most thorough cultivation that they will prove profitable.

## Forcing Vegetables

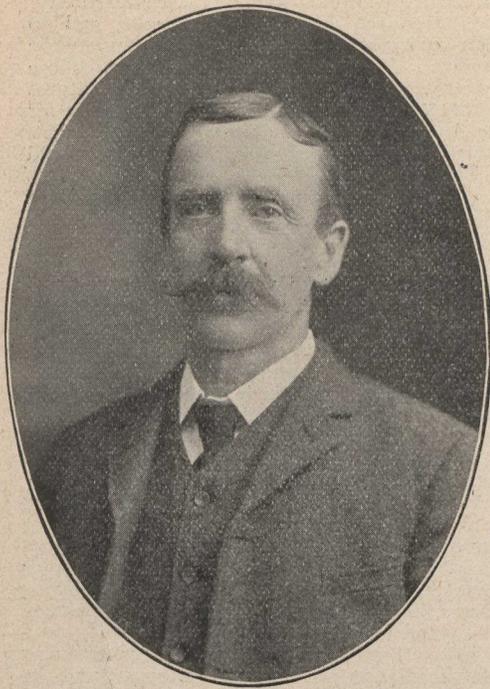
W. T. Macoun, Ottawa, Ont.

In THE HORTICULTURIST last winter Mr. S. Ward Kennedy, of Leamington, had an article on Early Vegetables. Why not go further and bring vegetables to maturity under glass in winter? I am interested in this question, but only as an amateur, and I trust I am not asking an absurd question. Given a properly constructed, ventilated and heated greenhouse, proper soil, fertilizers and attention, why could our growers not fill with their produce the stalls of our shops that in winter are supplied with foreign vegetables?—M. W., Hamilton.

The principal reason why Canadians do not grow winter vegetables to supply the home market is that the winters are so severe that the cost of heating prevents successful competition with vegetables produced in the south. It is gratifying to know, however, that tomatoes are being more largely grown in Canada in winter, and, we believe, with fair profit. Lettuce, radish, and some cucumbers are also grown. In southern Ontario, where the winters are comparatively mild, the growing of vegetables in winter is receiving considerable attention.

\*Extract from a paper read at the first annual convention of the Ontario Vegetable Growers' Association, held last November at the time of the Ontario Horticultural Exhibition.

## ANOTHER ANSWER



F. F. Reeves, Humber Bay.

The Toronto branch of the Ontario Vegetable Growers' Association is the strongest branch of the provincial organization in the province. It has over 100 paid members. Monthly meetings are held at which addresses are given by local vegetable growers. One of the secrets of the success of this organization lies in the hard work that has been done by its efficient secretary, Mr. Reeves, who has been a successful vegetable grower for a number of years. Mr. Reeves was in charge of the vegetable exhibit at the Ontario Horticultural Exhibition and is a director of the Ontario Vegetable Growers' Association.

**Celery Blight**

What is the cause of celery blight, and what is the best remedy? What experiments have been conducted to find the cause?—F. F. Reeves, Humber Bay, Ont.

Prof. F. C. Sears, Truro, N.S.: There are two common diseases of celery that are known as "celery blight." As one appears much earlier than the other they have been distinguished as the early and the late blights. Both are fungous diseases and both begin as spots upon the leaves, but in the early the spots are at first grayish-green and later brown and ashen; while in the late blight the spots are of a tawny color.

The remedies that have proved most satisfactory are: growing celery in moist ground and, where feasible, shading it; practising rotation so that the disease may not be carried over in old celery plants and attack the new crop; destroying all refuse, plants and leaves, and spraying with Bordeaux mixture in the early part of the season, and later, as the plants near maturity, with copper carbonate solution (copper carbonate six ounces, ammonia water two pints, water 45 gallons). It is also recommended to dip the tops of plants on setting them out into the copper carbonate solution. Extensive experiments have been made at the following experiment stations: Ithaca, New York; New Brunswick, New Jersey; New Haven, Connecticut, and U.S. Department of Agriculture, Washington, D.C.

Prof. L. R. Taft, Michigan: Celery blight is caused by a fungous disease that is especially troublesome when the growth of the plants has been checked either by lack or excess of moisture. Its effects can be lessened by using land that is naturally moist but well drained and that is well supplied with plant food. The use of mineral fertilizers rich in phosphoric acid and potash seems to reduce the tendency to the attack of this disease. When the disease has been troublesome it is a good plan to use the land for some other crop for a year or two. Spraying with Bordeaux mixture or weak copper sulphate solution will reduce the injury. Sometimes the disease appears on a few plants and it will be well to remove and destroy the infected leaves. It will also be well when harvesting celery to carefully gather and destroy all the leaves.

## ONLY ONE BLIGHT

Prof. S. F. Edwards, Guelph, Ont.: The term celery blight is commonly applied to several diseases of celery, but accurately speaking there is only one that should be called blight. The cause of this trouble is a fungus, *Cercospora apii*, Fr., which may appear at almost any time during the season, attacking first the lower leaves, and producing irregular brownish blotches that later turn yellow. Probably the most beneficial treatment is spraying with Bordeaux mixture, twice on the young seedlings, and again a few weeks after transplanting.

Another disease of celery that is sometimes called blight, and which is probably of bacterial origin, is under investigation in this laboratory. In connection with this work, specimens of a few leaves of diseased celery, accompanied with data as to the extent of the trouble, percentage of loss, and varieties of celery most affected, would be gladly received.

**Growing Cauliflower**

The question of growing cauliflower was ably discussed at the meeting of the Toronto branch of the Vegetable Growers' Association on January 6, by Mr. Jno. McKay, the cauliflower king, of Doncaster. It was stated definitely that for success in growing this crop a suitable soil must be provided. As a rule success cannot be had on land that is suitable for growing celery. A sandy loam is the best soil and much better than heavier soil. A liberal supply of manure must be added and frequent cultivation is required throughout the season. It is an expensive crop to grow, as the plants are delicate and will not stand extremes of heat or cold, and there are numerous insect pests to combat.

For success the best seed is needed. These should be started about June 1.

Mr. McKay used to sow the seeds before May 15, but he found that the white maggot usually did much damage when the plants were started early. He advised setting out a few plants about July 1, and the main crop July 15, and holding a few thousand as late as July 20. The best returns were obtained by setting the plants in rows two and a half feet apart, and the plants two feet apart in the row with those of one row opposite the spaces in the adjoining rows. All the plants were watered as they were set out, two men setting while the third put on the water. It is well to set the plants out during showery weather but when three or four acres are to be planted suitable weather cannot be awaited. Plants with two to two and a half inch stems were claimed to be better than longer specimens.

Frequent cultivation with the horse and constant use of the hoe to keep the weeds down results in rapid growth, and when the head has developed to the size of a hen egg or duck egg the leaves should be pulled together over the top and tied with a string to prevent the sun from burning it.

Mr. McKay was asked what his experience with commercial fertilizers had been, and he remarked that he had used different fertilizers both in the greenhouse and for field crops. In some cases excellent results followed and again, under similar conditions, no improvement in the crop was noticed. The blight could not be kept down no matter how much fertilizer was used. Mr. Shuter said that the fertilizers tended to make the plants stronger and more able to resist disease and insect attacks.

When asked what variety gave best results Mr. McKay said that Erfurt seed procured from one of the Toronto seed houses was most satisfactory on his soil. He started the seed on a knoll and secured more sturdy plants there than when the seed was planted on lower ground.

**The Burdock**

Will a burdock bear seed the first year, or how many years will the same root bear seed?—Subscriber, Clinton.

The burdock is generally considered a biennial (that is, it takes two years to reproduce itself), but in rare conditions it may be found as an annual. The biennial burdock starts from seed but does not flower the first season. The following spring it resumes growth and produces seed, after which the whole plant dies. The same root bears seed only once.

Plants should be treated more as human beings who eat and drink and breathe. Weak plants are usually caused by high feeding, or the addition of something that the plant doesn't like. — E. F. Collins, Toronto.

## The Canadian Horticulturist

Published by The Horticultural  
Publishing Company, Limited

The Only Horticultural Magazine  
in the Dominion

Official Organ of British Columbia, Ontario, Quebec  
and Prince Edward Island Fruit Growers'  
Associations and of the Ontario Veg-  
etable Growers' Association

H. BRONSON COWAN, Editor and Business Manager

J. ALBERT HAND, B.S.A., Associate Editor

W. G. ROOK, Advertising Manager

A. B. CUTTING, B.S.A., Travelling Representative

1. The Canadian Horticulturist is published the first of every month.

2. Subscription Price \$1.00 a year, strictly in advance. For all countries except Canada, United States and Great Britain add 50c. for postage.

3. Remittances should be made by Post Office or Money Express Order, or Registered Letter. Postage Stamps accepted for amounts less than \$1.00. Receipts will be acknowledged on the address label, which shows the date to which subscription is paid.

4. Discontinuances—Responsible subscribers will continue to receive THE HORTICULTURIST until the publishers are notified by letter to discontinue, when all arrearages must be paid. Societies should send in their revised lists in January; otherwise it will be taken for granted all will continue members.

5. Change of Address—When a change of address is ordered, both the old and the new addresses must be given.

6. Advertising Rates quoted on application. Circulation 5,500. Copy received up to the 25th. Responsible representatives wanted in towns and cities.

7. Articles and Illustrations for publication will be thankfully received by the editor.

8. All Communications should be addressed:

THE CANADIAN HORTICULTURIST  
507 and 508 Manning Chambers  
TORONTO, CANADA

### UNRELIABLE NURSERIES

A considerable amount of business is done in Canada each year by unreliable nursery firms from across the line. Eagerness on the part of the grower to save a few cents, and foresight on the part of the managers of these nurseries in issuing a bright catalogue full of tempting offers, result in many farmers and fruit growers being bitten. Trees are catalogued at rates slightly lower than the Canadian nurserymen offer similar stock, but the short-sighted grower forgets that duty and freight have to be paid.

The Indianapolis Nursery Company and others of a similar stamp flood the fruit growing districts of Canada with these catalogues every season. The stock that they offer is generally found to be a surplus that they cannot sell in their regular territory. In many cases it is not true to name as the orders are filled from whatever sorts are most plentiful. More than this these firms specify that money must accompany the order, and cases are known in which the money was retained and no stock sent.

The fact, also, that these goods are grown in the south is worthy of consideration. Such stock is naturally of a softer and more pithy growth than our Canadian trees. They are not suited to Canadian culture, and the first severe winter kills the trees or causes them to become black-hearted. Many of these trees are grown in sections that are the very hotbeds of the dreaded San Jose scale. Every case in which this scale has been found in Canada has been traced to stock imported from the United States. Special precautions are taken to destroy scale forms on imported stock by thorough fumigation, but it is infinitely safer to purchase from Canadian nurseries where such troubles do not exist.

Last spring an unreliable firm established temporary headquarters at Napanee, and sent agents around selling the famous Lovett strawberry at exorbitant prices. Many growers, knowing the superior quality of this variety, made large purchases. The plants proved to be worthless, but the contracts were so arranged

that they could compel payment. In a few cases the stock was satisfactory in appearance, but it was afterwards learned that the plants were obtained from a neighboring patch and taken up with a plow.

Such practices should be a lesson for every grower in Canada. Reliable firms, such as those advertising in THE CANADIAN HORTICULTURIST, for each of whom we can vouch, can supply the requirements of the great majority of the growers, and it will be found much more satisfactory to deal with established firms such as these that are known to be reliable, and who have a reputation to maintain.

### FRUIT GROWERS AND THE TARIFF

The position of the Ontario fruit growers on the tariff is an unfortunate one. Instead of going before the Tariff Commission and presenting a statement, and later having a discussion of the matter in the fruit sections, the discussion should have been held first and the commission waited on later. As it is, the Ontario Association has asked for one thing while the growers in the Niagara peninsula purpose petitioning for something entirely different. The result is that the growers are divided among themselves as to whether or not the tariff should be increased, while the opposition to an increase is strong and to the point. The position of those who oppose an increase is strengthened by the foolish action of those growers who favor asking for a higher tariff than they need, or expect to receive, in the hope that in that way they will be able to obtain what they require. By asking for more than they need they strengthen the attack of those who oppose an increase who are thus enabled to show how unreasonable their demands are and in this way to bring discredit on the whole case of the fruit growers.

The sympathy of the public is what settles the line of action taken in matters of this kind. If the commission dealers are able to show that the demands of the fruit growers are in any way unreasonable they gain this sympathy.

The statement made by Mr. W. F. Maclean, M.P., last week, at the Vegetable Growers' banquet, that there is no reason why it cannot be arranged to have the tariff on fruit and vegetables go into effect through order-in-council in any district or districts, and for stated periods, is a most important one. If this can be done, and no strong reason has been advanced to show the suggestion to be impracticable, the difficulties of the situation have largely been solved. In this way the growers in the different sections of Canada would be able to obtain the protection they require, and at the season it is needed, while the consumption of fruit at other periods of the year would not be curtailed.

This matter is worth further consideration by the growers. It might be well to arrange for a conference between representatives of the Ontario Association and those of the Niagara peninsula. The first effort of the growers should be to harmonize their views as far as possible, and then to lay their amended case before the commission. THE HORTICULTURIST strongly favors greater protection on several varieties of fruit for limited periods, but it will oppose, as being unreasonable and unwise, demands that, if granted, will prevent the consumption of foreign fruit at periods when Canadian fruit is not available.

### IMPROVEMENT NEEDED AT GUELPH

What is the matter with the horticultural department at that excellent institution the Guelph Agricultural College? Why is it that so few students take the horticulture option? Why is it that those who do take that option find such difficulty in securing positions? The answer to the former question is found in the latter. The horticultural department has been running long enough to have gained a reputation equal in its field to that acquired by the agricultural department. Although comparatively few students took the horticulture special during the past few years, several promising graduates are without work such as their energy

and ability deserve. Men of no greater ability, who specialized in other departments, had no difficulty in securing desirable and remunerative positions. There is no option on the college curriculum that has so many desirable features as that of horticulture. Were a reputation for excellence established by that department, students who graduated in horticulture would be in demand.

Apart from this fact, how is the Province being benefited by work done or experiments carried on at the college? Some experiments have been conducted with strawberries and with tomatoes, but how great has been the benefit to the practical grower of strawberries and tomatoes? Have the results been sufficiently advertised? The vegetable growers are thirsting after knowledge in regard to insect and fungous diseases and yet the college is able to render them but little if any assistance. What the practical grower wants is results of practical experiments and not theoretical information he is unable to use to advantage.

Vegetable growing under glass is becoming an important industry in Ontario. Why is not our Agricultural College in the van of this great work? It is all well enough to grow a few choice tomatoes and cucumbers for table use during winter, but how many experiments have been conducted along this line and the results published so that the ambitious gardener may know the varieties to put into a glass house, and the cultural methods to follow to obtain profitable returns for his labor? Fault is not being found with those in charge of the greenhouses. With the addition of lectures to the already numerous duties delegated to Mr. Hunt the wonder is that he has done so much good work. What is wanted is more greenhouse space for experimental work, and the appointment of a competent assistant. In fact the assistant is needed whether additional houses are built or not.

The Ontario Agricultural College has gained an enviable reputation. This reputation can be retained only by making still further improvements. In no branch of the college is improvement more needed than in that of horticulture.

### ONTARIO HORTICULTURAL EXHIBITION

Arrangements for the next Ontario Horticultural Exhibition are already well under way. A meeting for organization purposes was held in Toronto, Jan. 23, when it was decided to hold the exhibition this year Nov. 6-10, in Massey Hall. Half rates will be guaranteed over all railroads. The officers elected were Pres., R. J. Score, of Toronto; 1st V.-Pres., W. H. Bunting, of St. Catharines; 2nd V.-Pres., H. R. Frankland, of Toronto; Sec., H. B. Cowan, of Toronto; Treas., J. H. Dunlop, of Toronto, and an Executive Committee composed of representatives from the Ont. Fruit Growers', Ont. Vegetable Growers', and Ont. Bee Keepers' Associations, and the Toronto Electoral and Horticultural Societies, and Toronto Gardeners and Florists' Association.

A financial statement was presented that showed that a deficit of some \$400 connected with the last exhibition had been wiped off through the efforts of the directors, and that the prize lists and all expenses had been paid in full. This was considered very encouraging. It was decided to open the exhibition this year Tuesday evening, instead of in the afternoon, as in the past. The judging will be completed and the prize cards in place before the exhibition is opened. It was decided to have the prize lists printed and in circulation by July 1 next. In the meantime preliminary prize lists will be published in the papers. Those present were enthusiastic regarding the success of the next exhibition.

If boxes are used they should be made strong. I have heard of many boxes being so light and easily broken that they were in bad shape when they reached Montreal. I have always considered that packing in boxes is slow work.—Irvine Hicks, South Bay, Ont.

# Niagara Growers Want More Tariff

At an important meeting of the Niagara Peninsula United Fruit Growers' Association, held in St. Catharines, Jan. 18, it was decided after a spirited discussion to ask the Federal Government to increase the duties on certain fruits. The increase asked is identical with that decided upon at previous meetings held in Winona and Grimsby and published in the January issue of THE CANADIAN HORTICULTURIST, viz.:

- On peaches from 1 cent a pound to 2 cents.
- On pears from 20% *ad valorem* to 1 cent a lb. specific.
- On plums from 25% *ad valorem* to 1 cent a lb. specific.
- On apples, from 40 cents a barrel to 75 cents a barrel.

A large attendance gave evidence of the interest taken in the tariff question. Different opinions were voiced and three different proposals were submitted to the meeting. Mr. W. H. Bunting, of St. Catharines, seconded by Mr. Chas. Lowry, St. David's, moved the adoption of the following:—"Resolved, that we believe the maintenance of the tariff on foreign fruits is necessary to the encouragement of the fruit industry of this country, that the tariff at present in force has a beneficial effect, and has not to any appreciative extent increased the cost to the consumer; we would, therefore, respectfully urge upon the Government that no reduction be made in this tariff but that a specific duty of 1 cent a pound be substituted whenever an *ad valorem* tariff is at present in force."

In amendment to the above Mr. Jos. Tweddle, of Fruitland, seconded by Mr. W. A. Emory, of Aldershot, moved that the Government be asked to adopt an open and closed season as requested by a majority vote at a meeting held in Burlington on Jan. 2, with the following proposed schedule of rates, the Government to regulate the tariff during the open season for revenue purposes:

- Strawberries, 4 cents a lb., May 15 to July 1.
- Raspberries, 2 cents a lb., July 1, to Sept. 1.
- Blackberries, " " " "
- Gooseberries, " " " "
- Currants, " " " "
- Grapes, 2 cents a lb., Aug. 1 to Dec. 1.

Cherries, 3 cents a lb., July 1 to Sept. 1.  
Plums, 2 cents a lb., July 1 to Nov. 1.  
Peaches, " " " "  
Pears, 2 cents a lb., July 15 to Jan. 1.  
Apples, 75 cents a barrel July 15 to Jan. 1.  
After a lively discussion on this question of a sliding tariff, Mr. Jonathan Carpenter, of Winona, supported by J. W. Smith, of Winona, moved in amendment to the amendment that the Government be asked to increase the duties on a flat rate basis, as outlined in our opening paragraph. This was put to the meeting and carried by a large majority.

## THE BURLINGTON MEETING.

A meeting of the Burlington Horticulturist Association was held in Burlington, Jan. 2, Messrs. E. D. Smith, M.P., and J. W. Smith, of Winona, were invited to attend.

The members present were unanimously in favor of an increase in the duties on fruits, but differed as to the best means of adjusting same. Some favored a flat increase; others proposed and supported the idea of a closed season. There was some talk also of asking for a revenue tariff on bananas as it was thought that the enormous consumption of bananas in this country interfered with the desire and sale for domestic fruits. Finally it was decided to appoint a committee—J. C. Smith, and A. W. Peart, Burlington, W. A. Emory, Aldershot—to draw up a schedule for a sliding tariff, same to be the voice of the meeting, with the alternative of a flat rate increase. Same committee later met delegate from Winona and Grimsby, and decided upon the schedule above mentioned. Such was presented to the mass meeting at St. Catharines and defeated by the advocates of a straight increase.

## THE DISCUSSION AT ST. CATHARINES.

At the St. Catharines meeting the positions taken at meetings held at Burlington, Grimsby and Winona, were submitted to the growers and thoroughly discussed. Mr. Robt. Thompson, of St. Catharines, said that the idea of a sliding scale was absurd and impracticable. Closed season in this district would not be a favorable closed season in the Northwest. During open season consumers would buy their

supply of fruit in advance of our season, both for table use and for canning. In reply, the advocates of a sliding tariff contended that before the first dates of closed season fruit could not be bought cheap enough for profitable canning and only the few could afford to buy it even for table use.

Mr. W. H. Bunting and others of St. Catharines were not in favor of either proposition for an increase in the duties except in the case of pears and plums, which should be changed from *ad valorem* to a specific duty of one cent a pound. Mr. Bunting said that he was strongly of the opinion that if the Association presses for two cents a pound on peaches that it will be so strongly opposed in the Northwest that our petition will be swamped. The Northwest is not in favor of our peaches and fruit, generally speaking, and we must go easy if we are to command our share of that market. If we can secure a five days' transportation service to the Northwest, we need not fear so much the competition from over the line.

Regarding the idea of a sliding tariff on fruits, Mr. E. A. Lancaster, M.P. for Lincoln, said that he believed such was feasible. The present tariff provides for an open and closed season for some kinds of manufactured goods.

Mr. E. D. Smith, M.P., of Winona, spoke in favor of an increase. The more he thought of the closed season idea the more favorably disposed he was towards it.

An increase in the duties is necessary: from the growers' viewpoint a sliding tariff would be the most satisfactory; from the Governments' viewpoint a flat increase may seem the most feasible. For apples an increase was asked, not so much for growers in the Niagara district, but in the interests of growers all over the Province. "In the case of peaches," said Mr. Smith, "if we can get the Government to put a duty of 2 cents a pound on them and thereby keep out California peaches, we can find a market in the Northwest for thousands of bushels that we cannot send now." As we have found the way to put our peaches in the Northwest in sound condition, and as we can grow the fruit, we should not be denied the market for want of an increase of one cent in the duties.—A. B. Cutting.

# The West Wants Tariff Reduction

THE action taken recently by the Niagara District Fruit Growers in demanding a higher duty on fruit from the United States brought forth the following editorial from the *Winnipeg Free Press*, which may have been in part inspired by the Winnipeg commission dealers, and which is to a certain extent the reply of the West:

"Wholesale fruit houses of Winnipeg have dropped thousands of dollars in the attempt to handle Ontario peaches. Ontario shippers have not succeeded in sending peaches to the West in good condition. As for British Columbia peaches, they are not early, and have appeared here as yet only in limited quantities, and of those that have appeared a considerable proportion have been lacking in carrying quality. Plums and pears of British Columbia are also late, not being ready before the end of July or early in August. British Columbia, like Ontario, possesses areas of the finest fruit-growing lands on the continent, but they do not produce fruit all the year round, nor have Ontario or British Columbia fruit-growers succeeded in producing fruit of a sort to stand transportation in comparison with the strawberries of Oregon, which come to Winnipeg in prime condition. The problem of the 'carrying quality' of fruit which is both a problem of fruit production and a problem of fruit packing, is one which has not been solved, especially in regard to strawberries, either in Ontario or

British Columbia. But if it were solved, why should people living in Prairie Provinces be heavily taxed, as Mr. Ernest D'Israeli Smith, M.P., advocates on fruit brought in from across the boundary in months when neither Ontario nor British Columbia have any fruit to offer?

"Fruit is not so much a luxury as a necessity to health.

"The question of the tariff taxation of fruit is a vital one to the people of the Prairie Provinces, and in view of these demands of the Ontario fruit growers, as also of the demands that were made by representatives of the British Columbia fruit growers, who appeared before the Tariff Commission a couple of months ago, some figures of what is paid out in the way of customs duties on fruit claim attention. During the months of January and February, strawberries from the United States arrive in Winnipeg in express lots at the rate of some 20 or 25 cases weekly; in April and May, 100 cases weekly. In the latter part of May and on through June they arrive in car lots, mainly from the famous Hood River plantations in Oregon.

"The only fruits which Ontario can send to the West in satisfactory condition are apples, plums and grapes, also tomatoes. Apples from across the boundary pay 40 cents a barrel duty. They cannot begin to compare with the apples either of Eastern Canada or of British Columbia, but we get them two months earlier. They do

not in any way compete with Canadian apples, and nobody imports them once Canadian apples are to be had.

"The West wants tariff reductions, not tariff increases. The West will not stand up for any tariff increases, and least of all for tariff increases on fruit. If any indication is given of an intention to alter the tariff in the manner demanded by the Niagara Peninsula United Fruit Growers' Association the Government will find it met by a protest from the West that will be anything but perfunctory in its character."

In a communication dated December 20, to the Trade and Commerce Department, Mr. Chas. Kittson, Canada's commercial agent in Africa, states that a recent shipment of Canadian apples consigned to Cape Town, was seriously infested by scab, and also by codling moth, some barrels to the extent of 60% in case of the former, and 40% in case of the latter. He points out that Canadian shippers were warned that fruit so affected was liable to confiscation on arrival, without compensation to shippers or consignees, and it has lately been authoritatively stated that unless Canadian shippers refrain from shipping diseased fruit to South Africa the importation of fruit from the Dominion will be prohibited by the Cape Colony Government.

# Practical Pointers from Practical Planters

Picked up and penned by A. B. Cutting, B.S.A., Special Representative of The Horticulturist, who is visiting the homes of fruit and vegetable growers in the Niagara Peninsula

**S**UCCESS in fruit growing depends chiefly upon four factors: the personality of the growers, proper methods of orchard management, a thorough knowledge of market economics, and the prospective condition of the market, local or foreign. The first of these, the individuality of the growers, is more important than most people think; yet everyone knows that any two persons placed in business in the same environments, and given an equal chance, will arrive at very different results. A difference in individuality, and in some cases a lack of individuality is very striking in fruit growers. How often we see, side by side, enjoying the same condition of climate and local environment, tilling the same kind of soil and growing the same class of fruit, two men attaining very different results in the fruit business! Even in our famous Niagara district many contrasts of this nature may be found.

Besides the factor of individuality the factors of marketing and markets are important also, but not more so than the factor of orchard orchardment. Some growers are apt to leave too much to chance. Even in the selection of varieties for spring planting, I find in my sojourn amongst the growers of this district that some planters are very careless in this matter. Others again are alive to the requirements of the industry and from these I have picked up some pointers of value and interest.

## HOW TO SELECT VARIETIES.

The gist of these pointers shows that the fundamental principal in selecting varieties is to profit by the experience of your neighbors, to observe the behavior of varieties growing under conditions similar to your own, and to be governed accordingly. With some men personal preference largely influences the selection. For the home orchard such a system of selection may be all right, but for a commercial plantation something more stable must be depended upon. Local conditions of soil and climate must be studied and varieties chosen to suit such conditions. Some purpose must be kept in mind, and some particular market to be filled, and selection be made accordingly. Inter-pollination also should be considered, particularly in varieties of apples, pears, grapes and strawberries; it is safer never to plant even a peach orchard of one variety alone. "To illustrate the value of interpollination in grapes," said Mr. F. M. Carpenter, of Fruitland, "observe the case of Brighton, which seldom ripens all over the bunch unless planted near some variety that will fertilize it. In my vineyard rows of Brighton adjoining Concord fertilize and ripen much better than rows far off."

The number of varieties that one should plant will depend upon the market to be supplied and the method of marketing. When catering for both local and distant markets, plant varieties to ripen early and late so as to keep up a supply of marketable fruit from the beginning to the end of the season. When large shipments in refrigeration are in prospect select varieties that will ripen at or near the same time, or better still, plant enough trees of one variety, if self fertile, so as to have sufficient fruit of one kind and at one time to fill the car, or the apartment on board ship.

Pressure of space does not permit of all the list of varieties recommended for planting by the many growers that I have visited. At a farmers' institute meeting in Ancaster Jan. 10, the question was asked: "What six varieties of apples are the best to plant as money makers?" In reply, Mr. G. C. Caston, of Craighurst, who was the chief speaker on fruit matters, recommended the following:—Ontario, Gano, Boiken, Spy, Baldwin, and R. I. Greening. Boiken, a variety little known, is a very early bearer and produces abundant crops yearly. Mr. Caston

advised top-grafting the tender varieties of apples on hardy stocks, and, in particular, he recommended top-grafting King on Talman Sweet to ensure early bearing and a double yield.

## CHERRIES.

"The best sweet cherries for my district," said Mr. H. F. Burkholder, of Bartonville, "are Schmidt's Biggereau, a reliable yielder and a very profitable sort; Black Oxheart, Black Eagle, Black Tartarian and Windsor."

He and other growers in that locality recommend in sour cherries the old reliables, Early Richmond and Montmorency.

Cherry trees are very difficult to graft. For best results it should be done in early spring just before growth starts. The bird cherry makes a good stock to graft sour cherries upon.

## POINTERS ON PLUMS.

Mr. C. C. Pettit, of Fruitland, who has an orchard of over 2,500 plum trees, including about 1,100 Lombards, discussed the Lombard situation with the writer and said that there are too many Lombard trees in the country. When there is a glut in the plum market the Lombards are the ones to suffer. Although such gluts may be the result of over-production in certain localities they are more probably due to a lack of proper distribution. One of the crying needs of our fruit industry is for a system of distribution that will do away with disastrous plum gluts such as growers have experienced during different seasons in the recent past.

It is well known that oftentimes when Hamilton, Toronto, and other large markets are overstocked with plums, that in smaller towns they cannot be bought at any price. "To illustrate this fact," said Mr. Pettit, "I was talking during the plum glut of 1903 with a man from the eastern townships who said that in his town he paid as high as 75 cents a basket for plums, when in Toronto and Hamilton they could be bought for 10 cents and less."

Although Mr. Pettit has such a large percentage of Lombards in his orchard he would not advise new planters to set out any trees of this variety. In yellow plums, also, there are some well-known ones that are not worth planting, particularly General Hand which is unproductive. Some nurserymen are pushing the Stanley which is identical with the General Hand—another case of an old variety with a new name. Among the many profitable varieties, Mr. Pettit recommends Burbank, Bradshaw, Canada Orleans, Washington, Green Gage, Yellow Egg, Quackenboss, Damson, German Prune and Reine Claude.

## THE JAPAN PLUMS.

Whether or not it is wise to plant Japan plums is a disputed point. Some of the growers that I have visited say that this class of plum is being planted too much. Japan plums fall to pieces when canned, particularly the Abundance, and as a consequence they are not wanted at the canning factories. Others claim that there is more money in this class of plums than in any other, being early and very productive. As for canning these men cite the case of Satsuma which is, they contend, one of the best for canning to be found in any class.

## PLANTING PEACH TREES.

"When selecting or buying peach trees for planting," remarked Mr. J. W. Smith, of Winona, "the height should be the last consideration. Large trees are not the best—medium sized or small ones, if smooth and thrifty, are more satisfactory—in no case should they be more than one year from the bud. The trees should be stout and well grown at the collar, and have plenty of roots; a good strong top is sure to follow." Plant the trees just deep enough and

firm enough to be solid when future top is formed.

## FORM LOW-HEADED TREES.

Mr. Smith believes in low-headed trees, but says that the head should be started in the nursery row, by nipping back when grown to the right height, say 18 inches, rather than cut back after the tree has grown to good size. Trees with heads well started in the nursery are worth at least five cents more than others not so treated. Trees not headed back and formed in nursery row cannot be headed as low as they should be, as strong buds are few and irregularly placed low down on the trunks of such trees.

The present custom is not to form the heads in the nursery, and, as Mr. Smith said, nurserymen should not be expected to do so until the demand for low-headed trees warrants the change. Any planter who desires such, however, will be gladly accommodated by nurserymen if he will first tell his wants to the nurserymen during the previous season and in plenty of time to do the necessary work in the nursery.

Some growers object to low-headed peach trees on the ground of expense and labor at the time of cultivating. Mr. Smith claims, while recognizing the force of this argument as far as it goes, that the greatest expense and labor comes at the time of picking, not earlier in the season. As a consequence it is better to hire additional help for cultivating and have low trees that may be picked from the ground than to try and economize time and money in cultivating high-headed trees, that must be picked from ladders. A picker on the ground, provided the fruit is within his reach, will pick twice as fast and twice as much as one on a ladder. It is wise, therefore, when planting for growers to bear this in mind.

## BUY HEALTHY STOCK.

"I received a lot of peach trees from a nursery in Ontario, in each of which I found one or two borers. I have reason to believe, however, that the trees were not grown in this Province, but were imported from over the line." So said Mr. Geo. Awrey, East Hamilton, who cautions growers against buying infected stock. Nursery trees should be free from fungi and injurious insects. It is best to avoid trees grown in districts subject to tree troubles; such as peaches from a region where leaf curl is prevalent, or pears from a section where blight is known to exist.

## PLANTING GRAPES.

"When planting grapes cut off the previous year's growth to two buds on a single vine. To plant quickly, stake out distance apart of rows, plow furrow in same direction as row is to run, then mark out the distance apart vines are to be set in the row. Plant firmly, then cultivate with scuffler to loosen surface soil and to fill up furrows. A hoe crop may be grown first year which should be cultivated at regular intervals." Such is the advice of Mr. Murray Pettit, of Winona, who also recommends for planting the following varieties in order of ripening:—Campbell's Early, Worden, Delaware, Lindley, Concord, Niagara, Agawam, Catawba, in localities where they will ripen, and Vergennes. In early localities, on heavy soil, good money may be made in growing Champions if they are well thinned. Mr. Pettit follows the fan system of training, which we hope to describe in a future issue of THE HORTICULTURIST.

Both as a fruit grower and a fruit merchant we find THE CANADIAN HORTICULTURIST exceedingly interesting, and we have gained some very valuable information from the hints contained therein.—Joel Goodwin, Manchester, Eng

## Apples at Five Cents a Barrel

J. J. Philp, Dominion Fruit Inspector, Winnipeg

Apples are more in demand in Winnipeg at this season than any other fruit. They are more of an actual necessity than are the finer and more expensive fruits.

This year in Winnipeg to many the apple trade is a very unsatisfactory proposition, not to the regular and legitimate dealers, or those who have a regular trade and are handling their stock intelligently, but to those who are shipping here on commission, or for storage, and have no proper facilities for watching their fruit, or a regular trade to absorb the accumulation of off stock that is bound to appear at this time of the year. To the latter the experiences of the present season cannot fail to be anything short of disastrous. One eastern man sold 75 barrels, and notwithstanding that some of them brought \$4.25, the whole lot netted him less than \$1.00.

There was a time when the writer used to think that we had the very best climate for keeping apples over winter. Closer observation has convinced me that this is a mistake. Few cellars can be procured that are altogether free from artificial heat. This means want of uniformity of temperature, and lack of proper ventilation, two conditions that when combined cause the destruction of the fruit stored.

It may be asked what about cold storage? It's the very best, but could not accommodate one-half of the quantity that has to be stored here for the three months after navigation closes. It is astounding to look over the stocks stored in Winnipeg at the present time. Just fancy: Snow apples, lots of them, XXX, and XX, the first some of them not too bad, but the latter small, scabby, and rotten. Many of them are not worth the price of the barrel in which they are packed. Also in stock there are: Colvert, Jenning, Wealthy, McIntosh Red, Haas, Golden Pippin, and other varieties too numerous to mention. Very few of these will realize enough to pay for their transportation, and all

the time they are seriously injuring the sale of good stock. Herein we have the pith of the whole matter. Such apples as many of these are can never be shipped here except at a loss, because they are not worth anything, and never should have been shipped.

A couple of weeks ago The Ottawa Fruit and Produce Co. auctioned off large quantities of Ontario fall fruit for five cents a barrel. From 300 to 350 barrels a day were sold, according to a recent issue of the *Winnipeg Free Press*, for several weeks. These were fall apples that should have been sold by November. The purchasers were Yiddish people.

Shippers should send half the quantity, and that the best half. This gives only half the expenses, and half the risk. Better marking of the barrels according to the Fruit Marks Act should be observed. Shippers must consider the effect that a fine package, neatly marked, has on the sale of the article. I believe that a man's character and personal habits can be told by the way the apple barrels are marked. Besides, the law says so, and the inspectors are supposed to see that it is observed.

The wholesale fruit dealers at a recent meeting appointed a committee to formulate resolutions regarding the standard for a No. 2 or XX grade, and other amendments that they think will improve and help to facilitate the working of the act. If there are any amendments to be made that will improve the act, they will be very welcome, and cannot come too quickly, but in any event let all discussion in reference to its several features be on a higher plane than the purely selfish idea that if it is going to benefit the other fellow more than it does me I won't have it. That our fruit interests are in need of being raised to a higher standard, no one in close touch with the business will deny, and all should aim to have a part in the good work.

## The Fruit Industry of Nova Scotia

G. H. Vroom, Middleton, N.S.

The day is not far distant when this little province down by the sea, Nova Scotia, will be exporting over a million barrels of apples in addition to supplying the ever increasing demand in the local markets. Great progress has been made during the past few years.

The earliest record we have of apple-growing in this province is in the year 1633. Previous to 1812 the fruit industry was only an industry in name, and consisted in growing a lot of seedling apples and a few good varieties. These latter were shaken from the trees and marketed in old flour barrels, and found sale in local towns and cities in the Maritime Provinces. The poorer sorts and seedlings were carted away to the mills and the juice converted into cider.

In the year 1812, the Hon. Charles R. Prescott, M.L.A., bought a farm at Starr's Point and started fruit-growing. This marks a new era so far as the fruit industry is concerned in Nova Scotia. Most of the varieties of fruit planted by Mr. Prescott were imported from England, and in that way very many of the best standard varieties of to-day were introduced. In his list were to be found the Spy, Ribston, Blenheim, Baldwin, Gravenstein, Fameuse, Greening, Spitzenburg, and others.

His list of pears, plums, cherries and other small fruits contained many of the leading standard varieties of our time.

About 1849 the first fruit show was held in Canard, Kings County. At that show Mr. Prescott exhibited 63 varieties of apples and 20 varieties of pears. From this time on the fruit industry increased and grew until in the year

1880 the export of apples from St. John and Halifax to Great Britain amounted to 24,000 barrels. In 1890 the export had reached the 100,000 barrels, and in the year 1903 the total export of apples from Nova Scotia to the Old Country amounted to 532,000, besides over 80,000 barrels sold in local markets.

It is only within the last 20 years that fruit has been grown very much outside the district known as the Annapolis Valley, which includes the stretch of country lying between the north and south mountains in the counties of Annapolis and Kings. This valley is about 80 miles in length and three to eight miles in width. The best orchard land is near the foot of the mountain and on the hilly slopes. The soil is deep and fertile, and frost does less damage than it does on the low lands near the rivers.

In the early eighties other parts of the province made small beginnings in the fruit-growing industry. The farmers in the county of Lunenburg began to wake up to the fact that fruit-growing was a pleasant and profitable industry, and decided to try the possibilities in that grand, historic old country. Their efforts were crowned with a marked degree of success, and to-day some of our finest and best fruit comes from Lunenburg county. Hants county also embarked in the business on a somewhat extended scale about the same time, with the result that to-day fruit grown in the Avon Valley is sought after in both the local and foreign markets on account of its superior quality. Similar advancement has been made in other sections.

With few exceptions the fruit business in Nova

Scotia is carried on in an up-to-date manner. Among those exceptions may be mentioned the tendency to pack and market third-grade stuff, which is detrimental to the reputation of number one Nova Scotia fruit. Among the up-to-date features of the Nova Scotia fruit business is the abundance of first-class fruit houses along the lines of railway where the farmer can store his apples and haul them when the roads are good in the fall. This does away with the old method of hauling through snow-banks or mud, or running the risk of having the fruit frozen on the highway.

In these frost-proof houses the fruit is packed under the supervision of a competent man who has had sufficient experience to qualify him for such a position. When a steamship arrives in port cars are run alongside the fruit house, and the work of loading a car is only a matter of a short time. The cars are better than in former years and, taking everything into consideration, good facilities are in existence to ensure our fruit arriving in the British market in excellent condition, if proper care and precaution is taken. This is benefiting the industry and helping Nova Scotia fruit to hold its own in the markets of the world.

## Notes on the Fruit Trade

E. H. Wartman, Dominion Fruit Inspector

Handlers and speculators in Canadian apples are a class that make many mistakes, and run a little wild in their ideas. Frequently buyers say, "If I only had purchased 5,000 instead of 10,000 barrels, or 10,000 rather than 20,000. By purchasing the smaller quantity my help engaged could have done good work and got through before frost had a chance to do any damage." Many a buyer has purchased from small growers 25 to 50 barrels on the trees, not making provision to house or shelter this fruit as gathered. When the time comes to gather you have the spacious out-door to do your work, through rain, snow, heat or mud. The markets demand a clean, neat package, but how is it possible under these circumstances? Buyers should pass such ill-provided ranches, and teach such men it is absolutely necessary to provide for their products. The buyer who left such fruit would be money in pocket. Other buyers go around the country buying small lots of 20 to 40 barrels that have been picked some 5, 10 or 15 days, and exposed to heat and all kinds of weather. No fruit should be bought under these circumstances. In this day of advancement buyers are looking for sound goods in neat, clean packages. Co-operative associations have been formed and are doing good work. It is hoped soon that all those who have no place to house and properly pack their fruit in, will have one of these close at hand, where the fruit can be taken and properly cooled, graded and packed; then a buyer can at any time get a full car of the varieties he desires.

As the demand for choice apples in boxes is increasing, we need not look for any more barrel famines. Fruit buyers this year who have tried to live up to the requirements of the Fruit Marks Act have been well compensated. The principles of this act are only the golden rule after all.

**A Business Change.**—The first of this year Mr. Felix A. Perkins, of the firm of Perkins & Paine Manufacturing Co., Port Dover, sold his share and interest in this firm to Otto G. Palm, who, with Mr. John B. Paine, of Toronto, will continue manufacturing the Little Giant Sprayer in Port Dover, Ont., under the firm name of the "Little Giant Sprayer Mfg. Co." The office will be in Toronto at 41 Colborne St. They have several orders on hand, and are rushing out machines as fast as possible. This is one of the most practical spraying machines on the market, and as it is a Canadian invention and made in Canada, it ought to be patronized by Canadian fruit growers.

## Excellent Work of the Horticultural Societies

Judging from the enthusiasm that is shown by the reports from the annual meetings of the different Horticultural Societies in Ontario, a great improvement will result this year in the appearance of the various towns and cities where these organizations exist. The result of the selection of officers for many of the societies have reached THE HORTICULTURIST. Lack of space prevents the publication of not nearly as full a report of the numerous meetings as we would like.

### PICTON.

At Picton the new officers are: Pres., P. C. Macnee; 1st V.-Pres., W. J. Carter; 2nd V.-Pres., Thos. Bog; Sec.-Treas., Walter T. Ross. Directors, R. Davison, W. H. Seth, J. Roland Brown, J. L. Graydon, H. Platt; Auditors, J. P. Blakely, J. C. North.

The premiums promise to be greater than ever as the money spent last year for a United States garden magazine will be used for premiums.

### HESPELER'S OFFICERS.

The officers for 1906 at Hespeler are: Pres., David Rife; 1st V.-Pres., Henry Bolduc; 2nd V.-Pres., Peter Morlock; Sec., Robt. Davis; Treas., John E. Warren; Auditors, James Pringle, D. N. Panabaker; Directors, H. Prestien, Abr. Rudell, F. Evans, Owen Reist, R. H. Knowles, James Hyslop, James Moreland, Ed. Birkin, Thos. Chesterman. The members are to be given practically the same premiums as were given last year. This includes a valuable list of plants and THE CANADIAN HORTICULTURIST

### COBOURG'S PLANS.

At Cobourg officers were elected as follows: Pres., J. D. Hayden; 1st V.-Pres., Dr. Ferris; 2nd V.-Pres., Wm. Massie; Directors, D. Denton, H. J. Snelgrove, M. Jaynes, Alfred Landymore, J. G. Jackson, John Mason, T. A. Chapman, E. C. S. Huycke, K.C., and Mrs. Jas. Barr.

The Board of Directors met immediately and Major H. J. Snelgrove was re-elected Secretary, while Mrs. Jas. Barr was elected Treasurer. The Finance Committee will comprise the President, the Secretary and the Treasurer.

Sec. Snelgrove suggested that the society cooperate with the town council in cleaning up unsightly corners and in beautifying the town generally. President Hayden recommended window gardening at the town hall and the growing of plants and vines on the balcony. The same could be done at the post office and the public schools.

An effort will also be made to beautify the town's gateway, the G.T.R. station. It was unanimously decided to continue taking THE CANADIAN HORTICULTURIST.

### KINCARDINE ENERGETIC.

The following officers were appointed at Kincardine: Pres., A. Clinton; 1st V.-Pres., Joseph Abell; 2nd V.-Pres., M. McCreath; Directors, Dan. McDonald, Wm. Welsh, J. Miller, R. D. Hall, George Tuck, Rev. J. C. Pomeroy, F. H. Hoffland, A. C. Patterson, Jos. S. Gadd; Sec.-Treas., Joseph Barker; Auditors, T. H. Scougall and Ed. Fox. The energetic work of the past season will be continued.

### SMITH'S FALLS.

At Smith's Falls Dr. McCallum was again elected President. The doctor has filled the office continuously since the formation of the society nine years ago. The other officers elected were: 1st V.-Pres., Mrs. Wm. Richy; 2nd V.-Pres., Mrs. W. A. Wood; Directors, Mrs. Wm. Johnston, Mrs. G. F. McKimm, Mrs. R. C. Currie, and Messrs. Wm. Keith, S. E. Arnold, F. Ballentyne, Jno. Rabb, W. J. Graham, J. T. Pearson, H. W. Hutton; Auditors, J. J. Kerfoot and H. A. Lavell. Mr. C. A. Weaver was appointed Sec.-Treas.

Every effort will be put forth to increase the usefulness of the society.

### OTTAWA'S PLANS.

The Ottawa Society selected officers as follows: Pres., S. Short; 1st V.-Pres., E. Mepsted; 2nd

V.-Pres., Mayor Ellis; Board of Directors, R. B. Whyte, Ald. Putnam, J. Graham, G. A. White, W. H. Snelling, Jos. McNabb, P. G. Keyes, T. McCann, and W. H. Ostrom; Sec.-Treas., J. F. Watson. Arrangements are being made to hold a series of meetings during the winter months at which papers will be read on horticultural topics and demonstrations given in pruning, etc.

### DESERONTO ORGANIZED.

The Deseronto Society which did such good work last season, elected the following officers: Patrons, Major E. Walter Rathbun, F. B. Gaylord, Mayor John Dalton; Patronesses, Mrs. Gaylord, Mrs. F. S. Rathbun, Mrs. Blair; Hon. Pres., P. Slavin; Hon. V.-Pres., J. P. Ashworth; Pres., F. B. Gaylord; 1st V.-Pres., Dr. W. J. Pasmore; 2nd V.-Pres., J. B. Davidson; Directors, Mrs. McGaughey, Mrs. E. W. Rathbun, Mrs. Smellie, Mrs. Rixen, Mrs. Gaylord, Mrs. McClew, and Messrs. P. Casburn, H. E. Parks and D. McClew; Exhibition Manager, H. E. Parks; Sec.-Treas., D. McClew.

It was pointed out that an untidy and unattractive dooryard was now the exception. The grounds competition will be arranged for again this season. The annual flower show will be held on August 29.

### WOODSTOCK'S OFFICERS.

The newly appointed officers at Woodstock are: Hon. Pres., G. R. Pattullo; Pres., R. W. Woodroffe; 1st V.-Pres., J. W. Armstrong; 2nd V.-Pres., Mrs. James Hoare; Sec.-Treas., Maurice Dawes; Directors, Mrs. J. W. Armstrong and Messrs. Whealey, Richmond, H. E. Karn, Whitehead, Vrooman, Becker, Tindale, and Hoare.

Although the members took but little interest in the annual show of the society last year it was decided to hold it again this summer. Pres. Woodroffe advocated that the management of the parks and play grounds of the city should be under the management of a park commissioner.

### SIMCOE'S SEED DISTRIBUTION.

At Simcoe the new officers are:—Pres., H. H. Groff; 1st V.-Pres., E. Boughner; 2nd V.-Pres., J. A. Campbell; Sec.-Treas., J. Thomas Murphy; Directors, I. S. Rowat, H. S. Macpherson, Thos. Haddow, Jos. Gilbertson, Henry Johnson, H. F. Cook, E. E. Collins, A. Gilbert, W. D. Boyd. Excellent results followed the distribution of seeds to the school children in 1905, and that work will be taken up again this season. Besides this, seeds, bulbs, and trees are given to the members.

### WATERLOO'S PREMIUMS.

The officers for 1906 at Waterloo are: Pres., R. Y. Stuart; 1st V.-Pres., Ammon Merner; 2nd V.-Pres., Cleason Shantz; Sec.-Treas., J. H. Winkler; Directors, A. Musselman, Wm. Miller, Chr. Scheifele, Fred. Czerwinski, Geo. Bolduc, J. H. Roos, Hy. Bracey, Miss M. Bruce and Mrs. Hohmeier.

For this year the inducements are: The CANADIAN HORTICULTURIST for 1906. A quantity of Gladioli bulbs, and a choice of one of the following premiums: (a) 2 German Prune trees; (b) 2 pear trees—Louise Bonne de Jersey; (c) House plants. In addition to this the society will give a quantity of bulbs next fall without further cost.

### MEETING AT LINDSAY.

The following officers are charged with the management of the Lindsay society:—Pres., Robert Chambers; 1st V.-Pres., Alexander Cathro; 2nd V.-Pres., Mrs. D. C. Trew; Directors, F. J. Frampton, S. Nevison, Geo. Irwin, Byrd Woods, G. H. Wilson, T. Connolly, C. Hughan, Alex. Skinner, and Mrs. Ancil Mills. Mr. F. J. Frampton was elected Sec.-Treas.

### BELLEVILLE'S INDUCEMENTS

At Belleville the election of officers resulted as follows: Pres., Wm. Rodbourne; 1st Vice-Pres., H. J. Clarke; 2nd Vice-Pres., S. J. Wedden; Directors, Mayor Sulman, J. Harris, S. A. Gardner, F. D. Diamond, W. J. Diamond, W. Kemp, E. Naylor, E. T. Cherry, and W. C. Reid. The

officers met at the close of the annual meeting and elected Mr. W. J. Diamond Sec.-Treas. Special inducements for 1906 include a fine collection of plants, shrubs and fruit trees, and THE CANADIAN HORTICULTURIST for a year.

### SEAFORTH'S LOSS.

At the annual meeting of the Seaforth Horticultural Society Robert Scott was elected Pres.; Wm. Hoag, V.-Pres.; and H. W. Brown, Sec.-Treas. It is the intention this year to award each member a copy of THE HORTICULTURIST, practically his own choice of trees, plants, bulbs and seeds to the retail value of \$1.50 for spring planting, and a collection of about 30 bulbs in the fall. Monthly meetings will be held and a flower show in the early fall. The society met with a heavy loss in the removal from town to Owen Sound, of Mr. Wm. Elliott, who had been secretary for years and had worked up interest to its present height.

### STIRLING'S RESULTS.

The Secretary of the Stirling Society, Mr. G. G. Thrasher, reports that they find it beneficial to expend the funds on improving the public park, as well as looking after the individual wants of the members. The benefits and results of the Horticultural Society are noticeable both in the park and in the individual homes.

### MITCHELL'S GOOD WORK.



A. J. Blowes

The Rev. I. Kenner was selected as Pres., and Mr. A. J. Blowes, Sec., of the Mitchell organization. In a recent letter to THE HORTICULTURIST, the president outlined the good work done during the five years since the society was formed. One by one individual houses and lawns have been made beautiful, and the infection spread until now practically every resident has made

some attempt to make his home a credit to the town. The churches and the town hall have been improved, and the town fathers passed a by-law excluding bovines from the streets.

### MIDLAND'S CHILDREN ENCOURAGED.

Midland society selected Mr. Frank Cook as Pres., and Mr. E. H. Piggott as Sec. The latter wrote THE HORTICULTURIST as follows: "The most encouraging work we have taken up is the distribution of seeds to school children and awarding prizes for bloom at the fall fair. We distributed 800 packages last spring."

### CIVIC IMPROVEMENT AT NAPANEE.

The following officers were elected at Napanee: Pres., W. S. Herrington, K.C.; 1st V.-Pres., Mrs. J. A. Shibley; 2nd V.-Pres., Mrs. H. T. Forward; Sec.-Treas., Miss J. E. Ham; Directors, Mrs. D. C. McNaughton, Mrs. J. L. Boyes, Messrs. A. W. Grange, Thos. Symington, G. F. Ruttan, Geo. Gordon, F. F. Miller, John Wilson and Clarence M. Warner. Civic improvement will receive special attention during 1906. A lecturer will be brought to the town to advise regarding park improvement and other matters of interest to lovers of flowers.

### TORONTO TO ARRANGE FOR ADDRESSES

At the annual meeting of the Toronto society the following officers were elected: Pres., H. R. Frankland; 1st V.-Pres., W. G. Rook; 2nd V.-Pres., George Musson; Directors, R. J. Score, Lieut.-Col. Delamere, F. Abbott, C. J. Agar, G. H. Mills, William Jay, H. Simmers, W. Williams, and G. C. Arnott; Representative to Industrial Exhibition Association, H. R. Frankland; Delegates to Ontario Horticultural Exhibition, R. J. Score, H. Simmers, W. G. Rook and Thomas Manton, Delegate to Ontario Horticultural Society; H.

R. Frankland; Sec.-Treas., Chas. E. Chambers. About four meetings will be held during the year, exclusive of the annual meeting and the annual excursion. These meetings will be devoted to the more important subjects connected with horticulture, such as a contemplated address by Mr. J. Horace McFarland on "Civic Improvement" and addresses such as that delivered by Dr. Fletcher in June last. It is claimed that fewer meetings and better subjects would be conducive to a much larger attendance.

#### GRIMSBY HELD MEETINGS.

The officers of Durham Society for this year are: Pres., Gilbert McKechnie; 1st V.-Pres., Geo. Furneaux; 2nd V.-Pres., Wm. Scaif; Sec.-Treas., Chris. Firth. The secretary writes *THE CANADIAN HORTICULTURIST* as follows:—"A great impetus has been given to home improvements in the way of ornamentals. Evergreen and shrubbery, and flower gardens have been started where such things have never been before, especially about the homes of farmers, for a radius of eight or ten miles around the town. A great improvement is to be noticed also in the surroundings of town residences

#### DURHAM'S HOMES IMPROVED.

The officers of Durham Society for this year are: Pres., Gilbert McKechnie; 1st V.-Pres., Geo. Furneaux; 2nd V.-Pres., Wm. Scaif; Sec.-Treas., Chris. Firth. The secretary writes *THE CANADIAN HORTICULTURIST* as follows:—"A great impetus has been given to home improvements in the way of ornamentals. Evergreen and shrubbery, and flower gardens have been started where such things have never been before, especially about the homes of farmers, for a radius of eight or ten miles around the town. A great improvement is to be noticed also in the surroundings of town residences

#### VANKLEEK HILL PROGRESSIVE.

A new society was formed at Vankleek Hill and officers elected as follows: Pres., J. L. Browne; 1st V.-Pres., E. Z. Labrosse; 2nd V.-Pres., A. R. Metcalfe; Sec.-Treas., D. T. Mode; Directors, J. Hurley, A. Bancroft, J. MacCallum, F. B. Bouden, J. S. MacIntosh, P. Dusserre, J. Irvine, H. C. Jones, and S. A. Huntington. The organization was effected chiefly through the instrumentality of the newly elected president, who had been connected with the Durham society. Special inducements are offered in giving premiums of ornamental trees, shrubs, bulbs and plants, and low rates on fruit trees and other nursery stock. Besides the members will receive *THE CANADIAN HORTICULTURIST* for a year.

### Will Improve the Horticulturist

At the annual meeting of the Horticultural Publishing Co., Limited, held in the offices of the Company, Toronto, Jan. 24, it was decided to still further improve *THE CANADIAN HORTICULTURIST*. Various departments of the paper are to be strengthened; it will be enlarged by four pages in each issue, and the cover will be improved. The following officers were elected: Pres., W. H. Bunting, of St. Catharines; 1st Vice-Pres., J. H. Dunlop, of Toronto; Sec.-Treas and Managing Director, H. B. Cowan, of Toronto.

The board of officers consists of those already named, and Messrs. Alex. McNeill, of Ottawa, representing the Ontario Fruit Growers' Association; Herman Simmers, of Toronto, and Harold Jones, of Maitland. It is the intention of the management to make *THE CANADIAN HORTICULTURIST* a publication of which Canadians may feel proud, and one that will hold its own with any other publication of a similar nature on the continent.

A general statement of the Bank of Hamilton shows that they have a capital stock of \$2,440,740. After paying the customary dividends this bank has been able to place in the reserve fund the substantial sum of \$135,000. A few new branches have been opened during the year in Ontario and Manitoba, and special attention has been given to strengthening and building up the business at points where offices had already been established. It is proposed that \$500,000 additional capital be subscribed and used in providing for the future growth of the bank's business. It has also been decided that the practice of declaring dividends every three months be adopted.

## Dealing With the Tomato Question

A. B. Cutting, B.S.A., our Special Representative

At a meeting of the Hamilton branch of the Vegetable Growers' Association, held in Hamilton on Jan. 13, a committee was appointed to confer with the executive of the Consolidated Canners' Association of Canada and discuss the tomato question. The committee comprises Messrs. E. G. Mahoney, R. H. Lewis, P. Ray, H. D. Binkley, and A. E. Bates. It was decided to approach the canners in a businesslike way and ask for a business understanding. The vegetable growers of the district want a square deal and in return are ready and willing to guarantee superior excellence in the commodity that they have to offer in exchange.

Already some of the factories in this district have circulated rumors to the effect that they have contracted for all the tomatoes they require for next season. Growers should not be hoodwinked by reports of this nature as they are far from correct. In proof of this, we can cite the case of a factory representative who, when soliciting contracts in the vicinity of Hamilton, told each and every grower in turn that his factory required only 1,000 bushels more; when the contract was secured, the same story was told the next man and his neighbor until the whole neighborhood was completely canvassed. It is known that a few growers were led to contract for the coming season but the great majority have not yet done so, nor do they intend to do so until they get a square deal.

One of the members stated that last season

the canners took pains to keep a record of the grade and quality of each grower's tomatoes as they went in the factory, so that, in the event of a raise in price for this year, they would know where the best stock may be secured. This action on the part of the canners indicates two things:—first, as regards the canners, it shows that they are not so independent as they would have the growers believe, and that though they would demand high grade stock, they would pay an increased price if they had to; and second, as it effects the growers, it shows that a raise in price would mean greater discrimination in quality and grade, and as a consequence the grower of trash would be left out in the cold—this is as it should be.

Mr. Mahoney spoke briefly on the advantages of co-operation in this matter. The association can do a power of good for its members. During the past year a little friction was caused in one or two instances by members contracting at prices lower than asked by the association. These are things of the past, and should an incentive to do their duty in the future. Unity of effort is necessary to achieve results. This sentiment was supported by Mr. Emory who urged the members to stand together not only upon the tomato question but also in all matters that affect the association. He pointed out the fact that beside this possibility of better prices for tomatoes many other benefits may be derived.

## Practical Co-operation

The committee in charge of the co-operative work in connection with the Ontario Fruit Growers' Association have decided to concentrate their efforts during 1906 and put forth a special effort in about a dozen places to form co-operative shipping associations. It was decided that in former years an attempt had been made to carry on this work too extensively, and it is expected that if efforts are directed to fewer places it will result in strong associations that will serve as object lessons to growers in other parts.

It was recommended that the Minister of Agriculture be advised that a series of experiments for the spraying for the Codling Moth, Scab, San Jose Scale, Grape Rot, and other fungous diseases, should be carried on as extensively as possible during the summer. It was suggested that a committee be appointed in each section to act in conjunction with Prof. H. L. Hutt, of the O.A.C.; Secretary Hodgetts, of the Ont. Fruit Growers' Assn., and a representative of the Department of Agriculture, and that this committee inspect the work done two or three times during the season and have the compiled results published next fall.

Owing to the difficulty in obtaining reliable information regarding the prospects of the season's crop and the probable prices, it was proposed that correspondence be inaugurated between each of the co-operative fruit growers' associations and Sec. Hodgetts, so that the associations may be kept in closer touch with each other. It was also recommended that the different co-operative associations should unite in the effort to advertise their products by making as large and as representative an exhibit as possible at the Royal Horticultural Society's Show in London, Eng., as well as at other important shows, and that a representative be put in charge.

The Dominion Dept. of Agri. will be asked to continue the supervision of the work connected with the transferring of fruit shipments from the railways to the steamers at Montreal, and if necessary, to appoint special inspectors to look after this work. It is felt that commercial agents in the Old Country should engage extra help for two or three months during the shipping

season to personally look after the shipments and report their condition. The good work accomplished by Mr. B. T. Boies, of British Columbia, in showing the Ontario growers the proper methods of packing and grading fruit was referred to, and it was decided to ask the Dominion Government to continue such demonstrations.

### Items of Interest

A meeting of the members of the Toronto Vegetable Growers' Association will be held in the Albion Hotel, Feb. 3, at 3 o'clock, when "Forcing Rhubarb" will be discussed by Mr. Thos. Delworth, of Weston, and "Celery Growing," by Mr. George Syme, jr., of Carlton West. "Blights on Vegetables, Their Causes and Remedies, if Any," will be fully discussed. The first meeting held recently was a great success.

At a meeting of the Hamilton branch of the Ontario Vegetable Growers' Association, held in Hamilton, Jan. 13, the newly elected President resigned. Mr. E. J. Mahoney, President for 1905, was appointed without opposition. Directors for 1906 were also appointed as follows:—Chas. Scheer and W. A. Emory, Aldershot; P. Ray, Waterdown; John L. Lewis and John Ewing, Hamilton; Frank Crosthwaite, Bartonville; and J. J. Fields, Burlington.

The members of the committee in charge of co-operative experimental work in horticulture in connection with the Ontario Agricultural and Experimental Union appointed at the annual meeting are: Prof. H. L. Hutt, directors H. S. Peart and J. Albert Hand. Last year about 200 members experimented with the different varieties of fruits. During the coming season experimenters will receive the different bush fruits, grapes and apples.

The annual meeting of the British Columbia Fruit Growers' Association will be held in Vancouver, on Feb. 7 and 8.

Growers should lay in a stock of baskets, boxes and other fruit packages before the harvesting season comes. Mr. C. W. VanDuzer, of Grimsby, carries a full line of all such goods.

## Niagara Peninsula Growers Advocate New Lines of Work

**I**N addition to taking a stand on the tariff question the members of the Niagara Peninsula United Fruit Growers' Association at their recent meeting at St. Catharines, transacted considerable other business of importance. Officers were elected for the ensuing year as follows:—Pres., Thos. Berriman, of Niagara Falls, Ont.; 1st Vice-Pres., Jos. Tweddle, of Fruitland; 2nd Vice-Pres., F. H. Goring, of Homer; 3rd Vice-Pres., W. A. Emory, of Aldershot; Sec.-Treas., C. E. Fisher, of St. Catharines; and a strong executive.

The following resolution was moved and carried: "Whereas, the bearing orchards of this district are largely planted from trees that in many cases have proved untrue to name, and in many others with trees propagated from parent stock having come inherent weakness or disease and as a result have degenerated both in hardiness and unproductiveness: Therefore, we would urge the Provincial Government to institute the necessary legislation with the view to the improvement of our nursery stock, and that a series of experiments along this line be initiated in our experiment stations and amongst our prominent fruit growers with the view of educating the public to the importance of securing pedigreed stock, and that a copy of this resolution be submitted to the Minister of Agriculture."

### THE BASKET QUESTION.

The association decided to ask the Government to amend the law regarding baskets as proposed at the last meeting except in the case of the six-quart basket which should be 4½ inches deep instead of 4⅞ inches.

Mr. E. D. Smith declared that the present clause in the act, allowing growers to use special sizes when such size is stamped in large letters on the side of the basket, should be done away with. Growers should be compelled to use a standard size and no other. Consumers do not know the law and are imposed upon by growers who use a small size even though such size is stamped on the package. A stamp has no meaning to the ordinary consumer and even to many retail dealers. If growers can use any size basket they like, we may as well have no act at all.

In opposition to Mr. Smith's proposal, the argument was advanced that since the Ontario basket factories have combined, growers may want American baskets which are of a different size and which could not be used if this law is changed. Mr. Smith: "All that is required is to give orders in advance and American makers will fill them and meet all demands." When put to the meeting the proposal did not carry.

### NEW FRUIT EXPERIMENT STATION.

The association passed a strong memorial to the Minister of Agriculture asking that an extensive experiment station be established in the Niagara district. Mr. Linus Wolverton, of Grimsby stated, that at a recent meeting of the Board of Control of Fruit Experimental Stations for Ontario it was decided to recommend to the Government the advisability of establishing a station of this nature in South Ontario.

Prof. Robt. Harcourt, O.A.C., Guelph, delivered an interesting address on the use of fertilizers in orchards.—A. B. CUTTING.

## Vegetable Growers' Banquet

At the annual banquet of the Toronto branch of the Vegetable Growers' Association, held last week, the spirit of advancement that has seized the Ontario Vegetable Growers of late was plainly manifested. Every speech was full of enthusiasm, and showed the increasing tendency of the growers to co-operate.

The president of the local association, Mr. George Syme, jr., made a most capable chairman.

Mr. W. F. Maclean, M.P., said that a specific duty is in the interest of the farmer, and that in some cases it should be made to go into effect in certain months of the year by order-in-council, and that geographical conditions should be considered in such orders. In discussing transportation facilities, he said that the express rates should be regulated so that there would be no discrimination given to imported goods by the transportation companies.

The toast to the Vegetable Growers' Association was proposed by Mr. F. F. Reeves, the energetic secretary of the Toronto branch, and was responded to by Mr. W. A. Emory, the president of the Provincial association, who favored a sliding tariff or a closed season; by Mr. H. B. Cowan, the secretary, and by Mr. Mr. Thos. Delworth, who advised the growers to stand by the association, and to strive to improve themselves in every way possible.

The toast to the Ontario Legislature was responded to by the Hon. Nelson Monteith, who drew forth applause by announcing that the Government is giving serious consideration to a proposal to establish an experimental station in some section where conditions are more congenial to vegetable growing than they are at Guelph. Hon. J. W. St. John said that co-operation, loyalty and unity would do much to benefit producers and consumers. They should learn to stand up for fair prices, as well as to demand duty against the imported goods. The only solution to the tariff question was in the establishment of a specific duty, and if that can-

not be got the Ontario Government should be approached regards appointing an inspector who would have power to reject undesirable importations.

Other speakers included Messrs. Geo. Syme, sr., reeve of York township; G. S. Henry, Jos. Rush, Herman Simmers and T. Rennie.

### A Heavy Fine for False Packing

The maximum penalty for infraction of the Fruit Marks Act was imposed on Mr. Jas. Coyle, of Colborne, by Magistrate O'Rourke of Trenton, on January 18. He was fined \$50

and costs, and in default of payment imprisonment for 30 days in the common jail at Belleville. The charge, laid by Robert J. Rutherford, Inspector of the Fruit Division of the Department of Agriculture, was that the defendant, on Dec. 28, 1905, in violation of Section 6 of the Fruit Marks Act, did have in his possession for sale 50 barrels of apples marked XXX that were below the standard, and that these apples were not XXX standard as required by the Act.

Mr. P. J. Carey, Fruit Inspector, testified to visiting the cold-storage warehouse in Trenton, in company with Inspector Rutherford, and finding a shipment of apples of the Stark variety being packed. They examined eight barrels that were marked XXX, and found the apples contained therein were not up to the standard prescribed; a large percentage of the fruit was inferior, being infected with scab, lacking in color, worm-eaten, and too small. On being asked if the general pack was similar to the barrels examined, Mr. Coyle admitted they were a poor lot, and signed a document stating that 50 barrels contained apples similar to some shown by Mr. Carey.

Mr. Robert Coyle, who had charge of the packing, in defence, said:

"Neither Mr. Carey nor Mr. Rutherford showed him an apple that was condemned, any more than one or two which were bruised by pressing; in fact, they did not go down in the barrel at all, and did not say anything about 'size,' 'off-color,' or 'worm-eaten.' In his presence the inspectors only looked into the 'tail,' and did not go farther into the barrel; they did not say anything about shipping the apples or offer any objections to their shipment, and he had not heard anything further about it until the summons was issued. The apples sold for \$3.56 per barrel by auction on a declining market in England to-day."

The chief of the fruit division, Mr. A. McNeill, asked for the maximum penalty, and said that the man who deliberately marked packages falsely committed a crime against society, which affected every apple-grower in the country. The false packer, to gain 50 cents a barrel here, caused a loss of \$2.00 to \$3.00 to the English merchant. Mr. F. C. Morrow pleaded guilty to a similar charge in respect to five barrels, and was fined five dollars and costs.

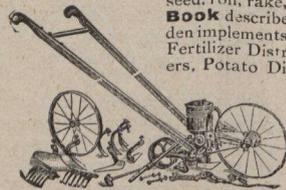
Your magazine during the last few months has shown a decided improvement in the articles appearing therein. We can see no reason why it should not stand at the very front of all the horticultural magazines published on this continent.—Brown Brothers Company, Ltd., Brown's Nurseries, Ont.

## Make Your Work Show in the Garden

The user of Iron Age Tools can show most results for work performed, whether at the end of the day or the end of the season. Wonderful ease and rapidity of operation, with wide range of adaptability, insures best results from every soil and crop.

## IRON AGE Implements

The No. 6 Combined Tool is almost a complete tool-house in itself. A simple change of parts and with the same pair of handles you can open the ground, sow seed, roll, rake, weed, hoe, cultivate. Our **New Iron Age Book** describes not only this but many other farm and garden implements, Orchard Cultivators, Sprayers, Horse Hoes, Fertilizer Distributors, Hill and Drill Seeders, Potato Planters, Potato Diggers and Riding Cultivators. This book is **FREE**. Send for it.



No. 6 Iron Age Combined Double and Single Wheel Hoe, Hill and Drill Seeder



No. 6, Sowing Seed

BATEMAN MFG. CO.

Box 516, Grenloch, N.J., U.S.A.

Or J. A. SIMMERS, Toronto, Ont., Canada

# New Crimson Red Canna

DID YOU SEE EXHIBITED AT ST. LOUIS THE NEW  
CRIMSON RED CANNA

## Mrs. Wm. F. Kasting?

Height, 3½ feet. Most brilliant in color, most prolific of all Red Cannas. Blooms all the time, and is exceptionally fine for conservatory decorations. You will need it in your business. Awarded, on its merits, a GOLD MEDAL at the World's Fair, 1904.

West Seneca, N.Y., U. S. A., Sept. 15, 1904.

Mr. Wm. F. Kasting,

Dear Sir—In our trial grounds this year, the Canna, Mrs. Wm. F. Kasting, was by far the best of its class; both in richness of coloring and in freedom of bloom. It has been a sheet of dazzling crimson from June up to the present time and promises to be good for a month to come. I consider it a most valuable acquisition and shall need a large bed of it next year.

Respectfully, JOHN F. COWELL.

Prices for Bulbs, \$2.00 per Dozen    \$15.00 per Hundred    \$100.00 per Thousand    Delivery now up to April

**WM. F. KASTING**    383-387 ELLICOTT STREET  
BUFFALO, NEW YORK

## GERHARD HEINTZMAN PIANOS

☞ All the work in the world is directly and immediately undertaken for the maintenance and betterment of the home. Musically, no refined home is complete without Canada's best piano

### The Gerhard Heintzman

which can be purchased on easy terms and will prove much the cheaper piano in the end.

☞ Have you seen the wonderful self-player, the "Apollo"? Anyone can play it. Send for catalogue and printed matter.

**GERHARD HEINTZMAN**  
LIMITED

97 YONGE STREET, TORONTO

Hamilton Warerooms—127 King Street East

## ATTENTION!

IF you intend purchasing any Trees, Vines, Shrubs, Roses, or Ornaments the coming Spring, it will pay you to submit list of wants for special prices, as I have a complete assortment of Nursery Stock for delivery this Spring, especially Apples, Pears, Plums and Ornaments.

Quality and Prices Right

Agents Wanted    Outfit Free

**C. W. F. CARPENTER**  
WINONA, ONTARIO

Nurseries:

WINONA

GRIMSBY

BEAMSVILLE

**POULTRY DEPT.**  
Conducted by  
S. Short, Ottawa

**F**EBRUARY is the most trying month of winter for the fowls. They begin to find the limited space of the winter quarters irksome. The floor litter should be changed frequently, say once a fortnight. The windows of the pens should be cleaned to admit as much light and sunshine as possible. Keep the grit boxes filled. Study the birds with a view to making up this season's breeding pens if they are not already made up. Dispose of all extra or surplus males. If thoroughbreds are not kept, try and make provision or arrangements to introduce them.

Good pure bred breeding birds may be purchased for five dollars a trio in nearly every neighborhood. Try and see personally the birds before buying. Do not go across the border for them, but encourage Canadian breeders. Two expert breeders who visited Guelph and Madison Square poultry shows recently held, declare the quality of the stock shown at Guelph to be equal to that shown at the Madison Square Gardens. Five dollars is a reasonable price for a trio as I will endeavor to show in the next issue of this magazine.

With regard to which breed to keep, that depends on individual preferences. Apparently white Wyandottes are the most popular fowl in Ontario, for they were the largest class exhibited at Guelph. At Madison Square barred Plymouth Rocks headed the list, with white Wyandottes and white Leghorns next in order. This may assist in deciding the question, for breeders both

in Canada and the United States keep fowl more for profit than pleasure.

**VENTILATION.**

Last month something about ventilation was promised for this issue. With this end in view six of the most prominent poultry plants in and about Ottawa were visited in January—and data collected. No definite conclusions were arrived at and I will relate the conditions of each and let the readers judge for themselves. The first house visited was situated on the brow of a hill with southern exposure. There were three pens of fowl. The first pen contained 46 white Leghorns, hens and pullets. They were laying on the average 20 eggs a day. They looked in first-class condition. The next pen, a small one, contained 15 May hatched Plymouth Rock pullets. They were laying an average of six eggs a day. The third pen was in a loft over the other two. The poorest birds, that is the culls, were kept upstairs to the number of 50, and laid on an average eight eggs a day. The owner said that he had never been able to get really good results from birds kept upstairs so he had put up the least promising stock in this loft. The house was comfortable and I was told that the temperature never went below freezing point. There was a stove in this house and when the weather was cold a fire was lighted to keep the temperature up, and no trouble had been experienced with dampness for the frost did not collect on the walls unless the thermometer went below freezing point. The owner of this establishment is making money. The next house visited contained 20 white Wyandotte pullets, some of them winners of the best prizes at Ottawa last fall. They were all laying, and had been averaging 12 to 13 eggs daily. They were housed well. Last winter moisture collected very heavily on the inside walls of this house, and some sickness was the result. This winter two panes of glass,

one upper and one lower, were broken out and cotton stretched across the openings. There has been no moisture so far, but as this has been an unusually mild season the owner could not say yet whether or not the cotton ventilators would prove a decided success. These birds were more than paying expenses.

The next place visited contained three pens—one contained about 30 hens, white Leghorn and barred Rocks, half of each. The Leghorns were laying, the Rocks were not, although they looked well. Six to seven eggs daily were got from this pen. The next pen contained about 40 half-bred Orpingtons. These were well fed and in good condition. No eggs were laid at the time of visiting. The next pen was in a loft over the other two and contained about 40 white Leghorn and barred Rock pullets, half of each. Three to four Rock eggs were laid daily in this pen. No artificial heat was used in this building. The windows were single and the building not warm, and an occasional crack in the walls let the daylight through. The fowls were fed well and much the same as those mentioned above but were not paying expenses.

Of the other places visited two of the buildings were heated and the hens were laying well, and returning a profit. The last building was not heated artificially, and the fowl were barely paying expenses. From these visits and from conversations with other breeders the evidence adduced is in favor of heating the houses artificially, just sufficient to keep the temperature above freezing point. Under such conditions the best results have been obtained in this district.

**SAVE YOUR TREES** from the Ravages of SAN JOSE, COTTONY MAPLE SCALE, PSYLLA, Etc.

All you need — is — **Scalecide Water** AND A GOOD SPRAY PUMP

SIMPLE, MORE EFFECTIVE and CHEAPER than LIME, SULPHUR, and SALT

Mr. A. N. Brown of Wyoming, Del., writes—"You have conferred a boon on the American Fruit Grower."

For Samples, Testimonials and Prices Address

**B. G. PRATT CO.**

11 Broadway, New York, N.Y.

**THE SPRAMOTOR CO.**

London, Ontario, Canadian Agents

**Creighton Poultry Yards**

OTTAWA, ONTARIO

Have won First Honors on Barred Plymouth Rocks for the last ten years under judges such as Jarvis, Cosh, Bennett and Butterfield.

A few good Breeding Pullets to spare at \$2.00 each. In White Wyandottes we have several fine Cockerels at \$2.00 each—good value. Eggs in season from both breeds at \$2.00 per 13. Utility stock at \$1.00 per 13.

S. SHORT, Proprietor

**CANADA'S GREATEST NURSERIES**

Offer Four New Specialties for Spring, 1906

Why plant OLD varieties when the NEW will produce DOUBLE QUANTITY, BETTER QUALITY and BRING HIGHEST PRICES?

**THE MAYNARD PLUM**

Mr. Luther Burbank's greatest plum. In the May-ard we believe Mr. Burbank has reached the point of perfection.

**GOLD COIN POTATO**

Tested at Experimental Station, Ottawa, and produced 554 bushels to the acre. Best showing made out of seventy-five varieties tested. Free from Blight and Rot.

**IDEAL ASPARAGUS**

A new mammoth French Asparagus. Early. Largest size and most productive. A bunch of 20 stalks weighs 2 lbs. Strong 3 yr. old plants.

**NEW MILLER RASPBERRY**

Earlier than Marlboro. Continues a long season. Fruit large, bright red, best quality and exceedingly firm. Canes vigorous and hardy. Order at once as supply is limited.

Send for full particulars and special circulars fully describing the merits of these New Specialties.

Why not put your spare time to profit this winter in selling these specialties and other high-class nursery stock in Fruits and Ornamentals? Liberal inducements. Write for terms. See reading notice on page 49

**STONE & WELLINGTON**

Fonthill Nurseries, over 800 acres.

TORONTO, ONTARIO

**John B. Smith & Sons**

Limited

Cor, Strachan and Wellington Aves.

TORONTO



Manufacturers  
... of ...

LUMBER

LATH

SHINGLES

DOORS

SASH

BLINDS

SILOS, ETC.

Clear Cypress for Greenhouse Work



**STRAWBERRY Plants For Sale**

Every garden should have an extra early and extra late variety to expand the season of fruiting to its full limits.

**SPECIAL OFFER**—60 early and 60 late plants sent post-paid to any address for \$1.00.

Attractive prices on thousand lots of Haverland, Parker, Earl, and Williams. **TERMS** cash with order.

**JOHN DOWNHAM**  
Strathroy Ontario

**\$10.00 Given Away Each Issue to Readers**

who purchase goods from advertisers and say they saw their advertisement in "The Canadian Horticulturist." Five Dollars to the purchaser to the greatest value; One Dollar to each of the next five making application.

Write the Advertising Manager of

**The Canadian Horticulturist**

507-508 Manning Chambers, Toronto, Ontario

**MARCHMENT'S**

**Sure Growth COMPOST**

Supplied to all the largest nurserymen and fruit growers in Ontario. Shipments made by car or boat. Prices reasonable.

**S. W. MARCHMENT**  
105 VICTORIA ST., TORONTO

Telephone Main 2841 Residence Park 951

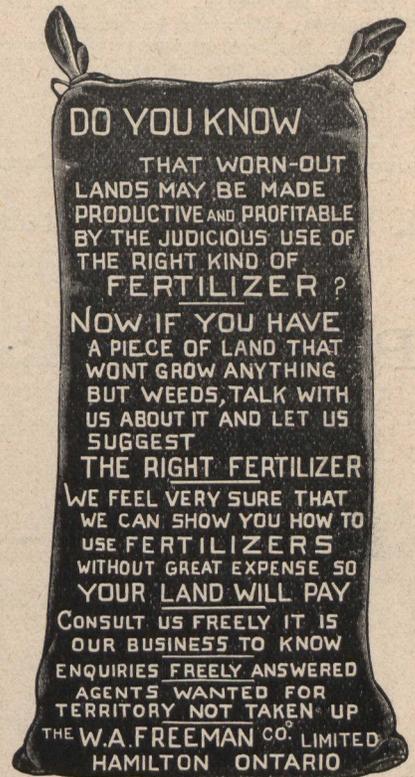
**New Catalogs**

The catalog recently published by Brown Brothers Company of Brown's Nurseries, Welland County, is a credit to that enterprising company and to the whole Dominion. As a work of art in the line of catalogs it is par excellence the finest THE HORTICULTURIST has ever received from any firm in Canada or the United States. Every page is decked with a richly colored plate illustrating as true to nature as possible, some variety or varieties of fruit, vegetables or flowers. The quality, season of usefulness or beauty, and general characteristics are concisely given for each specimen. This firm has long had a reputation for supplying good nursery stock, and now it stands alone in the quality of the catalog distributed among the fruit growers of Canada. This catalog is worth securing and preserving.

The catalog issued by E. D. Smith, of the Helderleigh Nurseries, at Winona, gives a full description of the leading varieties of fruit and ornamental trees, shrubs, vines, etc. Perfect system is found in all the work connected with growing and storing the stock, and so sure is Mr. Smith that the trees are true to name that he agrees to replace all stock found to be not genuine. The nursery land is given manure to the value of \$50 per acre, so that healthy, straight trees are grown. The long growing season that nature affords south of the lake and below the mountain and the accompanying absence of low temperatures remove all danger of black-hearted trees, as the wood is matured before winter sets in. Those interested should secure a catalog.

The new catalog and circulars being sent out by Stone & Wellington, of Toronto, of the Font-hill Nurseries, show that much is being done in bringing out new varieties of the different lines of fruit, flowers and vegetables. In their experimental orchards over 600 varieties of apples are being tested. This firm is to be complimented on their enterprise in securing such

**Mortgage Lifting FERTILIZERS**



**IT PAYS TO BUY THE BEST**  
**And the Best is None too Good for You**

**Canadian Grown Trees for Canadian Growers of Fruit**

☞ From the time the scions are taken, until the trees are shipped, they receive the personal attention which make our trees famous.

☞ We guarantee our trees to be free from disease of any kind.



☞ Place your order now for Fruit and Ornamental Trees and Shrubs.

☞ A large supply of the choicest varieties to select from.

☞ Our Catalogue is free for the asking.

**THE HELDERLEIGH NURSERIES**

E. D. SMITH - WINONA, ONT.

specimens as the Maynard plum, the Ideal asparagus, and the Gold Coin potato. In apples they have introduced such varieties as Milwaukee, Macdonald and Scarlet Pippin. In small fruits they are offering a fine collection, consisting of the King raspberry, Cumberland black raspberry, Boskoop Giant black currant, Perfection red currant, Rathbun black kerry, and Victoria gooseberry. Their line of shrubs and herbaceous plants also is complete.

Mr. J. A. Simmers' catalog contains a complete list of garden and vegetable seeds, bulbs, etc., for the city and suburban gardener. The seeds from this firm are noted for their high

standard of excellence, and those engaged in agriculture would do well to secure one of these catalogs before purchasing their seeds for spring sowing. The firm was established in 1856, and by honest and square dealing an extensive trade has been worked up. Besides seeds and bulbs, garden tools, bee keepers' supplies and other sundries are kept in stock. Its goods are shipped to all parts of Canada.

The Steele, Briggs Seed Co.'s 1906 catalog of seeds, bulbs and plants, showing what to grow and how to grow them, is replete with information. The business at Hamilton, formerly known as the Robt. Evans Seed Co., will in future be under the firm name of Steele, Briggs Seed Co., Limited. A cordial invitation is extended to all to visit their fine greenhouses and trial grounds on Queen Street East, Toronto. The warehouses and offices in Toronto contain nearly five acres of floor space, and are equipped with the latest and most improved cleaning mills, printing presses and all appliances necessary for economical work in connection with the extensive business carried. In addition to the Toronto and Hamilton offices, a flourishing store has been established at Winnipeg. A special price list for market gardeners and florists, containing the varieties in special demand, has been published.

Wm. Rennie & Sons' new catalog should be in the hands of every agriculturist in Canada. It gives a full description, with illustrations, of the best varieties of plants known to the horticulturist or general farmer. All orders for plants, bulbs, etc., are sent direct from this firm's greenhouse at Swansea, where tender plants can be held over until danger of frost is past. They are always in touch with a list of gardeners who are seeking situations, and will at any time be pleased to assist their customers in obtaining reliable help.

The 26th annual catalog of the firm of A. G. Hull & Sons, of St. Catharines, shows that this firm has a first-class stock of all fruit, forest, ornamental and evergreen trees, shrubs, roses, grape-vines and berry plants. It has a reputation for supplying excellent stock. The nurseries are inspected regularly by the Dominion inspector, so that clean healthy stock may be ensured. All shipments are fumigated before they leave the place. Messrs. Hull have, perhaps, the best catalog business in Canada.

The celebrated strawberry plants supplied by Mr. W. H. Vanderburg, of Poplar Hill, Ont.,

**P**ERMANENT meadows should have an annual dressing of 500 pounds per acre of a fertilizer containing eleven per cent. POTASH and ten per cent. available phosphoric acid.

This will gradually force out sour grasses and mosses from the meadows, and bring good grasses and clovers; thus increasing the quality as well as the quantity of the hay.

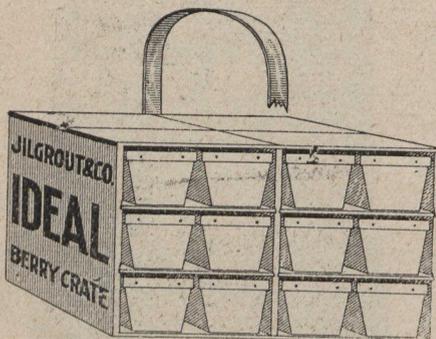
Our practical book, "Farmer's Guide," gives valuable facts for every sort of crop-raising. It is one of a number of books on successful fertilization which we send on request, free of any cost or obligation, to any farmer who will write us for them.

Address, GERMAN KALI WORKS,  
93 Nassau Street, New York.

**If You Want Your Fruit**

to look well, carry well, and sell well, you need the best

**PACKAGES**



I make them and can satisfy you

WRITE

**C. W. VanDuzer**

GRIMSBY, ONT.

Manufacturer of Berry and Plant Boxes,  
Berry Crates, the Climax Peach  
and Grape Baskets, etc.

A beautiful colored plate of our  
**New Eaton  
Red Raspberry**



and our strawberry catalog of valuable information about varieties with instructions for beginners. Free to all.  
**THE FLANSBURGH & POTTER CO.,**  
Leslie, Michigan.

**Farm Fruit, Stock or Grain**

I will sell or exchange my general store and stock for a small farm suitably situated. I am doing a good business here—farm implement trade growing. Good reasons for selling.

**C. B. REECE, North Pelham, Ont.**

**FLOWER POTS**



Now is the time to order them for Spring trade.

We have a large stock of all sizes on hand and can make prompt shipments.

Drop us a post card for Catalogue and Price List.

**THE FOSTER POTTERY CO.**

Limited

MAIN STREET WEST

HAMILTON

**STRAWBERRY PLANTS**

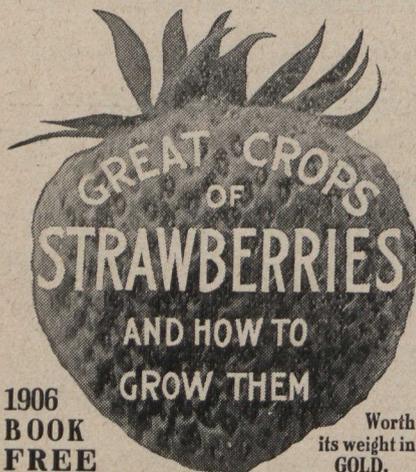
**"CARDINAL"**

("THE IDEAL")

A limited number of Cardinal plants for sale. Also Victor, Commonwealth, North Shore, Early Hathaway, New Home, Superior, Mrs. Fisher, Wonder, Ben Davis, and 80 others. Young plants, fair prices.

**E. B. STEVENSON**

PONSONBY — ONTARIO



**1906  
BOOK  
FREE**

Worth  
its weight in  
GOLD.

The Book that beats them all because it tells how big crops of big fancy strawberries can be grown every year and how to pick and pack them for big prices. It keeps Experienced Growers posted on new discoveries in plant breeding and latest cultural methods. It takes beginners through a complete course of instruction; tells just when and how to do everything to get Big Results, and how to start a Profitable Berry Farm with little capital. Beautifully illustrated with photo-engravings. Don't order your plants until you read this book. It is free.

R. M. KELLOGG CO., BOX 570 THREE RIVERS, MICH.

**Baskets**

We are Headquarters for all kinds of Splint Baskets

**VENEER**

supplied for the protection of trees from mice during winter

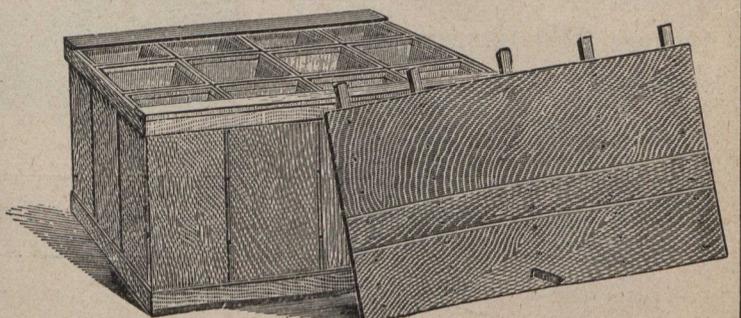
**FRUIT PACKAGES**

A Specialty

SEND FOR OUR PRICES

**THE OAKVILLE BASKET CO.**

OAKVILLE, ONTARIO



A Handsome Premium will be Given Free to all Readers who buy Goods from Advertisers.

THE  
**HERBERT  
RASPBERRY**

THE EARLIEST, HARDIEST  
FINEST FLAVORED, MOST  
PRODUCTIVE AND LARG-  
EST RED RASPBERRY

Originated by R. B. Whyte, prominent  
Horticulturist of Ottawa

From all quarters come favorable re-  
cord of the Herbert's good qualities.

**NORTH**

F. Theaker, Hanbury, Temiskaming  
district, writes: "Now for the Herbert  
Raspberry. It is the largest in size, and  
the finest in flavor of any red raspberry I  
have ever seen or tasted. It is a great  
yielder, a vigorous grower, and as hardy  
as the wild berry of this country. There  
is no need to protect the canes here, for  
there was no killing back whatever. The  
canes were alive to the very tips in the  
spring."

**EAST**

W. W. Dunlop, Outremont, Que.: "I  
have fruited the Herbert Raspberry here,  
having purchased a few of the plants from  
Mr. Whyte before he sold to you, and am  
very well pleased with it. Unlike most of  
the novelties introduced, it has so far shown  
most of the good points claimed for it."

The Herbert is highly spoken of in  
several reports issued by the Central Ex-  
perimental Farm, Ottawa.

**SOUTH**

*The National Nurseryman*, Rochester,  
N.Y., in its issue of October, 1905, says:  
"Keep your eye on the Herbert Raspberry.  
The editor of *The Nurserymen* has known  
it for a number of years, and his experience  
with it has impressed him very favorably."

**WEST**

A. E. Sherrington, of Walkerton (in  
December *Horticulturist*) says that during  
the past season the Herbert has given ex-  
cellent results. The first fruit was picked  
July 17th and the last August 11th. In  
that time 565 ounces were picked from a  
20 ft. row. The quality was fine, and it has  
proved to be a good shipper. (Mr. Sher-  
rington, like Mr. Dunlop, wants more of the  
plants.)

Each 40c.; Dozen \$4; 100, \$25; Half  
Dozen and Half Hundred at Dozen  
and Hundred Prices

**The Renfrew Nurseries Co.**  
LIMITED  
RENFREW, ONT.

J. K. ROCHESTER President W. E. SMALLFIELD Vice-Pres. and Sec.

are fully described in his seventh annual cata-  
log, which is just out. Mr. Vanderburg began  
raising strawberry plants for sale about seven  
years ago because he recognized how difficult  
it was to obtain varieties true to name, because  
there were no growers in Canada supplying the  
leading varieties in quantity. The growth of  
his business during the past few years is suffi-  
cient guarantee that his stock is good and prices  
right.

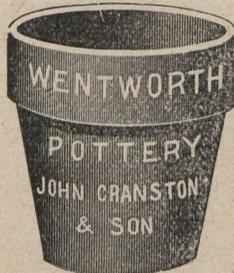
Some 21 years ago Mr. Allen, of the firm W.  
F. Allen, of Maryland, began business in a very  
small way and issued a small four-page cir-  
cular. The new circular for the season of 1906  
gives some idea of the development this firm  
has made. The new catalog includes a full  
description of the leading varieties of straw-  
berries, including Cardinal, Advance, Ches-  
apeake, Gandy, Bederwood, Bubach, and num-  
erous other standard varieties. A fine collec-  
tion of dewberries, raspberries, currants, goose-  
berries, grapes, asparagus, and all the vege-  
table crops are fully described and well illus-  
trated.

**Transportation Rates**

The committee of the Ont. F. G. A. in charge  
of the problem connected with transportation  
took steps at the meeting held at the Rossin  
House, Toronto, on Jan. 16, to obtain better  
transportation facilities for the coming season.  
Delegates to the Dominion Conference, which is  
to be held in Ottawa, will be instructed to  
arrange for deputations to wait on the Railway  
Commission and ask for a reduction in rates on  
apples. It is felt that barrels should be accepted  
at a fixed weight of 150 pounds, and that railways  
should be required to provide cars equal to the  
best now used in America.

The Railway Commission will be requested to  
pass an order compelling the railways to furnish  
shippers of perishable goods information each  
day as to where the car is located, and that a  
time limit of at least 12 miles an hour should  
be enforced regarding the shipping of this com-  
modity. The Dominion Government will be  
approached with the view also of having express  
rates placed in control of the Railway Commis-  
sion, as owing to present arrangements exorbi-  
tant rates are charged by the express companies.

Owing to the profit that can be derived from  
the shipping of cull fruit to Europe during seasons



**WENTWORTH  
POTTERY**

Standard Flower  
Pots, Fern Pan's  
Hanging Baskets.  
Cut Flower Jars  
and all Florists'  
Supplies.

Mail Orders given  
Prompt Attention.

**John Cranston & Son**  
HAMILTON, CANADA

**TWO GREAT DISCOVERIES**

**Nitrogen Culture**

OR NITROGEN COLLECTING BACTERIA

For inoculating the seeds of the Clovers, Alfalfa, Peas,  
Beans, and other Food Bearing varieties. These bacteria  
collect nitrogen from the atmosphere and deposit it in  
the soil.

**THE GREAT SOIL ENRICHER**

Just the thing for Pea, Bean and Alsike Clover growers

Write for Cir-  
cular and Prices

**GRIFFITH & TURNER CO.** 217 N. PACA STREET  
BALTIMORE, Md., U.S.A.

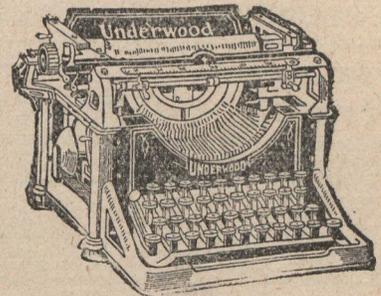
**Special Glass for  
Greenhouses**

GOOD QUALITY, FLAT, EVEN  
THICKNESS AND WELL CUT

— PLATE —  
**MIRROR PLATE  
WIRE GLASS  
PRISMATIC GLASS**

And all other kinds of Glass used for  
building purposes

**Pilkington Brothers**  
MONTREAL Limited TORONTO  
VANCOUVER WINNIPEG



THE UNDERWOOD

**The Underwood**

"Tried and True." Don't take our  
word for it. We are prejudiced.  
We can show you the Underwood,  
how it works and what it will do, but  
for the **Most Convincing Argument**  
you will have to ask any of the 5,500  
users in Canada.

More Underwood Typewriters  
are in use in Canada than all other  
makes Combined.

We carry a large stock of rebuilt  
typewriters at very low prices. Send  
for Catalogue and List.

HEADQUARTERS FOR SUPPLIES

**UNITED TYPEWRITER CO.**  
TORONTO, ONT. LIMITED

of Canada. Dr. Cowles, Ph.D., of Johns Hopkins Uni-  
versity, collaborating with U.S. Dept. of Agriculture,  
has charge of the scientific part of the work.

**KIL-@-SCALE**

**The Great San Jose Scale Destroyer**

No Cooking. Non-Corrosive. No Sediment to Clog  
the Nozzle.

Write for Circular and Prices

**OUR CATALOGUE**  
 opens with a triumphant arch  
 made up of over 40 varieties of vegetables the world has learned to value, and of which we were the original introducers. It has some both new and good for this season, and a vast variety of standard vegetable and flower seed, with intelligent instructions for the cultivating of all of them. Catalogue **FREE**.

**J. J. H. GREGORY & SON**  
 Marblehead, Mass.



**GREGORY'S SEED CATALOGUE**  
 FOR 1906

GET OUR CATALOGUE OF  
**RUBBER STAMPS**  
 AND STENCILS  
 THE SUPERIOR MFG. CO.  
 58 ADELAIDE ST. W. TORONTO.

### Money Makers for Someone

We have some excellent devices, fully covered by Canada patents, that are for sale. Some would make excellent patent-right sellers. Others are just what many of our manufacturers need.

WRITE FOR CATALOGUE

C. B. REECE St. Catharines, Ontario

### Strawberry Plants

Virginia and Chesapeake, winners of \$100 GOLD PRIZE ones; also Cardinal, Commonwealth, North Shore, Oaks Early, New York, Glen Mary, Stevens Champion, and 90 others; best list, good stock, fair prices. Dewberries: Loretta and Austins.

**Seeds** Full line best new and standard old varieties GARDEN, FIELD and FLOWER SEEDS. New 60 Page Catalogue Free. It tells about good plants and seeds and where to get them. Send now to  
 W. F. ALLEN, Dept. 57, SALISBURY, MD.

**QUALITY SEED BULBS**  
 SEND FOR CATALOGUE.  
**ARTHUR T. BODDINGTON**  
 342 West 14th St., New York.

### Better Cheese

At Less Cost By Using  
**WINDSOR SALT.**

Windsor Cheese Salt is especially for cheese making. Dissolves slowly and evenly—improves the flavor—insures a firm, solid, smooth, rich cheese—that will keep.

Because it IS pure, Windsor Cheese Salt will salt more cheese than any other.

Have your dealer send a barrel.

when Ontario growers have a full crop, the railway authorities will be asked for special regulations that will facilitate shipments of low-grade apples for cider purposes to the Old Country in open packages.

Those who intend taking a pleasure trip to Europe will find the new ships, Empress of Britain and Empress of India, belonging to the Canadian Pacific Railway Company, suitable in every particular. These boats have a displacement of 20,000 tons, and a sea speed of 18½ knots. They will be placed on the St. Lawrence-Liverpool route next May and June.

The Southern Pacific Railway Co. has contracted with N. W. Ayer & Son, the greatest advertising house in Philadelphia, to spend \$100,000 in telling the public of the wonderful scenery along their line from Los Angeles, Cal., to Portland, Oregon. This advertising company has an army of photographers, artists and writers at work preparing material for advertising purposes.

Your publication steadily improves. I cannot help noticing it, as I am one of the paper's oldest subscribers. I consider the giving up of the distribution of free plants to the subscribers has been well repaid by the improvement in the magazine.—A. J. Collins, Lis-towel, Ont.

**FERRY'S SEEDS**

Represent the survival of the fittest. We have become the largest seed house in the world because our seeds are better than others. Do you wish to grow the most beautiful flowers and the finest vegetables? Plant the best seeds—Ferry's.

**1906 Seed Annual free to all applicants.**

**D. M. FERRY & CO.,**  
 Windsor, Ont.

### Yes, It Pays to Buy the Best

This applies to Nursery Stock as well as other things. If you intend planting any **Fruit or Ornamental Trees, Shrubs or Vines**, send for our 1906 Catalogue—just out.

**THE DOMINION NURSERIES**

ESTABLISHED 1860

The Smith & Reed Co. St. Catharines, Ont.



### Small Fruit Plants

Gooseberry, Red, White. Currants, Red White, Black. Raspberry, Red, Yellow, Blackberries. Strawberry Plants. Strawberry-Raspberry. Roses. House Plants

**Garden Roots** Asparagus, Mint Rhubarb, etc.

**WM. FLEMING**  
 NURSERYMAN

P.O. Box 54 OWEN SOUND, ONT.

### Classified Advertisements

Advertisements under this heading will be inserted at the rate of ten cents per line, each insertion; minimum charge fifty cents in advance.

**MAN WANTED** who understands growing and handling nursery stock. State age, experience, and wages wanted. Correspondence confidential. **BUCHANAN NURSERY CO.**, St. Charles, Manitoba.

**WHAT INDUCEMENT CAN YOU OFFER** us to locate in your town? We expect to handle a large quantity of apples and will give employment to a number of people. Address **THE CANADIAN APPLE CO.**, care of **THE CANADIAN HORTICULTURIST**, TORONTO.

**FOR SALE CHEAP—ONE OF THE CLEANEST** and best equipped greenhouses in Toronto. Everything in splendid condition, carnations planted, excellent stock of ferns and general stock of plants, 10,000 feet of glass. Apply at once to F. C., care of **THE CANADIAN HORTICULTURIST**.

**WANTED—SUBSCRIPTION CANVASSERS** for **THE CANADIAN HORTICULTURIST** both in cities and in the fruit districts of Canada. Liberal commissions offered. Good men soon put on salary. Write **THE CANADIAN HORTICULTURIST**, Rooms 507-508, Manning Chambers, Toronto, Ont.

### Northern Grown Trees

Apple, Pear, Plum, Cherry, Peach, Nut and Ornamental Trees. Small Fruits, Roses, Shrubs, cheap. Specialties: Wismer's Dessert Apple and Mammoth Prolific Dewberry.

Send for Free Catalogue—it tells the whole story

**J. H. WISMER,** NURSERYMAN  
 PORT ELGIN, ONT.

### GLADIOLUS BULBS

Groff's New Hybrid Seedlings  
 Groff's Pan-American Exhibition Collection

Groff's Special Selections

**CANNAS—Leading Varieties**  
**DAHLIAS—Show and Cactus**  
**PAEONIES—A Large Collection**

WRITE FOR CATALOGUE

**JOHN A. CAMPBELL**  
 SIMCOE, ONTARIO

# Allan Lines of Royal Mail Steamships

Winter Freight Services 1906

H. & A. ALLAN, AGENTS, MONTREAL, QUE.

## LIVERPOOL

ROYAL MAIL SERVICE

From St. John, N. B.

PARISIAN February 3rd  
SICILIAN February 10th  
PRETORIAN February 17th  
NUMIDIAN February 24th  
CORINTHIAN March 3rd

From Halifax, N. S.

February 5th  
February 12th  
February 19th  
February 26th  
March 5th

## GLASGOW

From Portland, Me.

ONTARIAN February 3rd  
HIBERNIAN February 17th  
HUNGARIAN March 3rd

From Boston, Mass.

SIBERIAN February 10th  
SARDINIAN February 24th  
MONGOLIAN March 10th

## HALIFAX TO HAVRE

Pomeranian February 24th

The refrigerator equipment and ventilated compartments of the Allan Line Steamers are unsurpassed for the carriage of butter, cheese, bacon, apples and other perishable cargo.

For further information apply to

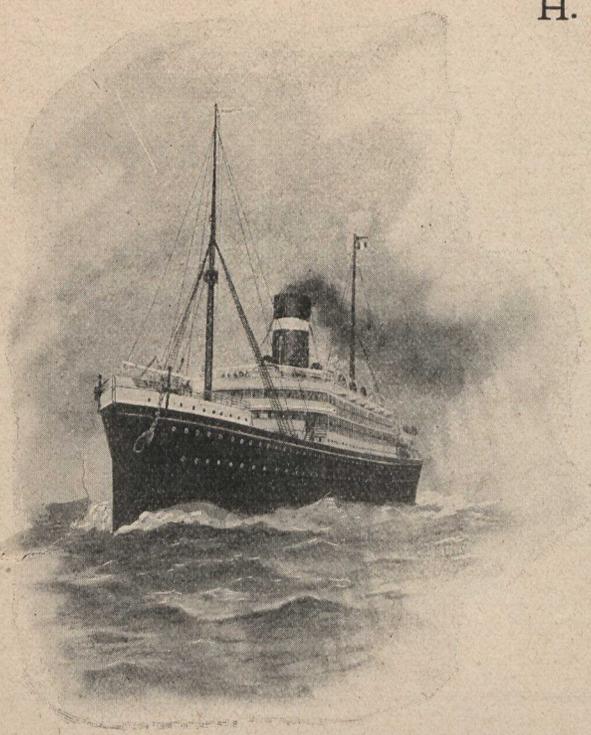
G. E. BUNTING,

Travelling Freight Agent

D. O. WOOD

General Western Freight Agent

77 YONGE STREET, TORONTO.



SUTTON'S GIANT GLOXINIA

We Sell  
**SUTTON'S**  
Cineraria  
Cyclamen  
Gloxinia  
and  
Primula

Our 1906 Catalogue of High-Grade **SEEDS**  
And POULTRY SUPPLIES is now ready.

Write for it to-day

**DUPUY & FERGUSON**  
38 Jacques Cartier Sq., Montreal

## Trees for Spring Planting



Try the Central Nursery when you are wanting Fruits or

ORNAMENTAL TREES

Small Fruit Plants, Hedge Shrubs, Vines or Roses. We ship direct the very best that grow. We have the Largest Supply, Finest Grade we have ever offered. Clean, handsome and will please you. Kindly send a List of Wants for Special Prices on Apple Trees, for early orders, before placing orders elsewhere.

### OUR SPECIALTIES

The Climax Plum, Niagara Peach Trees, Tree Hydrangea, Ryckman Strawberry, D. Perkins' Rose, and new varieties of Potatoes. Send for new Illustrated Priced Catalogue. See Bargain Counter by Mail. Direct dealings give satisfaction. Try Us. 26th year.

**A. G. HULL & SON**  
ST. CATHARINES, ONT.

# THE BEST CANADIAN GROWN TREES

Are those Grown by

Brown Brothers Company, Nurserymen, Limited, P.O. Brown's Nurseries, Ont.

FULL LINE OF  
LEADING SORTS

APPLES  
PLUMS  
CHERRIES  
PEARS  
GRAPES  
CURRANTS  
GOOSEBERRIES  
BLACKBERRIES



The Baby Rambler Rose is the most recent production in the rose line and a perpetual bloomer.

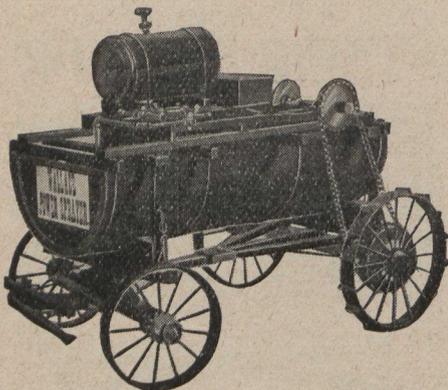
IN ORNAMENTALS  
OUR STOCK IS THE  
LARGEST  
IN CANADA

We Planted Last Year  
Over 750,000 Apples

SEND FOR OUR  
ILLUSTRATED  
CATALOGUES

BROWN'S NURSERIES

ONTARIO



"STANDARD" mounted outfit. Both these and the "DUPLEX" can be mounted low, if so desired.

"My Wallace Power Sprayer (a "Duplex") has always worked well; also maintained abundant pressure for grapes, etc. I use only one pump and find it ample."

Yours sincerely,

HENRY L. ROBERTS,  
Grimsby.

14th Dec., 1905

"We only use one pump for power and have to keep that shut off about half of the time. We have power enough to drive the spray right through a large apple tree while driving past."

COL. W. H. PTOLEMY,  
Stony Creek.

11th Jan., 1906.

## Wallace Power Sprayers

ARE STRICTLY COMPRESSED AIR MACHINES

### Power Costs Absolutely Nothing

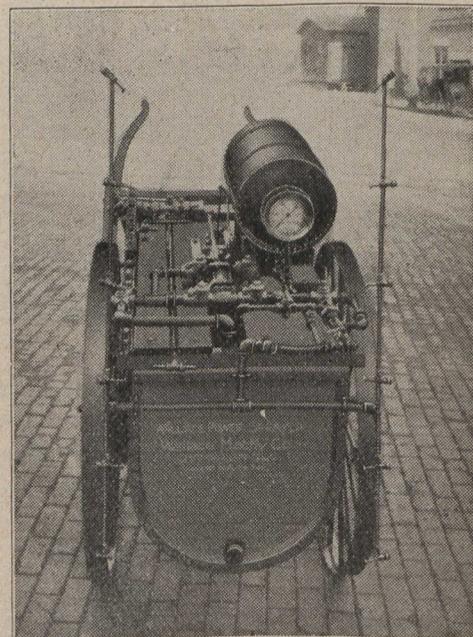
No hand pumping whatever. Are run by 15 and 17 year old Indians; you should be their equal, surely.

Save their cost in a very short time. \$10 to \$20 per day saved on each full day's work.

Sprays thoroughly the largest trees or smallest fruits, potatoes, mustard, etc. Abundant volume to work while standing at a tree. A number are now in use here in Canada.

The Wallace Machines prove their superiority when given the opportunity.

Don't delay your order—hustle it in NOW. We have a heavy demand to supply, yet desire to accommodate all comers. It is possible to be too late to get a machine when wanted.



"JUNIOR" arranged for nursery. It will develop equal pressure with the larger machines. Built to 6 foot track when wanted.

FOR ANY FURTHER INFORMATION WRITE

W. H. BRAND, Representative and Salesman  
(FORMERLY OF GRIMSBY) JORDAN STATION, ONT.

# Canadian Pacific Railway Company

## Atlantic Steamship Service

Arrangements for Summer Business commencing May, 1906

### FREIGHT

**BRISTOL SERVICE**—Fortnightly Sailings

**LONDON SERVICE**—Weekly Sailings

Ships engaged in the Bristol Service are equipped with Refrigerators and improved Fan Ventilation. Those in the London service are now being equipped with Insulated Tween Decks and improved Fan Ventilators.

**LIVERPOOL SERVICE**—Sailing every Saturday morning

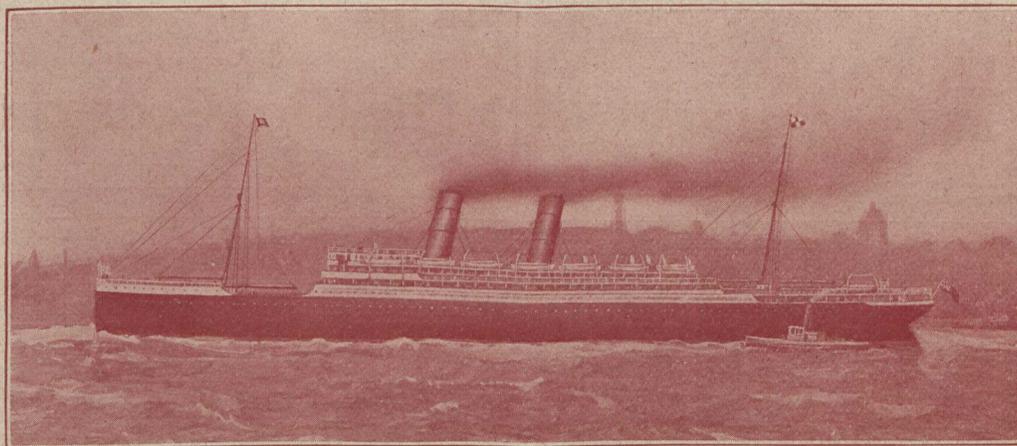
**S. S. EMPRESS OF BRITAIN and EMPRESS OF IRELAND**

Twin Screws 14,500 Tons

Speed 18½ Knots

**S. S. LAKE MANITOBA, LAKE CHAMPLAIN and LAKE ERIE**

These Ships are being equipped with all known devices for carrying fruit and all classes of perishable cargo.



S. S. "EMPRESS OF BRITAIN."

### PASSENGER

**LONDON SERVICE**—Third Class Only to Europe.

**LIVERPOOL SERVICE**

<b>EMPRESS OF BRITAIN and EMPRESS OF IRELAND</b>	} 350 First, 350 Second Cabin, also 1,000 Third Class, inclosed, 2, 3, 4 and 6 berth rooms.
<b>LAKE MANITOBA</b>	
<b>LAKE CHAMPLAIN and LAKE ERIE</b>	} First and Second Cabin, also Third Class in inclosed 2, 4 and 6 berth rooms. } One Class Cabin and Third Class. This One Class Cabin arrangement meets a popular demand. What is now First Cabin on these ships will be devoted to exclusive use of holders of Second Cabin Tickets.

For Information, Rates, Accommodation, etc., apply to any Canadian Pacific Railway Agent, or to

#### REGARDING FREIGHT

E. N. TODD, Ass't Export and Import Freight Agent,  
Toronto, Ont.

W. M. KIRKPATRICK, Export Freight Agent,  
Montreal, Que.

JOHN CORBETT, General Foreign Freight Agent,  
Montreal, Que.

#### REGARDING PASSENGERS

G. McL. BROWN, General Passenger Agent,  
Montreal, Que.

G. A. RINGLAND, Ass't General Passenger Agent.

S. J. SHARP, Western Passenger Agent,  
Toronto, Ont.

# Fruit Growers' Supplies

BLUE VITRIOL  
SULPHUR SAL SODA  
ARSENIC  
PARIS GREEN

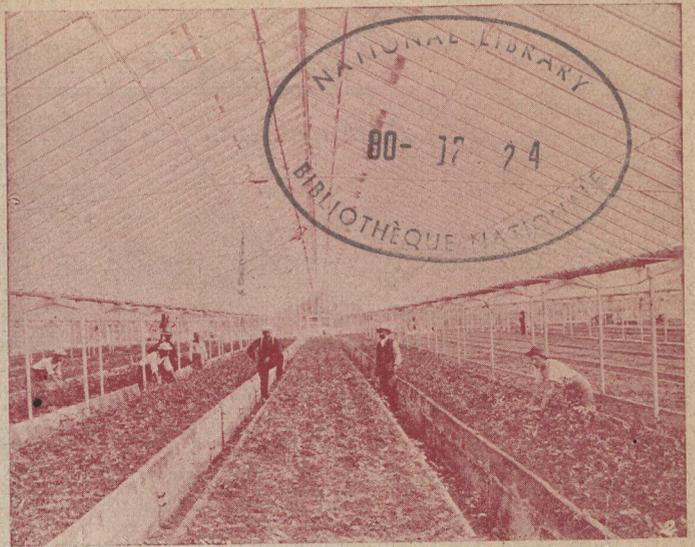
PRUNING SHEARS  
TREE PRUNERS  
STEP LADDERS

GRAPE TWINE Coils or Balls

WRITE YOUR WANTS AND GET PRICES FROM

**F. Hamilton & Co. Limited**  
HARDWARE MERCHANTS  
65 King Street East HAMILTON, ONTARIO

# GREENHOUSES FOR FRUIT AND FLOWERS



Permanent structures, best and cheapest to build. Ventilating, Heating, and all other accessories for Greenhouse equipment.

For Catalogues and particulars, apply to

**The King Construction Co.**  
32 CHURCH STREET, TORONTO

## DONALDSON LINE

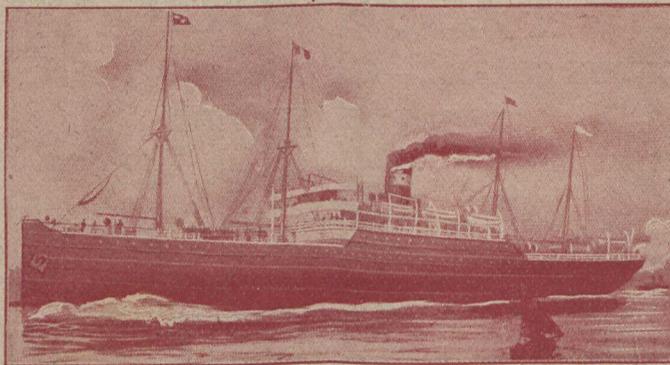
WEEKLY SAILINGS TO  
GLASGOW

From MONTREAL in  
Summer and ST. JOHN,  
N.B., in Winter

THE FAVORITE LINE FOR  
FRUIT AND PERISHABLES

MODERN STEAMERS  
PERFECT VENTILATION

USING SIROCCO FANS  
COLD STORAGE  
REFRIGERATORS



FULLEST INFORMATION GIVEN ON APPLICATION. ASK YOUR RAILWAY AGENT, OR

**The Robert Reford Company, Limited**

110 UNION STATION, TORONTO, ONTARIO

HEAD OFFICE—MONTREAL, QUE.

BRANCHES—ST. JOHN, N.B., and PORTLAND, Me.

## THOMSON LINE

ATLANTIC REFRIGERATOR SERVICE

WEEKLY SAILINGS TO LONDON

From MONTREAL in  
Summer and Portland,  
Me., in Winter

COOL AIR COLD STORAGE  
SIROCCO FANS

For BUTTER, CHEESE  
{BACON and all Perishables  
use only this Line

Also Sailings to NEWCASTLE  
LEITH and ABERDEEN