

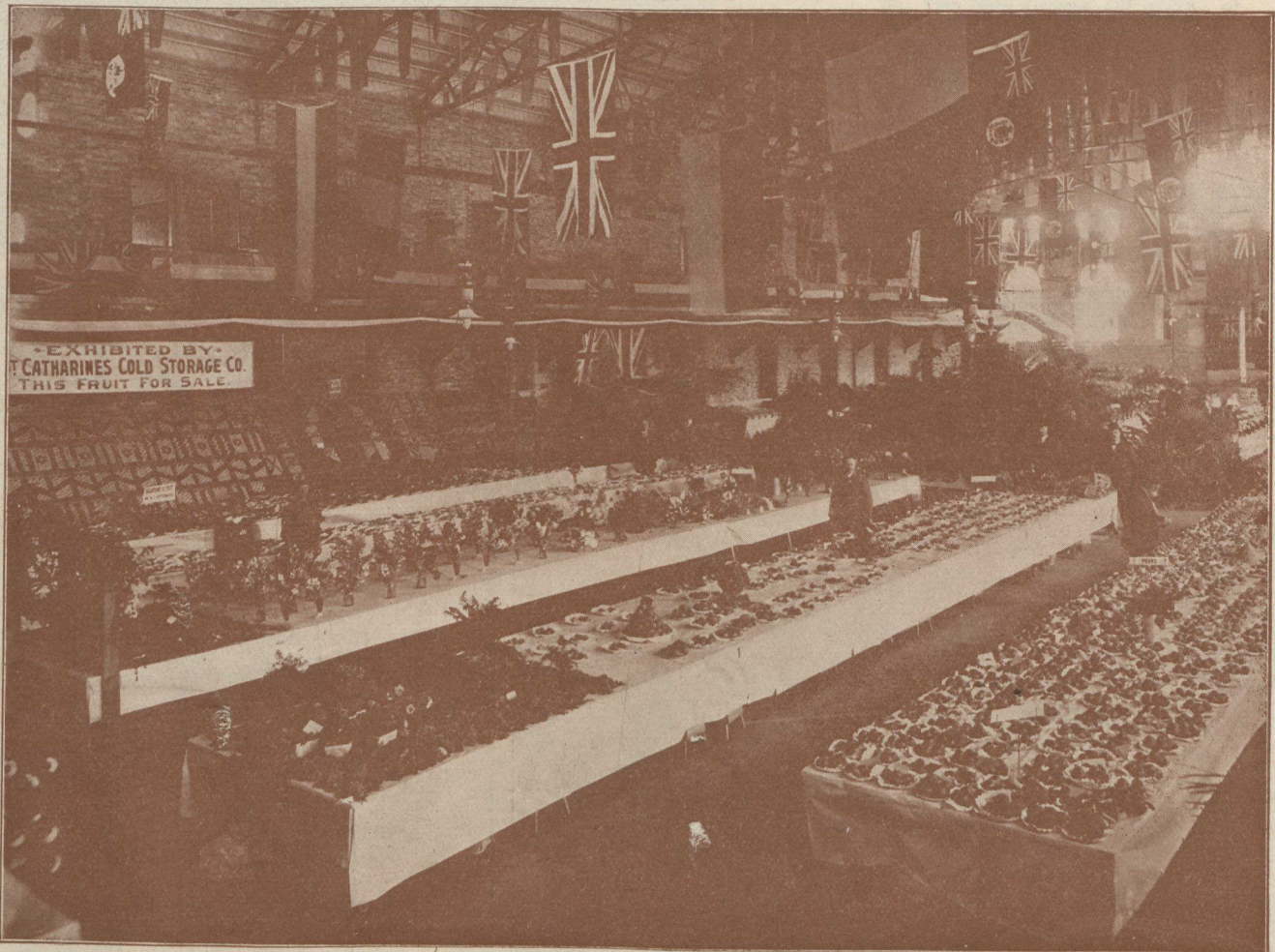
# THE CANADIAN HORTICULTURIST

SEPTEMBER, 1910  
Vol. 33 No. 9

PETERBORO, ONTARIO

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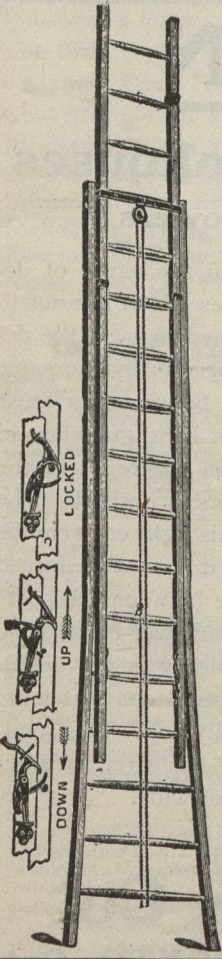
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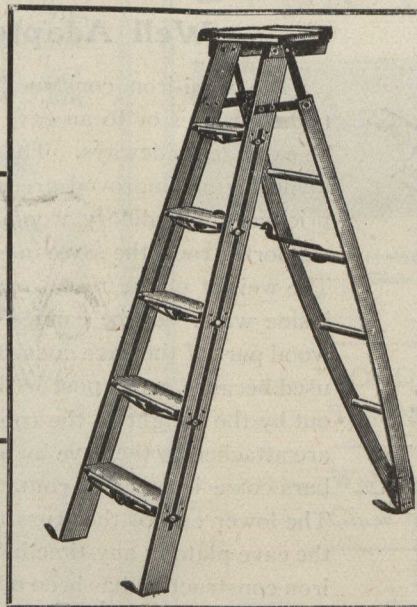
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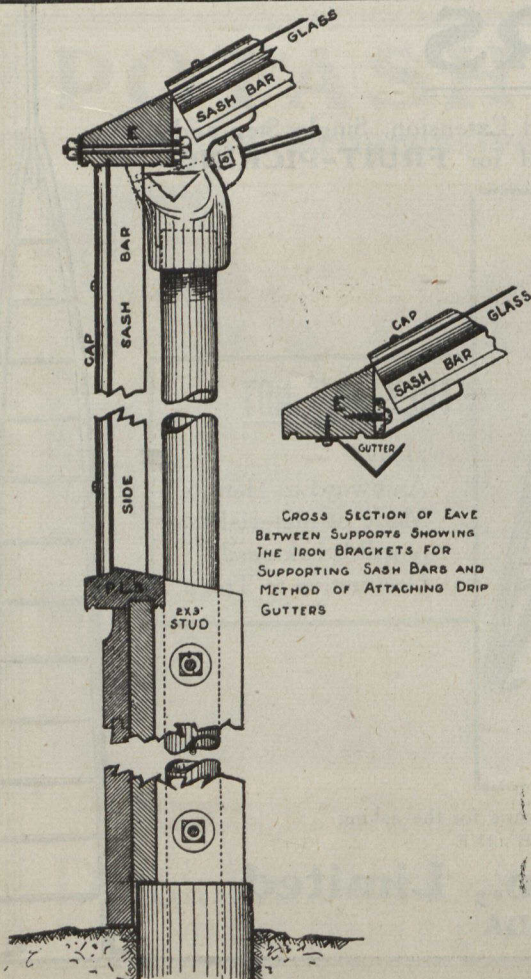
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## The Canadian Horticulturist Contents for September

Niagara District Horticultural Exhibition 1909 . Cover

### Fruits and Fruit Growing

Critical Position of Apple Industry in Ontario  
*J. W. Crow* 203

Root Pruning a Plum Tree . . . *W. S. Blair* 204

Harvesting the Grape Crop . . . *D. K. Falvey* 204

The Vase Method of Training Fruit Trees  
*W. J. L. Hamilton* 205

Renewing Peach Orchard . . . . *A. G. Pettit* 205

Yellows and Little Peach . . . . . 206

### Flower Garden and Lawn

Protection from Frosts . . . . . 207

Floral Notes . . . . . *F. Wise* 207

September Work in the Flower Garden . . . 208

Roses from June until November . . . . . 208

Familiar Autumn Flowers *Major H. J. Snelgrove*

Cuttings for Indoor Propagation . . . *W. Hunt* 210

An Interesting Hybrid . . . . . *H. J. Edwards* 211

### Vegetables and Market Gardening

Gardens of New Ontario . . . . . 212

Ginseng Growing . . . . . *E. A. Russell* 212

Harvesting and Marketing Onions . *Fred Smith* 213

The Root Maggot . . . . . *H. A. Surface* 213

### General

Editorials . . . . . 214

Publisher's Desk . . . . . 215

The Box Apple Package . . . . . *S. W. Fletcher* 215

Canadian Fruit Prospects . . . . . 216

Cold Storage for Fruit . . . . . 217

Florists and The Tariff . . . . . 218

Cold Storage of Apples . . . . . 218

Information for Fruit Shippers . . . . . 220

Ineffective Arrangement . . . . . *A. V. Main* 220

Peaches for England . . . . . *A. C. Biggs* 222

Notes from The Provinces . . . . . 224

### INDEX TO ADVERTISEMENTS.

Bank . . . . . 222

Books . . . . . x

Boxes, Baskets and Barrels . . . . . vi, 219, 222

Cameras . . . . . 221

Classified Advertisements . . . . . x

Cold Storage Rooms . . . . . 222

Commission Merchants . . . . . 218, 219, 221, 222, 223, 225, 226, x

Exhibitions . . . . . iv, 223

Fencing . . . . . 226

Fertilizers . . . . . ii, v

Flower Pots . . . . . 222, 225

Fruit Lands . . . . . x

Furnaces . . . . . 221, viii

Greenhouse Material and Supplies . . . . . iv, v, vi

Growers' Supplies . . . . . iii, 221, 225

Implements and Tools . . . . . vii, v

Insecticides . . . . . 222

Mail Order House . . . . . ix

Nursery Stock . . . . . vi, 216, 217, ix

Pianos . . . . . 220, 225

Roofing Material . . . . . vii

Rubber Stamps and Stencils . . . . . 221

Safes . . . . . vii

Salt . . . . . 220

Schools and Colleges . . . . . 220, 221, 223

Seeds Bulls and Plants . . . . . ii, iii, 216, 217, 221, 222, 226, x

Steamship Companies . . . . . xi

Telephones . . . . . xii

Toilet Preparations and Drugs . . . . . 226

Veterinary Remedies . . . . . 222

Washing Machines . . . . . 220

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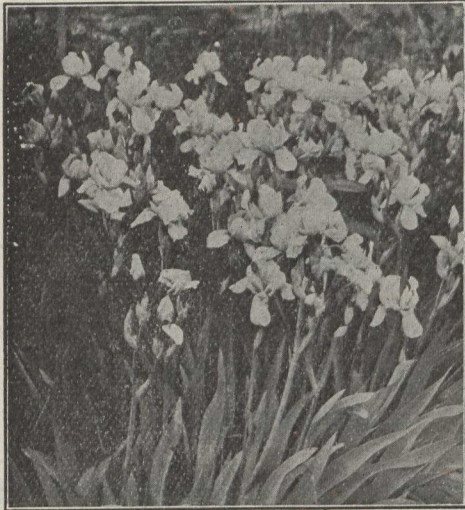
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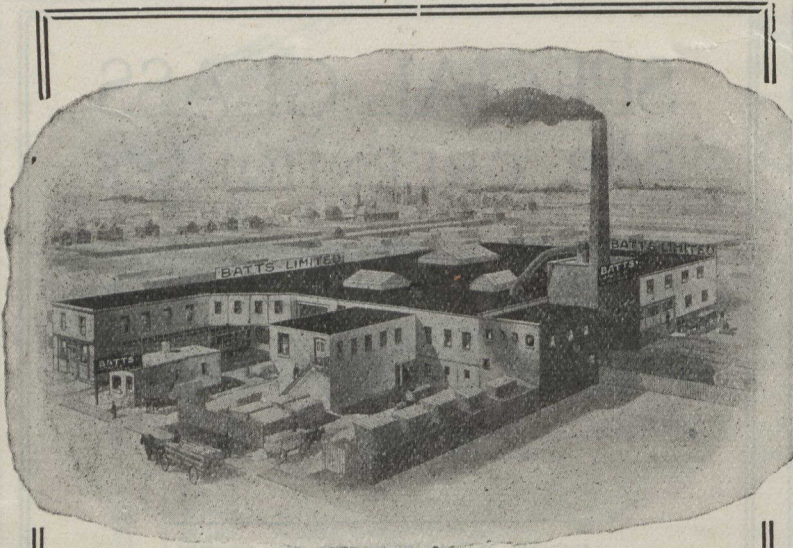
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# The Canadian Horticulturist

Vol. XXXIII

SEPTEMBER, 1910

No. 9

## Critical Position of the Apple Industry in Ontario\*

Prof. J. W. Crow, O.A.C., Guelph, Ont.

SOME fifteen or more years ago the apple industry of Ontario was at its best. Since that time, for various causes, there has been a general decline of interest in apple orcharding, a general increase in the percentage of defective apples, and a general falling off in the quantity of good apples finding their way to market. The industry is coming to life in a few localities, but over Ontario generally orcharding is still on the decline.

The causes which have led in recent years to the decline of the industry are, first, the increase of fungous and insect pests. It is said that until twenty years ago or even later, apple scab and codling worm were not found abundantly in any section of Ontario. Since that time they have spread and multiplied in every section until now these two pests are the most serious with which the apple grower has to contend.

The second great reason is a climatic one, namely, winter injury. Within the last six years Ontario has experienced unusually trying winters. That of 1903-04 was particularly destructive to fruit plantations. Since that date trees have been dying by degrees in all sections of the province, especially the northern ones. Previous to that time there had been little opportunity of determining the hardiness of various varieties and, as a consequence, many varieties which ultimately proved tender were planted in almost all localities.

The third great reason is that in the past we have suffered from an over-supply of buyers. It is not altogether the fact that there have been too many buyers, but rather the fact that there have been too many of the wrong kind.

The trade has had many reputable representatives for many years, but a large proportion of the crop has from year to year passed through the hands of men without capital and, in too many instances, without character. The country has been over-run with men whose business policy consisted very largely of sharp practice. Under the influence of lower prices brought about by such discouraging conditions, farmers have lost interest in apple growing, and we are to-day in a position from which no one

can do so much to deliver us as the honest, reputable apple dealer.

Buyers state that the codling moth has been the worst enemy their business has encountered in the last score of years. The growers state emphatically that the worst enemy they have met with is not the codling moth but the disreputable dealer—the man who operates without capital and who by means of crooked practices endeavors to get more than he pays for or to deliver less than he has sold.

### BUYERS BECOMING GROWERS

It is significant of the condition of the trade in Ontario that many buyers, finding they are no longer able to secure good apples are going themselves into the business of apple growing. It is also to be noticed that a number of buyers have transferred the scene of their

that will encourage the production of good apples. Good apples are always worth the price, but if the production of a high grade article is to be assisted, growers must receive the encouragement of profitable prices.

### THE NORFOLK DISTRICT

The locality in which the most rapid development has taken place in recent years is the county of Norfolk. It is probably correct to say that growers in this district are in advance of those in other districts with respect to their general methods of spraying, pruning, cultivating, grading and packing. The credit for this condition of affairs belongs very largely to Mr. James E. Johnson, of Simcoe, Ont.

Mr. Johnson, as manager of the Norfolk County Fruit Growers' Association, has established a reputation for grading and packing unexcelled in the province. The association handles the largest proportion of the apples grown in the locality and last year packed some 19,000 barrels. The orchards which last year produced this amount of fruit have not, as one might expect, just come into bearing, but have, as a matter of fact, been on the spot for twenty-five years or longer. Most of the orchards in that locality vary in age from thirty to fifty years.

Previous to 1900 no apples worth mentioning were being exported out of the county. Since, however, it has been demonstrated that old orchards, if properly handled, are capable of yielding good crops and paying good returns, considerable interest has been aroused and new planting is going forward at a rapid rate. The bearing orchards consist largely of Baldwin, Spy and Greening and average not more than three acres in extent. The newer plantings vary in size from five to seventy-five acres and consist principally of the same varieties, although a large proportion of earlier varieties, including Alexander, Wealthy, Snow, McIntosh, Blenheim and King are being used.

At present almost all the orchards in the county are being more or less carefully looked after. Cultivation is the rule, as is also thorough spraying. Situated as they are, in the southerly portion of Ontario, there has been very little experienced from winter injury of any

### All Should Read It

I have been much interested in watching the steady growth in practical usefulness of THE CANADIAN HORTICULTURIST. It is worth many times its subscription price to anyone who cultivates even only a small city lot. To the professional as well as to the amateur horticulturist, it is indispensable. Every member of a horticultural society in Ontario should read THE CANADIAN HORTICULTURIST. — R. B. Whyte, President Ontario Horticultural Association.

operations from Ontario to localities on the other side of the line or to the Maritime provinces. At present it is an utter impossibility for an isolated grower in Ontario to dispose of a small quantity of good apples to advantage.

### COOPERATION ADVOCATED

The only method which promises a solution of the difficulty is that of cooperative selling. It is a fact not lightly to be passed over that in almost every locality in Ontario in which the apple industry is on a paying basis there is to be found a growers' cooperative selling organization.

More than any other one thing, we need reputable dealers with good marketing connections to come into Ontario and buy our fruit, paying therefor prices

\*Extracts from an address delivered before the Apple Shippers' Association in Niagara Falls, in August.



kind, and late spring frosts are not prevalent.

"Fungus," or apple scab is, of course, common, but both scab and codling moth are kept under control by spraying. Instances are on record of orchards turning out as high as ninety-three per cent. No. 1 fruit. Choice varieties of No. 1 grade, such as Spy, King, Snow and McIntosh Red, sold last year for \$3.50 a barrel f.o.b.

The counties lying along the north shore of Lake Ontario, between Toronto and Belleville, contain the heaviest apple-producing section of the province. The orchards lie mainly within ten or fifteen miles of Lake Ontario, and the apple district is consequently a strip of country about ten or fifteen miles in width, embracing parts of Ontario, Durham, Northumberland and Hastings counties. The county of Northumberland is said to produce more apples than any other county in the province, and has to-day upwards of six thousand acres planted to apples, half of which are bearing.

There is already a large acreage of orchard through the whole Lake Ontario district and planting is still going forward at a rapid rate. In the western half of the section, the principal varieties in bearing are Baldwin, Spy, King, Greening, Russet and Ben Davis. The latter plantings contain more fall varieties. Stark is replacing Ben Davis to a certain extent. The eastern half of the district produces Ben Davis in a very large quantity, with Spy, Baldwin and Greening next in order. Of late years Ben Davis has fallen somewhat in popular favor and is being replaced by Stark.

#### SOME LARGE ORCHARDS

Orchards vary in size from five to twenty acres. There are not a few plantings of fifty acres or more in extent. At Oshawa, Newcastle and other points successful cooperative associations are in operation, and within the sphere of their immediate influence good care of orchards is the rule. Through the whole district cultivation cannot be said to be the general practice, although the better class of growers are accustomed to thorough tillage. Apple scab is in most seasons more or less common and the codling worm is also prevalent.

Spraying is fairly general through the district but is not so widely nor so intelligently practised as it might be. Late spring frosts are not often serious, but early frosts in fall are not unknown. The picking season is somewhat short and although the general practice through the district is to pack in the orchard, it is frequently found necessary to make use of barns and sheds for the purpose. The Oshawa and Newcastle Fruit Growers' Associations make use of their large packing houses for this purpose, apples being packed in the orchard loosely and without grading.

The Lake Huron district embraces a large area of country lying east and south of Lake Huron, including portions of the counties of Lambton, Huron and Bruce. In Bruce and the northern part of Huron, the apple belt is only a few miles in width, but in the southern part of Huron and in Lambton county the area extends inland for some distance. The climate is more equable than that of either of the districts previously mentioned, and extremes of summer and winter temperature are decidedly uncommon.

It is only in the northern part of the district that winter injury of trees has been noticed, and even here the districts immediately adjoining the lake are almost entirely free. The climate is moister than that of the counties lying to the north of Lake Erie and Lake Ontario and is consequently more favorable to a development of apple scab. Owing to the protective influence of the lake, late spring and early fall frosts are of rare occurrence. The picking season is sufficiently long to permit of apples being handled without danger of severe freezing. Codling worm is common, especially in the southern portions of the district.

#### DECLINE HAS BEEN HEAVY

The decline of orcharding is particularly noticeable through the Lake Huron district. It is only in certain localities that the industry is making progress. One cannot fail to be impressed by the large number of excellent orchards which are receiving little or no care. It is evident that encouragement of some kind is needed. Whether the growers will take the matter into their own hands and establish their own selling organizations, remains to be seen.

To a man possessing business ability and a certain amount of capital, there could be no more promising financial proposition than the leasing of orchards in this district, especially in the vicinity of Goderich, county of Huron. The men who are making most money out of the apple business in Ontario to-day are engaged in this line of activity. Large numbers of orchards of good varieties are simply occupying ground waiting for some enterprising man to take hold of them, and make them pay.

The apricot is as hardy as the peach, and it thrives in the same localities and under the same general cultivation and treatment, but demands rather strong soil.—From Bailey's *Cyclopedia of American Horticulture*.

Some of the best fruit districts in our sunset province, British Columbia, are greatly favored by nature for controlling fruit pests because of gentle rains or in some parts an almost entire absence of that commodity in summer. Bordeaux mixture or arsenate of lead applied in summer may be found in winter showing plainly on the bark and fallen leaves.

## Root Pruning a Plum Tree

Prof. W. S. Blair, Macdonald College, Que.

In mid-summer of 1909 I dug a trench around a plum tree, about four feet from the trunk and about 20 inches deep. I then sowed some commercial fertilizer and filled up the trench. This year the tree has a good crop of fruit. The tree is 12 or 14 years old. It never bore before. Had the cutting of the roots anything to do with starting the tree to bear?—W.E.L., Dundas, Ont.

Any operation which checks growth during midsummer has a tendency toward the development of fruit buds. If a tree is making a strong vegetative growth it is not so liable to develop fruit buds, the energy apparently being directed to this channel. Any injury to the root such as root pruning would tend to check the vegetative or wood growth and as a result the energies of the tree would be directed to the formation of fruit. Nature is bound to reproduce her kind and any form of injury, especially during the summer, throws the whole energy of the plant towards bringing this about.

Late June and early July pruning is often advocated where trees are making much wood growth and not fruiting well. Pruning done at this season has the same tendency as the root pruning referred to, the tree apparently suffering a check from the operation. Early spring pruning on the other hand has a tendency to invigorate the tree for the reason that at this time the normal wood growth is being made and the removal of buds throws the energies of the root into the remaining buds.

Summer pruning to induce fruitfulness should therefore be done just about the time the vegetative growth is ceasing and the terminal bud about ready to form. If done earlier new growth of wood may result.

Trees growing in grass are liable to be thrown into fruiting for the same reason, namely, that during late June and early July the grass not only dries up the soil but removes a large proportion of available food material necessary for growth, checking the tree as a result, following which many fruit buds develop.

## Harvesting the Grape Crop \*

D. K. Falvey, Westfield, N. Y.

The grape crop usually requires from 90 to 100 days from date of blossoming to harvesting. Our harvest usually begins about September 25. A large percentage of the grapes put in baskets are packed in the field in eight pound baskets, drawn to the fruit house and wilted twenty-four hours. The baskets are then refilled when necessary, covered and taken to the car. Many pick in trays and after wilting the grapes pack them in baskets. This method insures a bet-

\*Extract from an address delivered at the last annual meeting of the Ontario Fruit Growers' Association.



ter grade of fruit. Poor, slack packing has done more to hurt the grape market than any other cause. We need more of the golden rule principle put into effect if we expect to realize the maximum profits from our fruit. Honesty is the best principle always.

The car lots are handled by individuals, associations or grape companies.

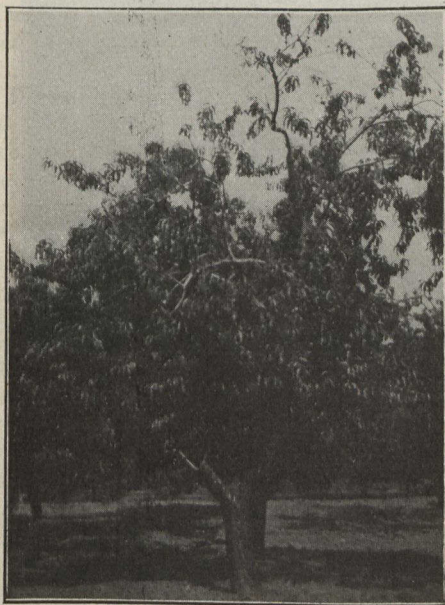
## The Vase Method of Training Fruit Trees

W. J. L. Hamilton, South Salt Spring, B. C.

To train fruit trees to the vase form, treatment must be commenced directly the trees are planted in their stations. I state this advisedly for, in my opinion, no orchardist should plant any but yearling trees, which, once planted, should be cut off close to a bud, at about 30 inches above the ground.

Set out in the fall (on the British Columbia coast) and pruned as above, once growth commences a number of shoots will start from the buds up the stem.

About five of these should be selected, so placed as to form an evenly balanced head, the lowest of them some fifteen inches above the soil, and the top one if possible the top bud. At any rate the tree top should be cut off immediately above the top shoot selected, if the highest bud is unsuitably placed.



Old Fruit Tree Partly Renewed

All other shoots should be rubbed off. This is all that can be done till the next season, when about one-third of the growth of these side shoots should be cut back—always to a bud.

During the following summer this top bud left on the shoot should be permitted to grow and another suitable bud, situated nearer the main stem on each shoot, should also be allowed its full scope. This will give us ten shoots in all, which, being trained properly at equal distances

Many cash buyers buy direct from the grower and sell in car lots. Large companies and associations have representatives in all the large cities who look after the business. Very few grapes are consigned. Grapes picked in trays for wine or unfermented grape juice are delivered from the vineyard to the car or wineries.

all around the tree, will form the framework on which the fruit bearing spurs will be formed.

All other buds should be permitted to grow to say six or seven buds during the summer, and, whilst the shoot is still green and tender, it should be nipped off close to the fourth bud. This, checking growth, tends to produce fruit bearing spurs.

Each season after this, the ten main branches should, in the winter, be cut back, leaving about two thirds of the season's growth, and in each case the terminal bud left should, next summer, be permitted full growth, whilst all others should be pinched back to the fourth bud.

By this method the ten main branches will be closely set all along their length with clusters of fruit bearing spurs, and all redundant growth of shoots, wherever it occurs, should be checked. Otherwise, it will both shade the fruit, and so prevent its full coloring, and will also spoil the form of the tree. This applies to the coast. Further inland more freedom of growth of the side shoots is admissible where the sun is so strong as otherwise to cook the fruit. Whilst young the tree can be tied into the cup or vase shape by means of tarred cord such as "Marlin."

When the growth has attained sufficient proportions a galvanized screw eye should be inserted into each of the ten branches at ten feet from the ground, and a No. 13 galvanized wire should be fastened, one to each eye, the free ends all meeting in the centre of the tree where they all fasten into a galvanized ring, thus all supporting one another. This prevents the snow or wind or weight of fruit breaking down the tree.

All fruit that cannot be reached from the ground can be picked from a plank passed through the centre of the "cup" of branches, just above the wire supports, each end of the board resting on a step ladder or trestle to carry its weight. If the tree had a central stem this would be impossible and the sun would not have the same free access to the fruit to color it. Also the tree would not be so easily sprayed, nor would the fruit be so cheaply thinned or gathered, while the repeated use of the necessary ladder would inevitably damage the tree.

## A Renewed Peach Orchard

A. G. Pettit, Grimsby, Ont.

Old peach orchards can be successfully renewed by cutting off the tops and allowing new growth to take its place. One good limb or two small ones should be left for the first year in order that a crop may be secured from the trees during the period of renovation. The other limbs should be cut off to mere stubs of four or five feet in length from the main trunk.

A few years ago, when I started in to renovate an old peach orchard, my neighbors thought that I was working its ruin. The trees had become much too thick in the tops and had been planted



Old Fruit Tree, Wholly Renewed

too closely for the character of the soil on which they were to grow. They had been planted 17 and 18 feet apart, whereas in real good soil, they should be at least 20 feet or better still 24 feet apart.

Every other tree was dealt with the first year. The next year, the others were subjected to the treatment. By practising the process of renovation in this way, one scarcely notices the difference in the yield since the large limb, or if it be two small limbs, having almost the full benefit of the root system of the tree, will produce largely of fruit of extra fine quality. The second year, the new growth will bear a crop, thus the cropping is continuous.

My old orchard renovated in this way, is to-day as good a producer as my other orchards, the crop being both in quality and quantity as good as that produced on four or five-year-old trees.

The peach trees may be renovated in the manner indicated at any time of the year that it is most convenient. I did the work in late winter and early spring, which perhaps is the most favorable time.



## Yellows and Little Peach

"Weary Worm," Winona

**N**OW is the time that the inspectors in the Niagara District are examining orchards for "Yellows" and "Little Peach." Where proper men have been appointed, in whom the growers have confidence they may be expected to do valuable work.

Both of these diseases are prevalent. During a recent trip through the district, while going over peach orchards in company with experienced growers, we detected several cases of "Yellows" in otherwise flourishing orchards.

From now on it is important that the official inspectors should make at least two thorough inspections of every peach orchard in each township, but even with the utmost care on their part, trees are almost sure to be overlooked. It, therefore, behooves every peach grower to be his own inspector, and he should therefore study the subject thoroughly, so as to be conversant with every symptom of the disease. He should also give every assistance in his power to the inspectors.

It is of vital importance that every peach grower should make a careful examination of their orchards from now till the end of October in order to detect at once the presence of either of these most fatal and infectious diseases. To young and inexperienced growers, of whom nowadays there are many, I would say, if there are any peach trees in your orchards that are sickly and showing symptoms like those about to be described, call in the inspector at once. If he is not available, get the most experienced grower in your locality to look your trees over. If either of these diseases be present, or if there is a strong probability that the trees are infected, destroy them at once, and do not lose any time in doing so.

### DESTROY THE TREES

No remedy has been discovered for these two most fatal diseases, except that of pulling the trees out at once and burning them. If that cannot be done, cut off all the small branches and then load branches, trunk and all upon a dray or low wagon, carefully covering them over with a tarpaulin, and making absolutely certain that these infected branches do not come in contact with the branches of healthy trees.

Prof. Surface, of Pennsylvania State College, and M. B. Waite of Washington, have been engaged for some time conducting a series of experiments with trees showing symptoms of "Yellows," but so far no sufficiently conclusive results have been obtained to base public directions upon them.

"Little Peach," too, lies in the same category, but is even more dangerous than "Yellows," for the reason that replanting cannot take place on infected ground for many years after, whereas a

single season of rest suffices for Yellows.

### CAUSE UNKNOWN

The cause of Peach Yellows has not yet been discovered. It is generally supposed to be a parasitic disease of native origin. Mr. Hale of Connecticut and Georgia, the great peach grower, considers it to be a sap disease caused by abrupt climatic changes. "Little Peach," on the other hand, is usually considered to be a soil disease.

Both of these diseases are strongly contagious. Individual trees or groups of trees affected by them, become centres of infection. These diseases spread from tree to tree by various natural methods, some of which are not fully known to investigators.

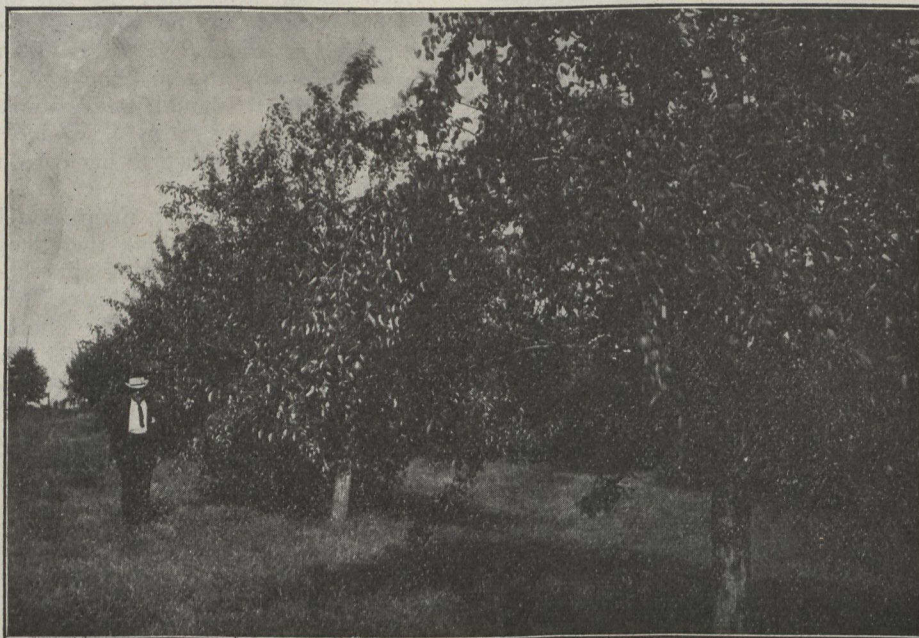
Prof. M. B. Waite, of the U. S. Department of Agriculture, Washington,

Sometimes only a single limb or twig of a tree is affected, nevertheless the tree is doomed and should be taken out instantly upon detection. In trees badly attacked the leaves turn yellow, but sometimes when it attacks very vigorous healthy trees, it at first stimulates both foliage and fruit.

Yellows is sometimes spread through the nurseries by means of buds taken from slightly infected trees, but is seldom spread by means of the pits, as pits affected by this disease will not grow.

### LITTLE PEACH

"Little Peach," in some of its aspects, closely resembles yellows, but is undoubtedly a distinct disease. It is very contagious. An orchard in this locality that had three or four trees affected was allowed to go. Up to the passing of the present Act, the inspectors had no power to compel destruction of the trees. In one year nearly 300 trees were affected,



Flemish Beauty Pear Trees, Near Oka, Que., Loaded with Their Crop of Fruit.

who is a specialist on Yellows, has given out the information that communities where prompt concerted action was taken to destroy all diseased trees, only suffered a loss of from ten to thirty per cent. of their trees, but where slow or delayed action was taken, they suffered a loss of seventy to ninety per cent., and, in extreme cases, 100 per cent.

### DANGER SIGNS

The most reliable symptom of "Yellows" is the premature ripening and red spotting of the fruit. It is upon this that most inspectors rely for detection of the disease. The disease, however, is often present in the orchard for some time before it can be detected upon the fruit. Other symptoms are a bushy or wiry twig growth, the inner leaves near the ground beginning to roll up and turn yellow—hence the name of the disease—and water sprouts starting from the main limbs.

and the entire orchard had to be destroyed.

### SYMPTOMS

The foliage symptoms are similar to Yellows, but the fruit does not ripen prematurely, nor does it spot. It is generally undersized—in bad cases extremely so—hence the name "Little Peach," and late in ripening. Most of the fruit upon the tree is similar in color and appearance to poor specimens of ordinary fruit. It attacks Japanese plums as well as peaches, and is supposed to have been introduced into America with the Japanese plums. The trees do not water sprout nor is a bushy wiry twig present, but the leaves generally roll up and droop as in Yellows.

All peach growers should be on the keen look out for these two fell diseases. They should remember that incessant vigilance is the price of safety.



## Protection from Frosts

In the Pacific Coast States fruit growers have experimented extensively to discover means of protecting their crops from early frosts. Last season, growers in the Rogue River Valley saved many acres of crops valued at \$500 to \$1,000 an acre at a total expenditure of not more than \$15 to \$20 an acre for firing. Adjoining orchards that were not smudged bore no fruit. This has led the United States Department of Agriculture to prepare a helpful bulletin dealing with this subject.

Frost prevention, the bulletin states, requires considerable preparation. It is impossible to get the material for fuel on the ground and have it distributed, especially where the orchards are large, after frost warnings are given out, since these warnings can not be given sufficiently in advance of the time necessary for firing in the orchards. Whatever the material to be used may be, it should be so placed that it may be readily distributed, and a sufficient quantity of it should be on hand in case it may become necessary to fire for a considerable length of time or in case several firings are required during the season. Usually it is never necessary to fire more than once or twice during the season, but during certain seasons it may become necessary to fire four or five times.

The material for building these fires, especially where brush and wood are to be the fuel used, should be piled up along the side of the field and, if necessary, covered to keep it dry so that it will ignite readily. This work may be done at any time during the summer or winter, whenever there is any spare time. Usually there are times when this work can be done without any real loss of time, since the men may not be able to do anything else with profit. At any rate, one should have a plentiful supply of fuel on hand and be sure that it is near by where it can be readily distributed and that it is in a dry condition so that it can be readily ignited. Failures in firing have been known where the grower failed to keep his material in shape for immediate use.

### MATERIALS FOR FUEL

The materials which may be used for fuel depend largely upon local conditions. In some places the use of wood may be entirely out of the question. There is a choice in the use of coal, crude oil, straw, stable manure, or any rubbish which usually accumulates around the farm. In the experiments in the Rogue River Valley, while there was some variety in the matter of fuel, wood was principally used. In some cases good fir and even oak cordwood was used. In other cases old rails from fences which had been torn down, and even prunings from the orchard were used. In the Bartlett pear orchard of Mr. J. G. Gore the crops were saved for two years in succession by the

use of old fence rails. Old rails were also successfully used in saving the crop of a 7-year-old apple orchard. There are usually not enough prunings in any one orchard to be worth anything except for use in starting the fires quickly, for which purpose they are valuable if kept very dry.

### USE SMALL FIRES

Experience has shown that the fires should not be large, since large fires tend to produce convective currents that are apt to bring in cold air; hence the quantity of material for each heap need not be



How Some Fruit Growers are Forced by the Express Companies to Market their Crops

Clarkson is only some sixteen miles from Toronto. Immense quantities of fruit are grown in the section. The express charges on fruit to Toronto, however, are so high that considerable quantities are hauled to the city. Several dollars a load are frequently saved in this way. A saving of nine dollars was made by Mr. Jas. Pengeley, on the load of farm produce here shown. So far the frequent complaints of the fruit growers to the railway commission have not been successful in righting these conditions.

very great. Large fires also might scorch the blossoms. From four to five pieces of cordwood, or its equivalent in any other kind of wood or old rails, are sufficient for a single fire; very often when the low temperature is of short duration all of this material will not be consumed in a single firing.

### CONCLUSIONS

The following conclusions are given in the bulletin:

- (1) Frost injury may be prevented by the use of fires and smudges.
- (2) Wood and coal have proved to be the best fuel.
- (3) When the temperature drops to 20 degrees F., it would seem that fifty fires per acre are necessary. Only half as many are needed when the temperature reaches, say, 25 to 26 degrees F.
- (4) Shavings, chips, or other fine material in paper sacks saturated with crude oil or kerosene have been found best for starting the fires quickly. Kerosene torches for lighting the fires have also proved to be very serviceable as compared with matches.
- (5) Straw and stable manure are valuable for producing dense smudges but are not effective in raising the temperature

in the orchard. The value of the smudge, or dense smoke, is more to protect the trees from the early morning sun where some slight freezing of the blossoms and the fruit has occurred during the night.

(6) The cost of firing with wood and coal, including labor, should not average more than \$3 a night per acre, even where it may be necessary to keep the fires burning five or six hours. In some localities where wood can be had without expense except for the hauling, these figures might be reduced somewhat. However, in localities where wood is rather scarce they would probably be somewhat higher.

## Floral Notes

F. Wise, Peterboro', Ont.

September is the month of the first frost which as a rule continues for only one or two nights near the middle of the month. If a little protection is given to your flower beds and tender plants, they will continue to bloom and thrive until October.

Cannas and dahlias should be labelled and at the end of the month dug up and stored in a dry cellar. "By this I do not mean your furnace cellar, as it is usually too hot." Leave as much soil as possible on your canna roots when digging.

Geraniums, Petunias and fuschias, propagated early this month, will make good flowering plants for your late winter and early spring window decoration.

Roses should have a good thick mulching with green manure from the horse stable before protecting for the winter, which latter must not be done until hard frost.

All winter flowering bulbs for house decoration can be planted as they arrive from the seedsman. Place in pots with lots of drainage. Water thoroughly and place in a dark cellar and bring up as



wanted. A good soil for bulbs of almost any kind is a rich sandy loam.

Celery grows faster in September than at any other period of the year and must be given careful attention. Do not handle it when wet as it causes rust. A good watering with manure water in the trenches once a week, being careful not to touch the foliage, will be very beneficial and improve its quality.

Sow spinach for early spring use and when ground is frozen stiff enough to bear your weight cover with light litter.

## September Work in the Flower Garden

Gather seeds in fine dry weather. Save seed from only the best types of flowers. Place them thinly in shallow boxes and dry them thoroughly in a dry, airy shed or room before storing them for the winter. Store them in the winter in a dry cool room, temperature about 40°. Avoid keeping them near a stove or artificial heat during the winter.

Keep weeds hoed down until frosts set in. Late seeding weeds mean an early spring crop.

Plants of seedling perennials may be planted out in the border early in September, or better still, unless they are strong and vigorous, keep them in the seed box or seed bed all winter and plant them in the early spring, as small seedlings are often destroyed when forking over the border in the early spring.

### TIME TO TRANSPLANT

Seedling pansy plants sown in August should be transplanted into light fairly rich soil in cold frames or nursery plots in September. Select a place where drainage is good and no surface water lies in the winter.

Wallflowers and pentstemons that have not flowered or that are not through flowering can be dug up and potted into good soil. Shade the plants for a few days after potting. Sprinkle them with water every day to prevent wilting. Keep them out of doors as long as possible in fine warm weather, until about the middle of October. A few early light white frosts will not hurt them. Put them in a window away from fire heat, temperature about 50°. Keep the plants well watered at root and sprinkle the foliage with water every two or three days. They will give a lot of bloom during the fall and early winter months.

Canna and dahlia roots should be dug towards the end of the month before severe frosts. Cut the tops down after they have been blackened by first frosts. Dig the roots and place them under the verandah or in a shed away from frost for a week or ten days to dry, before storing in the cellar for winter. Canna roots like a rather warm moist place in winter, temperature about 45° to 50°, as they are of a tropical nature. Dahlia roots keep best in a cool, moderately

On first indication of frost pull all fully developed tomatoes and place them in a dry, shady place when they will ripen more evenly than when placed in the sun. Squash also must be gathered and placed in a dry place.

Strawberries should have their last cultivating this month. If you have an old bed that you wish to fruit another year give it a good fertilizer with blood and bone or some other good fertilizer.

Plant shallots and any other onions required for early spring use.

moist cellar, temperature 35° to 40°. Where a potato will keep well will suit dahlia roots.

Where the clumps of lily of the valley have become too dense and thick they may be transplanted now. They like a fairly light soil and a partially shaded position. All kinds of garden lilies that require transplanting may be moved now, but lily roots should be disturbed as seldom as possible. They are decidedly of the "Let me alone" class of plants and do not like much shifting about.

### ORDER YOUR PLANTS

Order roots of paeonies now for planting early in October. October is the best time to plant paeonies. Dicentras or Bleeding Hearts are best divided and transplanted in October if they require it. *Corydalis nobilis* roots and *corydalis bulbosa* can also be transplanted early in the fall with better results than in the spring.

Chrysanthemums that have been planted in the garden should be dug up at once and potted into good rich soil. They require the same treatment as recommended for wallflower and pentstemons.

A great deal more depends on the laying out of a garden than on what is grown in it.—Miss M. E. Blacklock, Toronto.

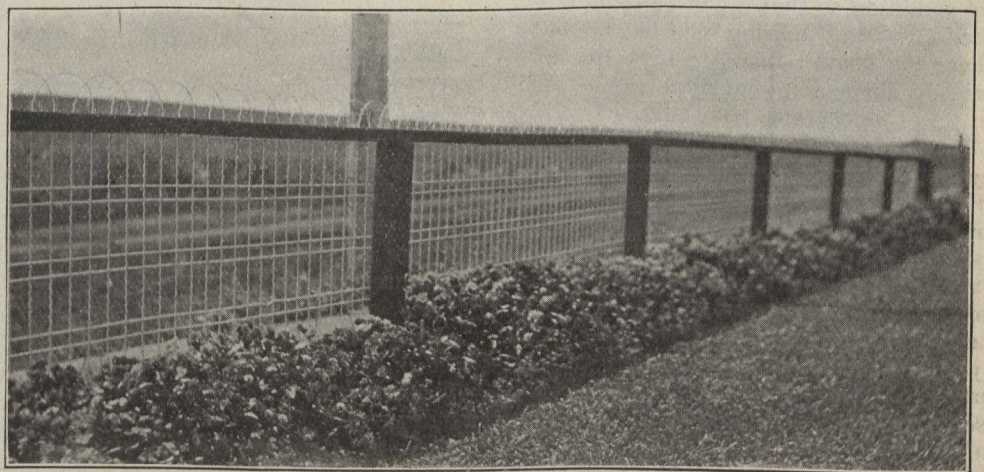
## Roses from June until November

The illustration shown on page 209, is of Mr. W. G. McKendrick's experimental rose garden on Toronto Island, where a foot of soil has been put on top of the ordinary island sand and the roses grown thereon. The garden is about seventy-five feet by fifty feet. It is enclosed on the north with a high board fence, on the east by a boat house and on the west by a residence. Two hundred bushes of hybrid perpetuals are grown, and 400 bushes of hybrid teas which Mr. McKendrick has been experimenting with to see if they will stand the winter in Canada. About 225 varieties in all are grown.

In December the rose shoots are tied together with raffia, and then the soil is hoed up around the rose bush in the same way that potato hills are made, covering the bush up from four to six inches from the ordinary level of the soil. This is all the attention the rose bushes received last year, and not over two per cent. of them died, although they were very weak bushes. On the fences and walls surrounding the rose garden are over 100 climbing roses embracing sixty-five named varieties, that, in another year, should make these garden walls "a thing of beauty."

The white dome shaped articles scattered through the garden are shades to keep the rain and sun off special blooms that the owner wishes to have protected that he may prolong their life.

The experience gained in this rose garden shows that from four to five crops of hybrid tea roses can be secured from each variety from about the end of June until the middle of November. While the roses are not so large as the bloom secured from the hybrid perpetuals, the fact that there is some bloom in the hybrid tea beds all through the summer makes this class of rose most desirable for amateurs.



Pansies Grown in Alberta—a Bed Sixty Feet Long and Wintered without Protection

These pansies bloomed from May until September on the grounds of Mr. D. W. Spice, Lacombe. They were transplanted in May into a bed dug extra deep, and heavily manured. They started to bloom almost at once and were one mass of bloom until the real hard frosts. They were kept well watered and the flowers continually picked.





The Rose Garden of Mr. W. G. McKendrick of Toronto

The soil in this garden is very light, consisting of over fifty per cent. of sand. The owner's idea is that every rose garden should be planted, if possible, where our hot Canadian July and August sun can not bleach out the

flowers after two p.m. This can be best accomplished by putting the rose beds in the neighborhood of large sheltering trees, where they will get all the morning sun, and be protected by the shade of the trees during the afternoon.

## Familiar Autumn Flowers

Major H. J. Snelgrove, M.A., Ph.D.

Let us hope that there are no readers of THE CANADIAN HORTICULTURIST to whom Wordsworth's lines might be applied:

"A primrose by the river's brim  
A yellow primrose was to him  
And it was nothing more."

On the other hand, who of us can truly say:

"To me the meanest flower that blows  
can give  
Thoughts that do often lie too deep for  
tears."

The nasturtium is perhaps the most common of all our favorite annuals. It produces an immense number of flowers with the least trouble for the gardener, and it withstands drought and the intense heat of midsummer better than any other denizen of the garden. This flower is a native of South America, chiefly Peru and Chili. No wonder it is adapted to a hot dry climate. Although the fruit is pickled and finds its way to our dinner tables as an agreeable condiment, the flowers, presenting a glory of color, oftener appear there as an August decoration: golden yellow, pale straw, rich maroon, turning scarlet, intense red, delicate salmon, bright orange, æsthetic old gold, scarlet pink, grey silky purple, peach blow pink, streaky bronze, velvety maroon, ruby-eyed gold, and a long list of combinations of all these colors.

The most remarkable thing about the nasturtium is its prodigality of bloom. From six dozen plants one may gather

fully three hundred flowers each day for a period of two weeks, or about four thousand flowers. Such marvellous results can be obtained only under favorable conditions. The nasturtium wants plenty of sun, plenty of water, and nothing but sandy loam to grow in. It is curious to note that if we want many flowers we must pick each bloom as soon as it appears. If the flowers are allowed to fade on the plant, the latter comes to the conclusion that they are not wanted, and soon stops producing any more. As fast as the flowers are gathered, new ones begin to make their appearance; whereas, if left to themselves, there is a grand display of color for a short season, and then no flowers at all.

The humming bird is passionately fond of the nasturtium and it is amusing to see how the cute little fellow lingers over it, taking repeated sips of honey from flower after flower, apparently loth to leave such a paradise of sweets. There are three divisions of the nasturtium group: the dwarf, which does not climb; the Lobbianum, which runs along the ground, and climbs but little, and the Major, which attains a height of ten feet. Of these three varieties, the dwarf seems to give the best satisfaction, as it is the most prolific bloomer.

### VERBENAS

Our charming garden verbenas, many of them, may be seen growing wild in Illinois and southward. As a rule, the

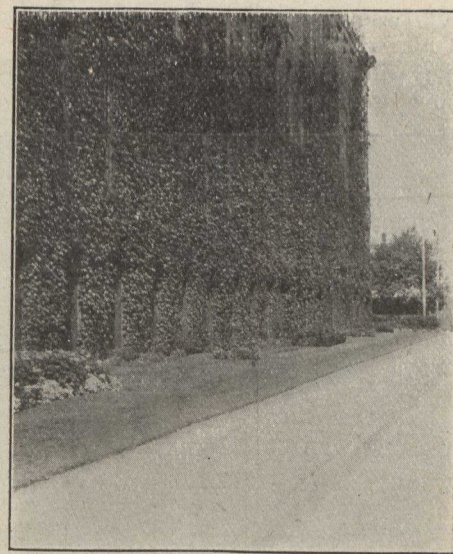
flowers are purple. Other varieties, pink, red and white, come from South America, generally the Argentine Republic.

The beautiful Virgin's Bower or clematis vine, hangs in festoons from the trees and covers the stone walls beside the roads which follow the river courses among the hills of New Hampshire. The flowers are produced in graceful clusters and in the fall the grey plumes of the flowers gone-to-seed, present a hoary appearance, which has suggested the name, "Old Man's Beard." It is hardy and flourishes in Ontario. The base of the vine should be protected from dogs, which are destructive to it. Clematis paniculata is a beautiful species. C. Jackmanni is a violet-blue flowered variety, whose blooms are often two inches broad.

### THE MARIGOLD

The marigold is a garden flower which is not half appreciated. It has an extraordinary power of supply, and from July until late in November, if it is protected from frost, it will continue to bloom with unabating vigor. The orange and yellow are magnificent hues of the royal colors of the Prince of Orange. Like the nasturtium, the marigold requires to be continually picked. In England it is used to flavor soups, and its leaves are also boiled down in fat for use as a healing salve. But the marigold is more beautiful than it is useful, its colors resembling the close-fitting feathers on the neck of a bird. It came originally from South America and Mexico.

In the gaillardia of our gardens we have a cultivated flower which is originally a native of America. It came first from Louisiana, by way of France, and was first taken to Paris by M. Thouin, a professor of agriculture, in 1787. The plant was named after M. Gaillardet, who



A Toronto Factory That is a Thing of Beauty

This factory on King Street West, Toronto, near the subway, is admired by all who see it. It shows that other ugly factory buildings could be improved in the same way. Horticultural Societies can do good work by offering prizes for the best floral effects of this nature.



was a patron of botany. In its single form it is a pretty flower, slightly resembling coreopsis, but is more highly colored than the latter. The hues are varied in reds and deep and pale yellows. There are several double varieties, but this is a case where a beautiful flower gains nothing by the doubling process.

#### A CHEERY FLOWER

Bright-eyed coreopsis is one of the cheeriest of our August garden flowers, and it is distinctly American in character. The perennial variety, *C. lanceolata*, is commonly cultivated by florists.

The dahlia is named from a Swedish botanist, Dahl, a contemporary of the

great botanist, Linnæus. The large conventional double flowers are not quite as beautiful as the single ones.

The zinnia, although a gifted flower, with a range of color comprehending nearly the whole scale, has one palpable fault. It is unmistakably stiff.

The Mourning Bride (*Scabiosa atropurpurea*) has been greatly improved of late. It was a favorite of the old-fashioned garden, but the newer varieties are so much larger and finer than the old, that it would scarcely be recognized as the same flower. The Black Scabiosa—a dark claret maroon color—has a striking effect.

## Secure and Plant Your Cuttings in September

Wm. Hunt, Ontario Agricultural College

**E**ARLY in the month is a good time for amateurs to increase their stock of flowering plants for the window. Cuttings of geraniums, coleus, iresine, salvia, ageratum, petunia and other perennial soft wooded plants are best taken in August, though geranium and petunia cuttings can be taken until early frosts set in. Coleus cuttings especially are best taken before chilly cool weather sets in.

When selecting and making the cutting, select a thrifty, vigorous terminal or side shoot of young growth. The length of the cutting must be determined by the habit of growth very largely, as well as by the texture or substance of the stem of the cutting. The selection of the part for the base of the cutting is most important to ensure success in root production. The base of the cutting should be of medium texture, neither too hard or woody, or too soft and pulpy, about the nature or texture of a young tender carrot. A cutting with a hard woody base develops roots very slowly, if at all, whilst a too soft, pulpy, sappy cutting will often rot or decay at the base without producing roots at all. Like all

other of the apparently minor but no less important details contributing to success in plant culture, much can and must be learned by close observation, experience and practice.

The base of the cutting should be immediately below and close to a node or joint of a main stem, usually where the base of the petiole or leaf stem—or flower stem—joins the main stem. With many plants, such as coleus, for instance, it is not absolutely necessary that the base of the cutting should be just below a node, as many cuttings will throw out roots between the nodes, but roots developed at points between the nodes are not usually as numerous or as strong as those produced at the node or joint.

The base of the cutting should be cut transversely so that the base of the cutting is level or flat. It is a mistaken idea to cut the base of the cutting at an angle as is often done, as this method often induces decay.

The lower leaves on the cutting should be removed, leaving one or two leaves at top of the cutting for transpiration purposes, or in other words, for sap circulation. The amount of leaves or



An Interesting Hybrid

Illustration No. 2. (See Article on Page 211)

foliage depends on the kind of foliage. If the leaves are large, as in the case of the geranium or some begonias, one or two leaves at the top are sufficient to leave. With smaller leaved plants, such as salvia and ageratum, a greater number of leaves can be left on. The smaller the leaves the more can be left on the cutting. The lower leaves should always be cut off close to the main stem. All stipules should be removed as well as all blooms and bloom buds where possible. With cuttings of some plants such as coleus, about one half of the two largest leaves on the cutting may be cut off. A sharp knife is necessary for taking cuttings.

#### MATERIAL AND APPLIANCES

A small shallow box is the best to root cuttings in although they will root very well in large flower pots or seed pans. A box 8 by 10 inches and three inches deep will hold from four to five dozen cuttings of mixed varieties of plants.

The bottom and sides of the box can be of half inch lumber and the ends of inch lumber. Five or six holes, half an inch in diameter, should be bored through the bottom of the box to ensure good drainage. About half an inch of broken flower pot, gravel, coal cinders or lump charcoal should be placed in the box first to keep the drainage clear. Use about an inch of this drainage material in each large flower pot if these are used. Then fill the box or pot with rather coarse, clean sand, pit sand is the best.

If lake or river sand is used see that it is free from sawdust, bits of wood or decayed vegetable matter of any kind. Rinse sand from the roadside can be used if free from impurities. The sand should be well moistened before being put in the box. Fill the box loosely level full, then



Plant Cuttings

First to the left—Coleus cutting, ready for putting in sand. Number two—Rooted Coleus cutting, showing root development at nodes or joints. Number three—Ageratum cutting, showing root development at the nodes or joints. Number four—Rooted *Impatiens Sultani* cutting (Bloom for Ever).



press down firmly with a brick or a small presser made of wood.

**PLANTING THE CUTTINGS**

The box is now ready for the cuttings. Now make a trench or drill with a strip of shingle or thin piece of wood about an inch from the end of the box. The trench should be just wide enough so that the base of the cutting can be inserted easily without bruising the end of the cutting.

Fully one half of the length of the stem of the cutting must be inserted in the sand. Press the sand firmly around each cutting. The cuttings should be from one to two inches apart according to the size and amount of foliage on the cutting. The cuttings are best set in upright in the sand. A black lead pencil can be used to make holes for cuttings instead of the trench if thought best. Water the cuttings well so as to settle the sand well around them.

Place the pot or box in a partially shaded position in a temperature of 60° to 75° until the cuttings are rooted. Under a tree out of doors would be a good place during July or August. A window with an east or north aspect is best at this season of the year. The cuttings should not be fully exposed to the hot sun at any time until rooted. The sand should be kept well moist after, but not soddened with water.

Coleus and ageratum cuttings will root in a week or ten days, oftentimes. Salvia, petunia and geraniums usually take fully double this time. When roots are about an inch or two in length the cuttings should be put into soil in boxes or pots.

A good soil for rooted cuttings can be made by mixing one part sand, one part leaf mould or black soil from the bush, and three parts of enriched loamy soil. Use small two inch pots for this purpose, or put the cuttings about one and a half inches apart into shallow boxes the same as are used for cuttings.

The cuttings need not be potted at once when rooted, as they will keep good in the sand for some time. They must not be given too much water. The sand should be kept only barely moist. I have kept rooted geranium cuttings in sand for several months by keeping them fairly dry at the roots and in a cool temperature of about 50° to 55°.

**THE SOIL TO USE**

Cuttings of many plants will root well in sandy soil. For geranium cuttings I have found a mixture of half sand and half potting soil to be as good in summer as all sand. Many cuttings can also be rooted in water but the roots produced in water are usually very soft and tender and do not endure the transfer from water to soil as well as cuttings rooted in sand or sandy soil.

**LENGTHS OF CUTTINGS**

The following is a table of the approximate lengths of cuttings of several species of window plants. The measure-

ments are given reckoning from the base of the cutting to the terminal point of growth where the stem or petiole of the topmost leaf leaves the main stem, and not from base of cuttings to tips of leaves.

Geranium .....	3	to	5	inches
Salvia .....	2	to	3	„
Coleus .....	2	to	4	„
Petunia .....	2	to	3	„
Ageratum .....	1½	to	3	„
Iresine .....	2	to	4	„

There is probably no feature of floriculture more interesting or fascinating in its character than plant propagation from cuttings or slips, especially when success attends the efforts of the plant lover. At this season of the year, when cuttings of plants suitable for this work can be had in profusion, the experiment should prove both interesting and profitable to all lovers of plants and flowers.

**An Interesting Hybrid**

H. J. Edwards, Winnipeg, Man.

The accompanying two illustrations may be of interest to readers of The Canadian Horticulturist. In 1904 I secured some seeds of Helianthus Cucumerifolius Grandiflorus, Giant Star (golden-yellow flowers with intense black centres), and Helianthus (Sunflower) Primrose Perfection. The seeds which were saved from time to time reproduced true to name, until last year, when I found amongst the Giant Star seedlings a plant which seemed to be much more vigorous than usual, this was carefully transplanted to another part of the garden, and eventually reached a height of about 7 feet. (See illustration No. 1.) In foliage and form of growth it resembled a true Helianthus Cucumerifolius Giant Star, but the flowers showed the markings of the Sunflower (Primrose Perfection).



Illustration No. 1. (See accompanying Article)

The flowers of the hybrid were produced on a long straight stem, similar to those of the Giant Star. The centre was dark, and the base and tips of the petals were a rich orange-yellow, the remainder of the petals being a very pale primrose. Illustration No. 2 shows a bloom of the hybrid and one of Giant Star. The former is the largest bloom. The Giant Star usually grows about three to four feet in height, and the flowers measure from four to five inches in diameter. The flowers of the hybrid were fully nine inches in diameter. As I do not remember ever reading or hearing of such a cross before, it is just possible that some of the readers of The Canadian Horticulturist may be able to give a little light on the subject.



**Geranium Cuttings**

Number one (on left)—Geranium cutting, not prepared. Number two—Geranium cutting, undesirable hard cutting. Number three—Typical Geranium cutting, ready for putting in sand. Number four—Rooted Geranium cutting, ready for potting.



## The Gardens of New Ontario

THAT the Temiskaming District in New Ontario has large horticultural possibilities, is evidenced by the excellent gardens that are to be found in the vicinity of New Liskeard and Englehart. Nearly every farm throughout the clay belt has a kitchen garden, and frequently these are among the first things the farmer points out to the skeptical visitor from the south as a proof of the tremendous possibilities of the district.

Possibly the horticultural conditions of Temiskaming can be better set forth by a reference to one of its successful gardeners—Mr. J. A. Brillinger who when seen by an editorial representative of THE CANADIAN HORTICULTURIST, was taking off his fourth crop. Mr. Brillinger has been in Temiskaming a little over three years. Previously he was a gardener at Stouffville, near Toronto. He is, therefore, in a position to compare New and Old Ontario from a horticultural point of view.

His garden of thirty-three acres is within the corporation of New Liskeard on the north-west shore of Lake Temiskaming. It is about five miles from Haileybury, and the far-famed silver city of Cobalt is ten miles distant. Its proximity to these three urban centres of the north affords Mr. Brillinger an immediate market for practically all his produce. However, he sells as far south as Temagami—seventy-two miles from North Bay, and north to the end of steel at Cochrane.

As a general thing the spring is a little later in New Ontario than in the older parts of the province, with the result that the Old Ontario gardener is on his land perhaps two weeks ahead of those in Temiskaming. But the New Ontario gardener is ready for the market as soon as the Old Ontario one. That is the thing that it is hard for the people in the south to believe. In the clay belt the sun stays on the job nineteen hours a day during part of the summer, and to the uninitiated the growth is astonishing. "As an example of the rapid growth here," said Mr. Brillinger to the writer, "in eighteen days after we sowed the seed our radishes were all pulled and sold. Indeed, everything does well in this northern climate. We have had cabbages since July 1; one head weighed seventeen pounds. Last year we set out fifty thousand plants and forty thousand headed. We usually do a little better than that.

"Cucumbers and cauliflowers do exceptionally well. Frequently we have had a single cauliflower weigh eight or nine pounds. Vegetables invariably give better results here than along the front and our market is the very best.

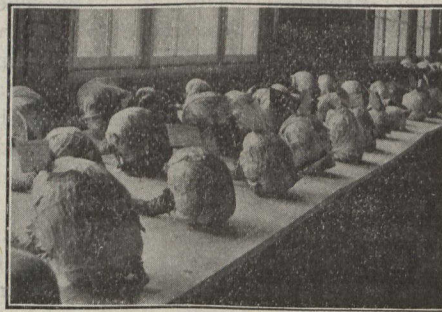
"Another thing in which we have an advantage is the absence of insects. Our radishes mature so rapidly that the radish

maggot has not time to hatch, and the loss due to it is entirely eliminated. We do suffer a good loss through the ravages of the cut worm and this year potato bugs are very plentiful. However, we are free from many insects with which the Old Ontario gardener is continually waging an unprofitable war."

The season is too short to ripen tomatoes, but there is always a large crop of green ones which find a ready and profitable market. Asked if tomatoes matured in Temiskaming; "no, they do not ripen successfully," was the reply. "The growth is so rapid that the nourishment goes to increase the size of the plant rather than to ripening the fruit. Then the nights are cool, and tomatoes need warm nights. But the crop of green tomatoes is enormous."

### CORN UNCERTAIN

The short season makes corn an uncertain crop. However, like tomatoes, it sometimes proves very profitable. It would be a mistake to think that tomatoes never ripen in the north. They frequently do, sometimes practically the entire crop, but always a percentage, which varies according to the season. The same



Cabbage at the Toronto Exhibition

is true of corn. Two years ago Mr. Brillinger had a considerable area in corn which turned out well, netting him something over \$30 to the acre. Last year, however, an early frost destroyed his corn before he had used any, with the result that he lost it all.

### BIG CROPS OF BEANS AND PEAS

The crop of beans and peas in New Ontario is double that in the older parts of the province. "I can hardly explain the reason," the writer was told, "but I believe it is owing to the large percentage of lime in the soil. In one season the peas blossom three times, and we take off as many crops."

Mr. Brillinger does a very extensive business. Each week he averages seven to eight hundred dozen bunches of onions, one thousand dozen bunches of lettuce and radish each, and other vegetables in proportion. He employs six men.

"There is a wonderful future for horticulture in Temiskaming. Small fruits, such as strawberries, raspberries and currants produce abundantly and the quality

is the very best. At fifteen to twenty cents a box a single acre of strawberries will yield \$400 worth of fruit," Mr. Brillinger concluded.

There is little danger of summer frosts. Last year, Mr. Brillinger lost \$1,000 worth of vegetables by a heavy frost on August 23. But when the country becomes cleared and drained and the sun is allowed to reach the ground, these frosts will become unknown.

## Ginseng Growing

E. A. Russell, Brantford, Ont.

The small number of people who grow ginseng in any quantity is remarkable considering the profit that can be made at the prevailing prices and the decided advantages that it possesses over many other crops. About ten years ago a wave of excitement passed over America at the reports of fabulous profits to be made with little labor in growing this plant. A large number of individuals and companies embarked in the business while the wave was at its height, and the dealers in plants and seeds profited at the expense of a host of experimenters who obtained nothing but experience.

Most of those who took up the business with enthusiasm soon lost interest when they found that ginseng required attention and labor as well as any other plant, and especially so when they had to wait for five years before any returns could be obtained. But there are a number of growers in various parts of Canada who, unknown to all but their immediate neighbors, have persevered and are now reaping the profits which can be made by all who follow their example.

### TWO DRAWBACKS

There are two features incidental to the cultivation of ginseng which deter many from planting it or making it a regular crop. One of these is the necessity of providing a shade of some kind, usually in the form of a lath screen erected on posts. This means some outlay of time and money, but the large profits which can be made from a small piece of land more than compensate for this extra initial outlay.

The other objection is that one must wait for so long a time before obtaining a marketable crop. We are accustomed to wait from three to eight years for orchards to come into bearing, but it appears singular to most people that a plant which seldom grows higher than thirty inches should require five or six years to mature. This objection is also counterbalanced by the large returns which can be obtained.

### SOME ADVANTAGES

There are a number of advantages which the ginseng grower has over the fruit-grower or ordinary gardener, and which should appeal especially to those



## Harvesting and Marketing Onions

Fred Smith, Scotland, Ont.

who have only an uncertain amount of spare time that they wish to employ as profitably as possible. One of the chief of these is that the crop is staple and practically imperishable. The dried root may be held indefinitely without loss and the green roots may be left in the ground for another year if the grower has not the time to spare to dig them.

After the second year of growth the plant will do well with almost no attention beyond providing shade, although during the first two years ordinary care must be given to weeding and mulching. There is also very little trouble with the insect pests and blight which make so much work for the fruit-grower. The plant has great vitality and will survive

The method we have followed for over twenty years in harvesting our onions has been to pull them by hand or to run a knife attached to the cultivator under them. The latter is the quickest and easiest way, but the ground has to be clean from weeds.

After loosening the onions from the ground they are pulled together in windrows, usually six rows in one. They are allowed to dry down thoroughly before topping operations begin which is generally within about ten days. The number of days depends upon the condition of the

bottoms. The measurement of the crates was twelve inches high, thirteen wide, and eighteen long. The slats were nailed to three cornered posts, leaving an inch space between each slat. The slats were two and a quarter inches wide by three eighths of an inch thick.

The onions were cut loose with a half round knife attached to the cultivator and allowed to dry for a few days. They were then raked into windrows of twelve rows each, a wooden rake being used. They were then crated with the tops and removed to shelter and allowed to cure for two weeks or more if necessary before being topped.

I find that onions handled in this way are a better color and splendid keepers.

An advantage gained by using the crates is that if bad weather comes and you cannot work outside your help loses no time.

This year my crop will be topped with a topping machine run by a gasoline engine. We have a topper here made by a local man that with a few improvements will be a complete success. It is made with two inch steel rollers six feet long and has six rollers. The rollers run in pairs and are set on a slant. The onions are poured in one end and as they run over the rollers the tops are pulled off and the onion runs out into a bag.

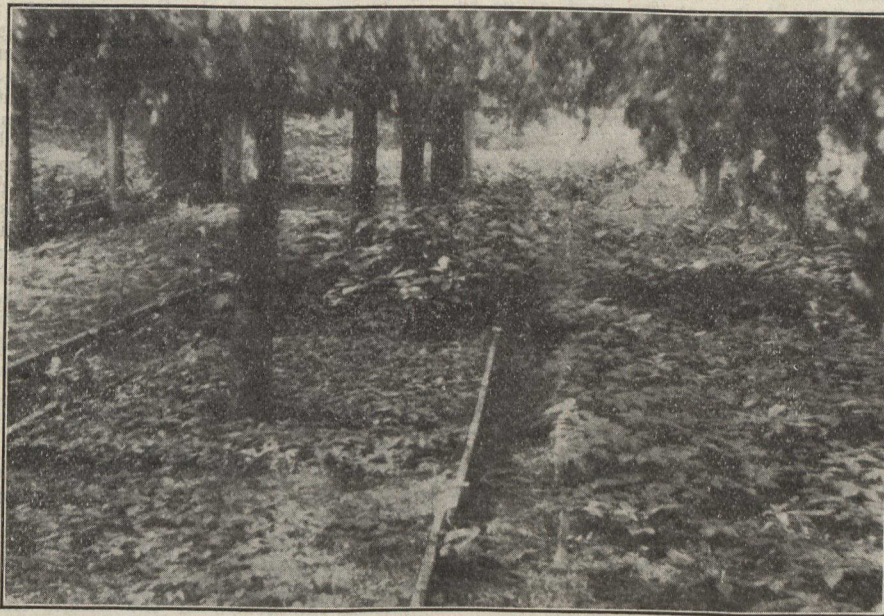
I always sell my onions in carlots. Until last year they were put up in eighty pound sacks. Now the buyers want the seventy-five pound sack, which is the standard sack. I run all my onions over a wooden screen with slats an inch and a half apart which removes all the dirt and pickling onions. Grown or spoiled ones are picked out. I never ship out a car of onions without sorting them over the screen even if they have only been sacked up for only a few days.

### The Root Maggot

Prof. H. A. Surface

The little white maggot that destroys garden truck, especially onions and cauliflower, is a root worm or root maggot, one species attacking the cauliflower and cabbage, and another closely related, injuring the onions.

One way of preventing injury by them is to dust around the plants some air-slaked lime, which has been sprinkled with turpentine or carbolic acid. The adult or mature form of this maggot is a fly, about the size of a house fly. The female lays her eggs at the roots of the plants, and as these hatch the little larvae commence to feed on the outer growing tissue of the roots, and cause the damage by eating this away. The preventive material should be applied before the eggs are laid.



One-year-old and Three-year-old Ginseng Plants in the Garden of Wm. Gilgour, Peterboro' Ont.

neglect which would kill most products of the garden.

The best way for one to commence growing ginseng is to buy one year old roots and seeds during the first and second years; after that enough seed will be produced to continue annual planting. If one has decided to plant extensively the proper way is to set aside a piece of land for the purpose and to keep this end in view while developing the garden. An acre of land divided into five plots of equal size, to be planted annually in rotation, would provide room for a regular annual crop of 15,600 roots which should yield over 900 pounds of dried root worth at present prices, \$6,750.00. After the the first plot is cropped it should be replanted with young roots. This would be an exceptionally large garden, but the same principle of rotation applies for a garden of any size.

Aside from the profitableness of the plant it is a very interesting one to grow and presents many opportunities for improvement by methods of selection which make it attractive to the amateur.

crop when it is pulled. If the tops went down naturally, without being rolled, they will be ready to top within that time.

Some use shears to top with, but I prefer an old case knife with a blade four inches long with a rounded, blunt end to prevent hacking of the fingers. Onions topped in the forenoon are better sacked up in the afternoon when they are dry and then removed to shelter.

Onions should never be picked up wet under any circumstances as it makes them dirty and is apt to discolor them. Years ago it was the practice to allow the onions to remain on the ground for several days after topping to cure in the sun which is a great mistake. The sun not only makes them strong but badly discolors them. The side exposed most will turn green which is very undesirable from a market standpoint.

#### ANOTHER METHOD

In 1909 I followed a different method, and in my judgment a far better one. In the winter of 1909 I made a thousand bushel crates with slatted sides, ends and



# The Canadian Horticulturist

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H. BRONSON COWAN, Managing Director

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### CIRCULATION STATEMENT.

The following is a sworn statement of the net paid circulation of The Canadian Horticulturist for the year ending with December, 1909. The figures given are exclusive of samples and spoiled copies, and of papers sent to advertisers. Most months, including the sample copies, from 11,000 to 12,000 copies of The Canadian Horticulturist are mailed to people known to be interested in the growing of fruits, flowers or vegetables.

January, 1909.....	9,456	January, 1910.....	8,925
February, 1909.....	9,310	February, 1910.....	8,967
March, 1909.....	9,405	March, 1910.....	9,178
April, 1909.....	9,482	April, 1910.....	9,410
May, 1909.....	9,172	May, 1910.....	9,505
June, 1909.....	8,891	June, 1910.....	9,723
July, 1909.....	8,447	July, 1910.....	9,300
August, 1909.....	8,570	August, 1910.....	8,832
September, 1909.....	8,605		
October, 1909.....	8,675		
November, 1909.....	8,750		
December, 1909.....	8,873		
Total for the year.....	107,638		

Average each issue in 1907, 6,627  
" " " " 1908, 8,695  
" " " " 1909, 8,970

Sworn detailed statements will be mailed upon application.

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## EDITORIAL

### BRITISH COLUMBIA PESTS

The very suggestion by an eastern grower or paper, that an insect pest of any serious nature exists in British Columbia is sufficient to lead the advocates of the fruit interests of that province to work over time denying the thought and casting aspersions upon the originator. While we admire this indication of provincial pride, we are not blind to the fact that unless precautions are taken it will ultimately prove an injury to that province.

Even when growers know that a pest is becoming established it frequently is only too difficult to induce them to take the necessary measures to stamp it out or control its ravages. It is easy for most of us to believe what we would like to know is true. The continual claims, therefore, that serious insect and fungus pests do not exist in British Columbia are apt to lull the growers of that province into a false sense of security and lead them to neglect to take the ordinary precautions that it is essential that they should if their interests are to be properly safeguarded.

In our May issue we ventured to make the statement that some parts of British Columbia still grow apples unmolested by the Codling Moth. The June issue of The Fruit Magazine, published at Vancouver, took exception to the statement and expressed doubt as to whether or not the editor of THE CANADIAN HORTICULTURIST could find a Codling Moth in any part of British Columbia. In the August issue of the same magazine appears an article entitled "Codling Moth In British Columbia". This article admits that the Codling Moth has been discovered in two spots in that province and warns the growers that the fact must be bravely faced. The public is asked to cooperate with the provincial officials in stamping out the pest.

In 1890 the late Dr. Fletcher, Dominion Entomologist discovered the Codling Moth at Kamloops, Kaslo and Nelson. In 1908 in one district one hundred and sixty orchards were condemned for Codling Moth.

Now that the British Columbia authorities admit the presence of the pest and have undertaken to stamp it out, prospects of its being held under control are brighter than they were when growers were being led to believe that Codling Moth was unknown in the province.

### MODIFICATIONS REQUIRED

Serious hardship will result to the interests of the professional florists of Canada unless modifications are made in the regulations of the Dominion government pertaining to the Destructive Insects and Pests Act. The Act is admirably conceived but in drafting it, it is clear that the government had in mind mainly if not entirely, conditions as they pertain to the large fruit interests of the country.

The conditions under which stock is handled and grown by the large nurseries, and by the fruit growers of the country in the open are utterly different from those under which the professional florist handles his greenhouse stock. The great expense involved in the handling of such stock as the florist grows makes it practically impossible for such pests as the Gipsy and Brown-tail moths to gain a foothold in this country on such stock.

At present much of the stock that the

florists have been in the habit of importing at periods that will enable them to market their products for the early markets cannot be imported any longer unless the Act is amended. The omission of the part of Montreal as a port of entry is a second decided weakness in the regulations. Now that the objections of the florists to the provisions of the Act have been made known to the government, we may reasonably expect that the government will find some means of improving the regulations in these particulars.

### COMMENDABLE WORK

The statement made by Dr. C. Gordon Hewitt, Dominion Entomologist, at the Convention of the Canadian Horticultural Association in St. Catharines last month, that during the past two years the Dominion government has inspected some four million plants during their importation into Canada, thereby discovering five hundred and nine nests of the Brown-tail and Gipsy Moths shows that good work is being done by the Dominion government to prevent the establishment of these pests in Canada. The state of Massachusetts alone has spent over a million dollars fighting these pests.

The sums that have been expended by the national government of the United States as well as by the New England states during the past few years fighting these pests are enormous. They amount to many millions of dollars. Canadian fruit growers, therefore, will do well to support the Dominion government in its work. It is fortunate that the Dominion Entomologist, Dr. Hewitt appreciates the importance of the position and that he is taking every precaution to guard our interests.

### THE SMOKE NUISANCE

There are sections in many of our Canadian towns and cities in which the lives of many of the citizens are made miserable owing to the thick palls of smoke that factories and locomotives are permitted to emit for many hours every day. This smoke affects the health of the people living in its vicinity, it discolors adjoining buildings, destroys foliage and invades homes, when windows or doors happen to be left open, thereby destroying furniture. The nuisance can be and should be abolished or at least greatly reduced.

After suffering from the smoke nuisance for many years residents in various towns and cities of the United States were finally led to grapple with the problem. Investigations were conducted which show that by the installation of proper machinery and care in firing the engines the smoke nuisance can be abolished. The American Civic Association took up the question some years ago and forced it to be an issue in a number of cities.

Such cities as New York, Philadelphia, Springfield, Mass., Cleveland, Ohio, and Pittsburg, Pa., have practically abolished the smoke nuisance. In many cases the cities were forced to take action against the railway companies and manufacturing establishments that persisted in defying their ordinances. In most cases only a few prosecutions were required to convince offenders of the need for improvement. In Cleveland, Ohio, it is estimated that 50% of the smoke nuisance has been abated since this question has been dealt with. In New York city one company which broke the smoke by-law was fined \$500.

Toronto has already taken action. Property Commissioner R. C. Harris reports that the efforts of the city have accomplished a great deal of good. People who formerly treated the enactment lightly are



now making sincere efforts to comply with its provision.

The horticultural organizations in our different Canadian cities, particularly in Ontario where they are well organized and strong, might well grapple with this question as similar organizations have in the United States. They will find much helpful information in a bulletin issued by the American Civic Association in March, 1908.

The death of the late H. S. Peart has imposed upon the provincial government the necessity of appointing at an early date a director of the experimental station at Jordan Harbor. It is essential that this station shall become one of the foremost experiment stations on the continent. This means that the director must be a man of the highest possible qualifications. The provincial government must be prepared to spend a larger sum than it has hitherto for the services of the director. The salary allowed should be at least \$2,000 and a free house. Nothing less will be likely to attract a man competent to fill the position with credit to the section and to the province.

Dairy Commissioner Ruddick, who is at the head of the Fruit Division of the Dominion government, is to be commended upon the efforts he is making to develop the trade in tender fruits between Canada and Great Britain. The sums that will be involved in the prosecution of experiments of this nature are trifling compared with the results we may reasonably expect will be obtained. The experiments, therefore, should be made as complete and thorough as possible.

## PUBLISHERS' DESK

### Friendly Criticism

Friends of THE CANADIAN HORTICULTURIST occasionally suggest that it would be a great improvement if we would print THE CANADIAN HORTICULTURIST on high grade coated paper, if we would use more and larger illustrations and if we would enlarge the different departments of the paper. In this connection they point out that THE CANADIAN HORTICULTURIST is smaller than some of the leading United States and British horticultural publications.

We would remind our readers that Canada is but a young country sparsely settled. THE CANADIAN HORTICULTURIST is devoted largely to the fruit interests of the Dominion. The principal fruit districts in Canada are located in Nova Scotia, the counties adjoining the lakes in Ontario and in British Columbia. They could not well be more widely scattered. This makes it expensive to increase our circulation and often difficult to hold it.

Our country being small the number of advertisers is limited. These conditions make it impossible for us to publish as large or as high class a paper as can be issued in the United States where there are over 80,000,000 people. We feel, however, that we can safely say that THE CANADIAN HORTICULTURIST is a better publication, considering its opportunities and possibilities, than most, if not all of the but few publications with which it is sometimes compared unfavorably. Canada is growing rapidly and if our readers will but stand by us loyally THE CANADIAN HORTICULTURIST within a few years will more than hold its own with any similar publication in the world.

## The Box Apple Package--Its Uses and Limitations in the East\*

Dr. S. W. Fletcher, Director of Virginia Agricultural Experiment Station

THE Larrel has been the standard and almost the only package for winter apples for over half a century. It has several distinct advantages. Owing to its rounded sides, it can be packed easily and rapidly, even by the unskilled; and, for the same reason, it can be handled more easily by rolling than any other package of equal bulk. Until within ten years it has also been a cheap package. Now, barrels cost most fruit growers from thirty to forty cents instead of fifteen to thirty cents as formerly. The apple barrel is an eastern package, and is made of hardwood, usually of elm and oak, which are more common in the east than in the west.

### HISTORY OF THE BOX PACKAGE

The apple box, on the other hand, is a western package. Open bushel boxes have long been used in the east for shipping vegetables and early apples. The closed box has also been used somewhat, by a few individuals, notably by Mr. L. Woolverton, of Grimsby, Ont., who was exporting wrapped apples in bushel boxes, 128 apples to the box, fifteen years ago.

But the real introduction of the apple box as a commercial package for winter apples is coincident with the rise of commercial apple growing in the Pacific coast states, within the past fifteen years. The prototype of the apple box is the orange box. The Pacific coast apple growers face conditions that have made the box, rather than the barrel, their almost exclusive apple package. The most important condition is their great distance from markets, and consequent high transportation charges. It costs 50 cents to raise a bushel of Hood River apples, and 50 cents more to lay it down in New York. This makes it imperative to economize space and the box packs tighter in a car than the barrel, especially the old fashioned barrel with a three or four inch bilge.

But the most important effect of the great distances and high rates has been on the grading of the fruit. There would be no profit in paying such high transportation charges on inferior fruit. Only fruit that will sell at the top of the market will justify the outlay. This means carefully graded fruit, fully as much as high quality fruit. The box package enforces careful grading. The shiftless "shuffle pack," is still used in some parts of the west, but in most cases apples packed in boxes are placed tier upon tier. This is expensive, but the cost of grading is small compared with the cost of getting the fruit to market, and the returns usually justify the outlay. The points to be noted are that great distance from markets and high transportation charges have forced the western fruit grower to grade more carefully than his eastern competitor; and that the bushel box, in which uniformity is imperative, has thus become the distinctive western package.

Another condition that has had some influence is the fact that the soft woods predominate in the west, and the hardwoods in the east. The barrel is a hardwood package; the box is a softwood package. Some boxes are now being made in the east from poplar and yellow pine, but they are decidedly inferior to the fir, spruce, and white pine boxes of the west; not only because they are heavier and more rigid, but also because they come in narrower widths. The bushel apple box is the most logical and

fitting package that the west could develop out of the material at hand. In view of the rapid reduction of our natural forests, we must soon expect to face the necessity of forest tree culture. The soft woods, being more rapid in growth, will become more common and cheaper than the hardwoods, hence the barrel will tend to become more and more costly, as compared with the box.

### HIGH PRICES FOR WESTERN FRUIT

Eastern apple growers have been more or less nettled, and their ambition stimulated, by the high prices received for western box fruit in recent years. It is rather galling to eastern men to see a bushel box of Washington or British Columbia apples selling for the same price as his own three-bushel barrel. It relieves him somewhat to dilate upon the superior "quality" and "flavor" of his own fruit.

### GRADING AND PACKING

The fundamental difference between the two types of packages is here. The box encourages and almost enforces, honest and uniform grading, while the barrel permits carelessness in this respect. The cost of packing is also an item. Where a very large quantity of fruit is packed by specially trained men, it costs little if any more for labor to pack in boxes than in barrels. But the small grower, and especially one who has been accustomed to the barrel pack, will find that it costs from one third to one half more to pack in boxes than in barrels.

Small, or otherwise inferior fruit seldom if ever yields as high returns in the box pack as in the barrel pack. Only the large sizes go well in boxes. It is a question for each grower to decide whether he can get more by sorting out his fancy and No. 1 stock for boxing and selling the smaller fruit in barrels, than to sell all in barrels as No. 1's.

Another point to be considered is the shape of the fruit. It is almost imperative that box fruit should be quite regular in shape. Lop-sided and mis-shapen fruit, like the York, especially from young trees, would not pack well in boxes.

No one has ever succeeded with the box pack using common stock. Only fancy and No. 1 fruit of the best quality has paid in boxes. By intensive methods and especially by thinning the young fruit on the trees, many of the best western growers have been able to produce fruit ninety-five per cent. of which is fancy. Practically all of the Hood River fruit is box fruit. I doubt if, on an average, thirty per cent. of the apple crop of Ontario, or any other part of the west, is box or fancy fruit. This point must be kept emphatically in mind when the suggestion is made that the box should become the exclusive apple package of the east, as it is now in the west.

### QUALITY OF FRUIT

Of far less importance than the grade of the fruit in the package, in respect to the question before us, is its quality. It is a fact, however, that the box fruit that has commanded the highest prices is mostly of varieties of high quality, Winesap, Spitzenburg, Newtown. But other varieties, even some of very indifferent quality, have been sold in the box package to great advantage, showing that the style of package and the grade of fruit, rather than its flavor, are the deciding factors. However, the general experience has been that the better the quality of the fruit, the more apt it is to pay in the box pack. If varieties of inferior quality pay in the box pack, it is be-

\*Extract from an address delivered at the meeting of the American Pomological Society last September.



cause the style of package and the grading outweigh the deficiency in quality.

#### EXPERIENCE IN THE EAST

Having in mind the essential difference between the box and the barrel trade, it does not seem strange that most of the attempts to use the box in the east have not resulted satisfactorily. It is probably near the truth to say that eight out of every ten trials of the apple box in the east have been unsuccessful. A notable example is an experiment by the Field Pomologist of the United States Department of Agriculture, Mr. W. A. Taylor, several years ago. He sent abroad during two seasons, eight carloads of carefully graded boxed Baldwin, York and Newton, but with indifferent results as compared with barrels. There are many possible reasons for these failures.

#### CUSTOM

Custom is hard to change and the box package is an innovation in the east. As a rule, eastern buyers and grocers do not look with favor upon the box, partly because the profits in repacking and selling a barrel of indifferently packed apples are apt to be greater than in handling three well packed boxes. If the producer could deal direct with the consumer, it would be different; there is no doubt but that a majority of the consumers prefer the box, or a smaller package, if the fruit did not cost much more.

#### THE MARKET

A good deal depends upon what a certain market prefers, in the matter of fruit packages, as well as in fruit varieties. In the west there is special necessity for caution in this respect. Some buyers want their

fruit in boxes, and others prefer barrels, according to the market they expect to reach. The grower who ships should be equally wise.

#### POOR PACKING AND GRADING

More failures arise from this cause than from any other. The art of packing boxes is not acquired in an hour. It is work for specially trained men, not for the average farm help. In this respect it differs materially from barrel packing, which may be quite well done by ordinary help. Moreover, the habits of several generations of

men who have packed in barrels, using "facers", and "fillers", have descended to the fruit growers of to-day and many of them find it extremely difficult to keep the smaller, poorly colored, or slightly imperfect specimens from gravitating to the bottom of the box. It will take a generation or two, perhaps, to breed out that habit. The western man deserves no credit for being more honest in this respect, for, as has been pointed out, honesty was not merely the best policy for him, but the only policy that would pay freight rates.

## Canadian Fruit Prospects

With the exception of British Columbia the crop of fruit in Canada this year will be unusually light. The crop in a large part of the United States is also light as well as in Great Britain and Europe. The shortage is world wide and prices for fruit should rule high.

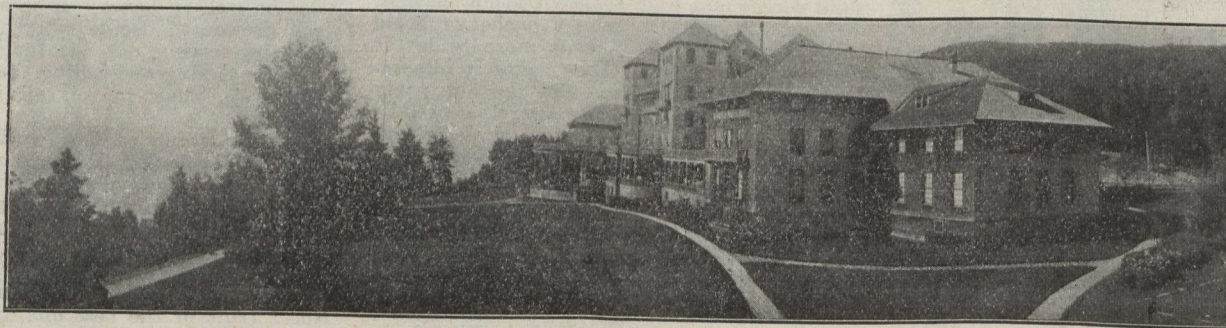
British Columbia will harvest probably the largest crop in the history of the province. The Deputy Minister of Agriculture, W. E. Scott, is apprehensive that there will be serious loss owing to the scarcity of labor. Orchard laborers are asking \$3.00 a day. In the adjoining states of Washington and Oregon, where Oriental labor is more available, labor can be obtained at about half that price.

In Nova Scotia the fruit crop will be the most signal failure on record. This is due in a large measure to severe frosts on June 5 and 6. With few exceptions, trees, that bore heavily last year, are almost bare this year. There are odd sections where

Gravensteins and other varieties are good, but for the most part they are a failure. The quality, too, promises to be poor. Owing to the small crop many growers ceased spraying and fungous diseases are more in evidence than usual. Pears, plums and other fruits will also be light. Secretary for Agriculture, M. Cumming, in an excellent crop report he has issued, reports that the year will be a disastrous one for the fruit growers.

In eastern Quebec the apple crop is very light as well as in the counties of Huntingdon, Chateauguay, Rouville, Bagot, Lotbiniere and Brome. The bloom was abundant, but the frost of June 3rd destroyed it and although the fruit set well it later nearly all dropped. Mr. August Dupuis, director of the provincial fruit experiment stations, writes The Canadian Horticulturist that owing to the shortage a few carloads of apples of fall and winter varieties from Ontario should find a ready

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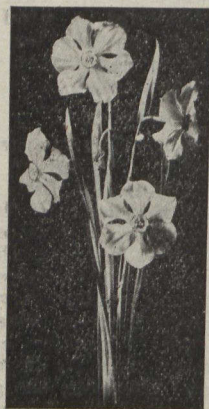


Manor Richelieu, Murray Bay, Que.

Our Selected Northern Grown Stock, which was used to ornament the grounds in the above illustration, has succeeded splendidly, even in this extreme climate. Our stock is used by those who demand the best. Give us a trial order. We will satisfy you. Our Catalogue free for the asking.

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sale this fall east of Quebec city as far as Rimouski.

ONTARIO PROSPECTS

The June drop in Ontario was so heavy as to materially affect the apple crop, which will be much lighter than was first expected. Along the north shore of Lake Ontario the apple crop will not be more than about one half of last year's crop, and a poorer sample than usual will be harvested from unsprayed orchards.

Along the Ottawa and St. Lawrence Rivers, although the drop was heavy, a fair crop of McIntosh, Fameuse and Alexander apples will be harvested. In southern Ontario, while early apples will prove a fair to good crop, winter varieties will prove lighter than usual. In Perth, Wellington, Waterloo and Simcoe counties winter apples are almost a failure.

ENGLISH CONDITIONS

The report of Wardell & Co., of Liverpool, is that the apple crop of the United Kingdom will be the worst known for many years. Reports from the Continent also show that the fruit crop is very poor. English dealers report that the British markets are ready for fruit and that good prices will be paid. Taken all around the apple crop of the world this year is likely to be one of the lightest ever harvested.

PEARS

Pears will be a medium to good crop in Ontario, Nova Scotia and British Columbia.

PLUMS

Plums will be a light crop in some sections of Ontario especially in the Georgian Bay district and the counties bordering on Lake Huron and Lake Erie. British Columbia will have a large crop.

PEACHES

Early peaches have been a good crop in British Columbia. In the Niagara district

peaches will be a good crop although not as heavy as last year.

VALUES

The Dominion Fruit Division reports that all No. 1 apples and pears, both early and late, will find a ready sale and that early apples have sold at good prices both in the northwest and on the eastern markets.

Cold Storage for Fruit

In order to assist in the establishment of an export trade in early apples and tender fruits, the Dominion Department of Agriculture has again arranged with the steamship companies for the reservation of cold storage chambers for fruit only, on steamers sailing from Montreal to Glasgow, London, Liverpool and Bristol, as follows:

- Glasgow—Saturnia, Donaldson Line, September 8th.
  - Glasgow—Hesperian, Allan Line, September 17th.
  - Glasgow—Ionian, Allan Line, September 24th.
  - Glasgow—Grampian, Allan Line, October 1st.
  - London—Hurons, Thomson Line, September 17th.
  - London—Devona, Thomson Line, September 24th.
  - London—Cervona, Thomson Line, October 1st.
  - Liverpool—Megantic, White Star-Dominion Line, September 17th.
  - Liverpool—Dominion, White Star-Dominion Line, September 24th.
  - Liverpool—Laurentic, White Star-Dominion Line, October 1st.
  - Bristol—Royal Edward, Canadian Northern Line, September 15th.
- One chamber on each of these steamers

will be available for shipments of fruit at the regular rate of freight, to be paid to the steamship companies in the usual way. A proper temperature will be maintained in these chambers regardless of the quantity of fruit carried. In every case, shipments should reach Montreal not later than the morning previous to the day of sailing. The Department of Agriculture will assume no responsibility in connection with these shipments, but there will be the usual supervision by the government cargo inspectors at Montreal and at the port of destination. Thermographs will be placed in the chambers so that a complete record of the temperature on each voyage will be secured.

As the space in the chambers is limited, shippers who wish to take advantage of the facilities offered should make application for space to the steamship agents as early as possible before making shipments. Applicants should state the kind of fruit and the number and size of the packages to be shipped. Freight will be accepted in the order in which the space is booked.

In connection with these sailings, arrangements will probably be made with the railways to run one or more iced cars weekly to Montreal to pick up export shipments of fruit. Full particulars of this special iced car service will be given later. Meanwhile shippers are reminded of the fact that iced cars may be obtained on both the Canadian Pacific and Grand Trunk Railways until October 1st, for export shipments of not less than 24,000 pounds of fruit from one station, on which this Department pays the cost of icing up to \$5.00 a car. Prospective shippers are requested to advise the Dairy and Cold Storage Commissioner, Ottawa, as to the date when shipments will be made and the quantity and kind of fruit to be forwarded.

Bulbs for Fall Planting



Pot Hyacinths

We have a magnificent stock of Bulbs of exceedingly fine quality to offer this fall at most reasonable prices. Excellent values in

- Dutch Hyacinths,
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READ WHAT OTHERS SAY ABOUT THEM

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"Dear Sir:—Let me express the pleasure I had in my visit to your large block of Herbert Raspberries. I have seen these fruiting now for a number of years, and have sampled the fruit in every form, and believe that the Herbert is the coming commercial berry in earliness, size and quality. This will certainly be the case where the hardiness of the cane is of importance. I have such faith in its merits that I propose to supply the capital to a tenant of mine to make a plantation of five acres of the Herbert this fall.

"Really too much cannot be said for the Herbert on account of its hardiness. The quality of the berry is, in my opinion, rather better than Cuthbert, especially when canned, and it also has the advantage in size. I do not know when I gave a recommend with heartier good-will.

"A. McNEILL,  
"Chief Fruit Division."

"Johnson, Nebraska, May, 13, 1910.

"W. J. Kerr, Esq.,  
"Woodroffe, Ont., Canada.

"Dear Sir:—The Herbert Raspberry plants came to hand O. K., and were planted the same day, and seem to not feel bad for changing their nationality, as they are starting to grow nicely, and they certainly look as if they were built for business.

Yours respectfully,  
"G. S. CHRISTY."

The above letters are evidence of the genuineness and quality of our Herbert plants. The Herbert has no equal as a heavy yielder of strictly high class berries. We are the only nurserymen who have ever secured plants from the originator.

The originator, with Mr. W. T. Macoun, Dominion Horticulturist, Alexander McNeil, Chief of the Fruit Division of the Dominion Department of Agriculture, and a staff representative of The Canadian Horticulturist, inspected and approved our large stock of plants, this past summer, so we are not ashamed of them.

Write for descriptive circular and price list.

THE OTTAWA NURSERIES, Woodroffe, Ont., Canada

Growers at Ottawa, of hardy trees, shrubs, vines, small fruit plants, etc. We offer a large stock of strong rhubarb roots for winter forcing. We have also a large stock of the new Hydrangea Arboreasens, or "Hills of Snow," and other hardy shrubbery, evergreens, etc.



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## Threatened Insect Invasion

In an address delivered at the convention of the Canadian Horticultural Association in St. Catharines last month, Dr. C. Gordon Hewitt, Dominion Entomologist, stated that Canada is threatened with an invasion of the Brown-tail and Gipsy Moths. They may be introduced either from the New England states or from Europe whence they first came to America. The Destructive Insects and Pests Act, recently passed by the Dominion government, was drafted with the object of guarding against the introduction of these pests into Canada.

Last year the division of entomology inspected imported European stock and found one hundred and ninety winter nests of the caterpillars of the Brown-tail moth. Over a million and a half plants were examined. This year about two and a half million plants were individually inspected and three hundred and thirteen nests were found. Each of these nests might have contained several hundred hibernating caterpillars of the moth. Dr. Hewitt stated that he could not insist too strongly on the importance of the utmost precautions being taken to guard against the introduction of such dangerous pests.

## The Florists and The Tariff

The annual Convention of the Canadian Horticultural Association was held in St. Catharines, Aug. 10 to 12th. This association represents the professional florists and gardeners of Canada.

It was decided to request the Dominion government to make certain changes in the tariff on plants. The principal discussion took place over the tariff on palms, on which there is now a duty of 20%. The government will be asked to place palms on the free list. It was decided not to ask

for any change in the present duty of about 20% on greens such as smilax and asparagus, greenlaurels, rose plants of all kinds, carnation plants, bedding plants, greenhouse plants known as stove plants, and ferns. A request will be made to have a duty of 20% placed on cannas and gladioli, which are now admitted free. A duty of 20% is now charged on aquatic plants. A request will be made to have these placed on the free list.

The government will be asked to amend certain regulations of the Dominion Insect and Pest Act so as to permit of greater freedom in the importation of florists' stock. The government will also be asked to have the port of Montreal made a port of entry.

The following officers were elected: President, J. Connan, Hamilton; 1st Vice President, A. C. Wilshire, Montreal; 2nd Vice President, R. L. Dunn, St. Catharines; Secretary, Wm. C. Hall, 825 St. Catharine St., Montreal; Treasurer, C. H. Janzen, Berlin; Executive for three years, E. I. Mepsted, Ottawa, H. B. Cowan, Peterboro, and W. Mustin, Davisville.

## The Cold Storage of Apples

Bulletin No. 24 entitled, "A Report on Some Trial Shipments of Cold Storage Apples," by J. A. Ruddick, Dairy and Cold Storage Commissioner, has recently been published. It gives the results of some practical tests of the advantages of cold storage for late winter and spring shipments. Much valuable information is contained in this bulletin.

Every result in the experiments points to the importance of immediate storing after picking. The advantage gained by the prompt cold storing of the apples after picking was strikingly manifested. The

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bulletin advocates having the cold storage facilities for apples located as near as possible to the point of production.

The experiments indicate that it is practical to ship carefully packed winter apples, that have been promptly cold stored, without repacking. This is important as it would be an immense advantage to the apple trade if repacking could be dispensed with.

**CAN EXTEND THE SEASON**

Mr. Ruddick claims that the usual season for greenings may be extended several weeks if the apples are well matured on the trees and placed in cold storage without delay after picking.

It is frequently asserted that apples deteriorate quickly after being removed from cold storage. It would seem to depend entirely on the stage which the ripening process had reached. Apples ripen slowly in cold storage. If they are held until the limit is nearly reached, they naturally deteriorate quickly when removed, but no more quickly than they would if the same stage had been reached in ordinary storage at any temperature.

There is evidence in the results of the trials to show that apples which are cold stored promptly after picking and held at 32-34 degrees for say five months, then removed to a high temperature for one month, will be in a better condition at the end of the sixth month than if they had been exposed to the same high temperature for the first month and then placed in cold storage for the rest of the period. Or, in other words, exposure to a high temperature just after picking, when the life processes are active in the apple, will cause more injury than the same exposure at a later stage.

Renew your subscription now.

**Ontario Methods Criticised**

The following extracts from two letters received recently by The Canadian Horticulturist should be of interest to Ontario fruit growers:

We are not handling any Ontario fruit and do not expect to with the exception of grapes and possibly some Snow apples. The trade in our section have been "done" so frequently on Ontario barrel apples that it is a very difficult proposition to sell them at any price in competition with the other stuff from British Columbia and Washington that is honestly packed.—Royal Fruit Co. Ltd., Edmonton, Alta.

Unless Ontario fruit growers adopt a better method of packing and shipping their apples for the western trade we fear they will lose this market to a large extent, as the British Columbia and Washington growers seem to have a much better method of packing and shipping than the growers of Ontario.—Stockton & Mallinson Limited, Regina.

**Items of Interest**

The greatest fruit show ever held in New Brunswick will take place in St. John during the month of November. The provincial government has granted \$500.00 in prizes which has enabled the officers of the New Brunswick Fruit Growers' Association to provide an attractive prize list. Copies may be obtained on application to the secretary, A. G. Turney, Fredericton, N. B.

The Department of Trade and Commerce reports that on account of the shortness of the crop of English orchard fruits this year there should be a good demand for Nova Scotia cranberries and at good prices, providing that shipments are made early.

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We are purely a Commission House,  
and our interests are coincident  
with those of the shipper.  
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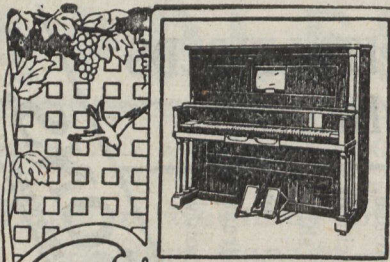
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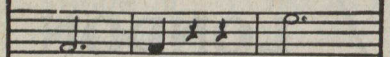


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REV. J. J. HARE, Ph.D.  
Whitby, Ont.

### Information for Fruit Shippers

Information relating to the provisions of the Inspection and Sale Act of the Dominion Government, better known as the Fruit Marks Act, is contained in bulletin No. 11, recently issued by the Dairy and Cold Storage Commissioner, for the guidance of fruit growers and shippers. The bulletin contains the Act with notes explaining each separate provision. The explanations show that the owner of apples at the time of packing is responsible for the grading and marketing. His name and address must appear on each package. Among the explanations given are the following:

Marks made on packages with ordinary lead pencils are not considered "indelible" as required in the Act where it specifies that the packer must mark his name and the name of the variety or varieties of apples on each package. A stencil is the best means of complying with the law, although a rubber stamp makes a plain and indelible mark if carefully used.

In case no name appears on packages, the government may take proceeding against the owner of the package where ascertained and otherwise against the party in whose possession the fruit is found.

When the name of a variety of fruit is unknown or doubtful, shippers are at liberty to substitute the word "unknown" for the variety name.

The definitions of grades, Fancy No. 1 and No. 2, do not vary from year to year, nor do they vary in different provinces of the Dominion. If the quality of the fruit generally is poor, the only result is that a smaller proportion of the fruit is of the higher grades.

Where the word "uniform" is used referring to the character of the fruit in a package, it is meant to refer to the specimens in each individual package. Normal sized apples and very large apples, packed in the same package are not considered uniform.

"Slacks" and over-pressed packages are considered as not properly packed when the condition is likely to result in permanent damage during handling or transit. Defects causing material waste, include abnormal growths, bruises, immaturity and the effects of fungous diseases.

The practice at one time common, of placing upon the barrels the name and address of the apple operator, instead of the name and address of the owner of the apples at the time of packing, renders the apple operator liable for the package. When a conviction is made upon information laid by a Dominion fruit inspector, the inspector does not receive any part of the fine. The whole fine is payable to the receiver-general.

### Ineffective Arrangement

A. V. Main, Almonte, Ont.

I question if we as a gardening community are moving onward in the importance of arrangement, effect and taste in the horticultural regime. One is more convinced of this when viewing the surroundings of fall fairs and the miserable appearance of many towns, with weeds and dead trees so conspicuous in the principal thoroughfares. When a few excel with original arrangement of flowers, fruit, plants and vegetables at fairs and some amateurs do similar justice in maintaining well-kept grounds around their dwellings, why does the large company of us not make amends? To make a town beautiful with well balanced shade trees, flower beds, lawns, etc., individual effort is chiefly responsible. The individual who possesses the faculty of taste in his horticultural pursuit is well gifted.

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Our "Champion" is easily the champion of all washing machines.

All cogs and machinery covered.

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Windsor salt is all salt—pure, dry, dissolves instantly, and lends a delicious flavor to every dish.

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Installed by Heating Engineers and Plumbers throughout Canada

Table decoration supplies a variety of taste. In this line, many ladies forget the real use of the table. Too many flowers and green material are employed and the view of the guests often is obstructed.

At horticultural exhibitions, collections of plants and cut flowers are unnecessarily stiff and artificial. The first prize exhibits usually are well set up, every flower is seen to advantage and the blending of color is calm, quiet and harmonizing. The unsuccessful exhibits may contain flowers that are perfection, but they are so imperfectly displayed, that they are void of attraction to either judge or spectator.

In vegetable exhibits, there is need of improvement. The general rule is everything mixed up. The word "effect" is scarcely known. There is much to gain from exposing our goods to the best possible advantage. Have your exhibit on a slope and keep each sort of vegetables grouped together. By all means, have names attached to all.

In the greenhouse or conservatory, stiff formal groups are evident by the various modes of arranging. They could be doubly attractive. There is no need for having the same old view and artificial aspect.

The suburbs of a town supply another picture. Every effort and much money is lavished on the mansion, ornamental walls and fancy verandahs and railings. When the landscape man is required, who is he? Oh, some handy man who claims that he is a most capable authority for laying out grounds. The result is a levelling up of the ground, a lawn is supposed to luxuriate on the surface of bricks or mortar, and some rank growing trees are planted that have to be hacked and limbed-up in a couple of seasons, for they are practically unsuited to the restricted area. Have a practical man for such work; for what is the most gaudy and costly house without a tasteful arrangement of lawns, trees, shrubs and flowers? A well-kept place commends itself in the locality. It is the admiration of those on foot, bus, car and automobile. Can any precept be given to imbue us to aim at advancement in horticultural management?

### Further Fumigation Regulations

An additional regulation has been adopted under the Destructive Insects and Pests Act, of the Dominion government, by which all nursery stock originating in Japan or in any of the states of Vermont, New Hampshire, Maine, Massachusetts, Connecticut and Rhode Island shall, after fumigation, be subject to inspection at the point of destination and cannot be unpacked except in the presence of an inspector. Already a number of injurious insects have been found on Japanese stock. The introduction and establishment of some of these might prove to be as serious as the introduction of the San Jose Scale.

Dr. Gordon Hewitt, Dominion Entomologist, informs The Canadian Horticulturist that a number of insects occurring in Japan, including the Apple and Pear Fruit Borers, have established themselves on the Pacific coast. Others have been found which might readily do so.

Prof. A. M. Soule, the President of the Georgia Agricultural College, addressed the members of the Lincoln Farmers' Institute at Vineland, Ontario, last month. He claimed that a soil survey should be made of the Niagara district so that the people would know just what the land was and how it should be fertilized and treated to obtain the best results.



## PAEONIES

We offer the following fine varieties:

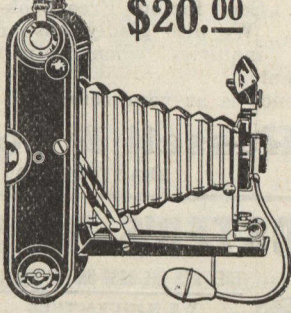
- Achille
- Alba Sulphurea
- Brettonean,
- Edulis Superba
- Festiva
- Festiva Maxima
- Julvecourt, Alice de
- Or, Couroune d'
- Victoria, Queen
- Wellington, Duc de

We send them safely packed, carriage prepaid, to any part of Canada.

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OAKVILLE, ONT.

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Finest Apple Rooms in the Dominion for  
**EXPORT AND LOCAL TRADE**  
Special Rooms for all kinds of Perishable Goods

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LIMITED  
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**HANGING BASKETS**  
**SAUCERS AND**  
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Feb. 11th.

"I had a horse that had a spavin for a long time and I had tried nearly every kind of medicine when a neighbor told me to use Kendall's Spavin Cure, which I did and it acted wonderfully."

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**DR. B. J. KENDALL CO. 56**  
Enesburg Falls, - Vermont.

## Peaches for England

Alex. C. Biggs, Oakville, Ont.

Our customers in Great Britain who ordered peaches from us last year were delighted with the fruit we sent and with its condition on arrival. On the whole our last year's shipments were a decided success.

This year we have sent out 1,000 circulars to our customers asking orders for peaches delivered anywhere in Great Britain. We see no reason why we should not ship these goods to the Old Country. We have had considerable correspondence with our Trade Commissioner, Mr. W. A. MacKinnon, of Birmingham, who is an expert on fruit, and he has pointed out to us the mode in which he considers this fruit should be packed, and we are endeavoring to follow out his instructions, and hope to be successful with a much larger quantity than we shipped last year. We are planning to deliver these from Glasgow, Liverpool, London and Bristol, and are negotiating for space on the different lines to these ports.

There is one great obstacle standing in the way of this line of trade. That is the need for a cheap fast service between the fruit districts and Montreal. It is true, we can ship by express but that is very costly and takes the profit in comparison with freight rates. If the Government only owned the railroads this trouble would be overcome, and not only would the shipment of this kind of fruit for export receive an impetus, but many others would receive the same benefit. We cannot use refrigerator cars unless there is a full car lot which might be a costly speculation for individuals to engage in. Under present conditions we are forced to ship often, in small quantities, by various routes, and by the fastest service that can be obtained.

## English Tomatoes

A shipment of fine English tomatoes was received recently by Mr. J. Lockie Wilson, Superintendent of Agricultural Societies for Ontario, which had been forwarded by the Royal Edward, taking just six days and three-quarters. The box contained tomatoes in three stages of ripeness. They were grown in the county of Kent. Several persons who tasted them and compared them with Canadian-grown tomatoes without knowing which was which preferred the home-grown product, as richer in flavor. The home fruit is also firmer and larger.

The English tomatoes appeared to have been grown under glass. Mr. Wilson has shipped in return three boxes of Canadian tomatoes. A larger quantity will be sent in September, along with a shipment of peaches.

## Items of Interest

The St. Thomas, Ont., Horticultural Society, in cooperation with the public schools of the city, will hold a floral exhibition on September 22, 23 and 24. The scholars will exhibit their school work of the last term. A musical entertainment will be given by the St. Thomas Operatic Society.

The annual report of the Canadian Forestry Association for the current year (1910) has just been issued, and is now being mailed to members of the Association. A full report of the convention held in Fredericton, N. B., in February last is contained in the volume. Requests for copies of the report should be addressed to Jas. Lawler, Secretary Canadian Forestry Association, Ottawa, Ont.

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(Member Toronto Board of Trade)

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WRITE ME FOR PRICES ON  
Staves, Hoops, Heading and Liners for Standard Barrels.

Correspondence Solicited with Fruit Associations. Can supply Barrels at low prices.

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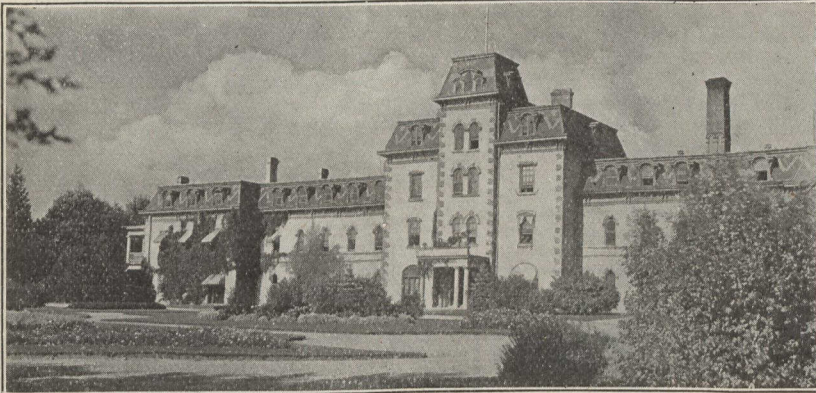
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# Ontario Agricultural College, Guelph, Ont.

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SEPTEMBER 20th, 1910



Horticulture is an important branch of the course of study. For earnest and enterprising young men, **Horticulture** in its various branches offers as large a reward for intelligent well directed effort as any other pursuit or profession. To those interested in fruit-growing, market gardening, nursery work, floriculture, or landscape gardening, the primary object of the course is to lay a foundation for the most successful and intelligent work. To this end both the science and art or the theory and practice are taught. While the sciences are invaluable in giving accurate and definite knowledge regarding the origin and growth of plants, and the composition and physical properties of soil, they cannot

tell us just how to select varieties or how to propagate, transplant, cultivate, fertilize, prune, spray or what is equally essential in practice, harvest, store and market the product to the best advantage. In the class room and laboratory or in the field in the busy season a student attending College has an opportunity to study these various operations, and also to learn the why and wherefore so far as is known.

Have you received a copy of our 1910 and 1911 Calendar, which outlines in detail the work of the various courses? If not, send for one TO-DAY. It will be mailed free on application to

**G. C. Creelman, President.**

## 1910 Niagara District HORTICULTURAL EXHIBITION

Under the Auspices of St. Catharines Horticultural Society

WEDNESDAY, THURSDAY AND FRIDAY

September 14, 15 and 16, 1910

AT THE ARMOURY

ST. CATHARINES, ONTARIO

Nearly \$1500 in Prizes

For Fruits and Vegetables, Flowers, Honey,  
Decorated Tables, Etc.

XIX REGIMENT ORCHESTRA IN ATTENDANCE

Reduced Rates on Railways

Horticultural Society Competition for  
**VALUABLE STERLING CUP**

donated by St. Catharines Horticultural Society under conditions adopted by Ontario Horticultural Association:

Exhibits to comprise the following:

Asters, 50 blooms in 5 vases.

Gladioli, 50 spikes in 10 vases.

Geranium, double, 20 blooms, in 4 vases.

Hydrangea, 3 spikes in 1 vase.

Phlox Drummondii, 50 in 5 vases.

Stocks, 10 weeks, 12 spikes in 3 vases.

Vases will be provided.

Cup to become the property of the first Society winning it twice.

Open to all Horticultural Societies in the Province, other than the St. Catharines Society. Notice of Entry should be given to the Secretary as early as possible that sufficient vases may be provided, and space assigned.

**GEORGE GORDON, St. Catharines,**

Secretary for District Exhibition

**C. A. HESSON,**  
Treasurer

**W. B. BURGOYNE,**  
President

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Consignments of Canadian Apples, selected winter varieties, in boxes, distributed direct to buyers—not auctioned.

Correspondence Invited



## NOTES FROM THE PROVINCES

### Annapolis Valley East, N. S.

Eunice Watts, A. R. H. S.

Growing crops are still being benefited by periodical showers,—so far the season has not been excessively hot. The shortage in the apple crop is already beginning to influence other industries. Coopers have turned away their men owing to orders for apple barrels being cancelled; this in turn affects the store-keepers and others who sell goods or hire labor. On the mountains the orchardists were more fortunate in escaping the frosts, but it is going to be a hard year for many growers in the valley.

Fall web-worms with their nests stand out conspicuously, while various other caterpillars in less quantities are scattered through the orchards. The brown beetles are attacking the cherry trees, but they are controlled by Paris green or other internal poisons.

The first shipments of apples, Crimson Beauties, went off during the first week in August; Astrachans and Duchess soon follow. Gravensteins come in about September 10th. The first ripe tomatoes were gathered here on August 10th.

Experiments were tried in the nursery of spring budding, but as these were not successful, the stocks are being re-budded. The

buds are preferably inserted on the north side of the young tree and are tied in with raffia which is cut away when the bud has swollen. These little scions remain dormant until the spring when they send out a vigorous shoot if the stock has been properly pruned and cultivated.

Herbs should now be cut and dried for winter use, they are better if gathered while in flower.

This has been an exceptionally bad year for bees. At the beginning of the season they stored a lot of honey, but owing to so much wet weather they were unable to forage and consumed their surplus stores. Even where they have not been treated for non-swarming, they have shown very little inclination to leave the hive.

### Montreal

E. H. Wartman

The arrivals of various kinds of fruits from Ontario this season have not been in excess of the demand. Therefore they have brought a good average return. We find to-day crates and baskets of uniform sizes, adapted well for the carrying of fruits safely to our markets. Cherries and Cuthbert raspberries were exceptionally fine and prices high.

Apples coming forward in 11 quart baskets have been generally of poor quality and poorly graded. The few that were properly graded and packed brought full prices.

Melons of the Montreal type are coming in quite large quantities in crates eight inches each, and have met with quick sales.

The world-famed Montreal melons are said to be below an average crop, although some patches are yielding well. I counted 400 melons on about one-sixteenth of an acre at Macdonald College Farm that were of superior quality, 10c per lb. is the usual price at this farm.

Peaches are coming forward from Ontario largely in 11 quart baskets, Cling Stone type, largely ungraded and selling low, while California, large Elberta and Crawford are selling at \$1.25 per two layer wrapped boxes. These peaches keep for 10 days in order, which gives dealers a good chance to dispose of them. Our own early kinds rot very quickly on arrival, therefore, dealers buy cheap and in limited quantities.

I fancy that the man who would grade his peaches, pears, plums and apples in baskets to a uniform size, large or medium, and put a slip of paper under each netting with the word "graded" and stick to such principles would be amply rewarded. We see these words on the boxes of Mediterranean lemons from top to bottom. I have seen these lemons sold and the prices ran high because this brand had been handled over, individually, and found true to uniform grading. It is a name we want for good grading and profits will follow.

### Niagara District, Ontario

The berry crop is almost over now, blackberries and black currants being the only small fruits now coming on the market. The raspberry crop was somewhat disappointing not turning out much over half a crop. Blackberries have been a good crop and are bringing a fair price.

Early peaches are abundant and are bringing a fair price. The market is keen for them.

Early plums are scarce except Burbank, which is a fair crop. Many Burbanks from here are being shipped to the west. They carry well and are bringing a good price there.

Early pears are nearly over and Bartletts

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Barberry Purple  
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Spiraea Blue  
Spiraea Anthony Waterer  
Spiraea Van Houttei  
Siberian Dogwood  
Snowballs  
Syringas in in variety

Flowering Thorns  
Golden Elder  
Honeysuckles in variety  
Lilacs, New Japan  
Viburnum Lantana  
Weigela Eva Rathke  
Weigela Rosea

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American Elms  
Beech, Purple Leaf  
Beech, Fern Leaf

Catalpa  
Linden (Basswood)  
Mt. Ash Oak-Leaf  
Carolina Poplar

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Maple, Norway  
Maple, Silver  
Laurel Leaf Willow

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Hollyhocks  
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Boltonia  
Coreopsis  
Fox Glove

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# STONE & WELLINGTON

TORONTO, ONTARIO



are beginning to come in. There is a good crop of these of excellent quality. Early apples turned out pretty well around here and some very nice fruit has been shipped. Mr. T. H. P. Carpenter, of Winona, had some particularly fine samples of Astrachans and Duchess. There has been a heavy drop of apples and both fall and winter varieties will not be more than a moderate crop, nor will the quality be anything extra.

The better plums are commencing to come on the market, such as Washington, Bradshaw, Imperial Gage, etc. Washingtons and Bradshaws are a good crop in the district this year but the Bradshaws are inclined to run small in a good many orchards.

Grapes still look very well. They will be nearly an average crop; red grapes over an average and of good quality. The markets are in a very healthy condition from a fruit growers' point of view and the prospects are for somewhat better prices than ruled last year. A quantity of fruit and tomatoes is going to the west from here already; seven cars left Winona alone on Aug. 20th with the west as their destination.

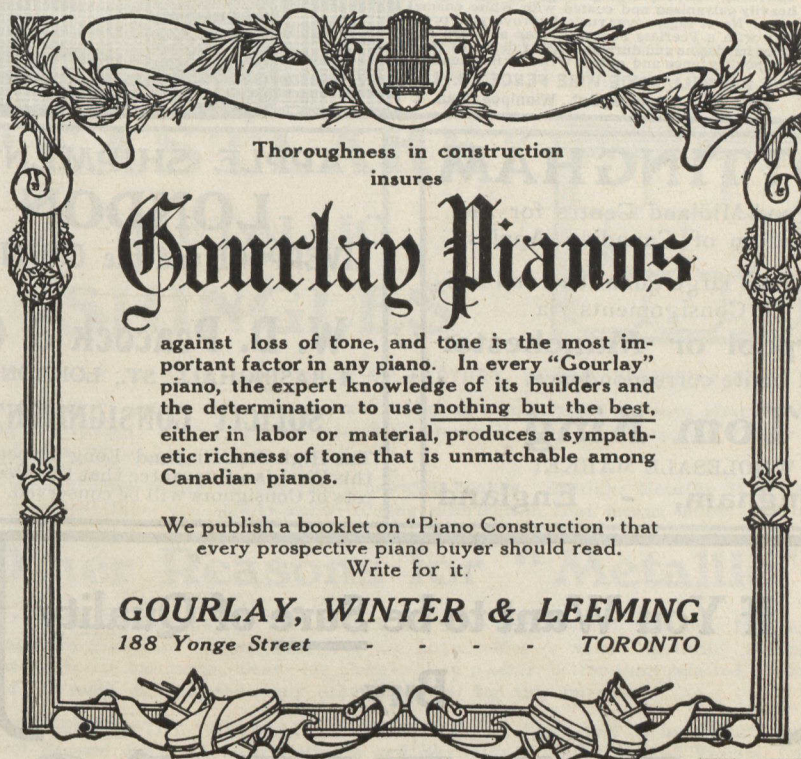
The better class of peaches are going to be a pretty good crop, not quite as heavy as last year, in my estimation, but some think that there will be just as many. Elbertas are not nearly as good a crop.

Tomatoes are plentiful and the price has fallen.

Plums are rotting quite badly in unsprayed orchards.

The following was the range of prices on the Hamilton market on August 20th.

Fruits: Blackberries, per crate, \$2.25 to \$2.50; red currants, per crate, \$1.25 to \$1.50; gooseberries, per basket, 75c to \$1; black currants, per basket, \$1.10 to \$1.25; apples, per basket, 15c to 40c; peaches per small basket, 15c to 25c; peaches, per large



Thoroughness in construction  
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against loss of tone, and tone is the most important factor in any piano. In every "Gourelay" piano, the expert knowledge of its builders and the determination to use nothing but the best, either in labor or material, produces a sympathetic richness of tone that is unmatched among Canadian pianos.

We publish a booklet on "Piano Construction" that every prospective piano buyer should read.  
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Tissue Fruit Wrappers, Specially prepared Paper

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| Strip Lace Paper  | Corrugated Boards  |
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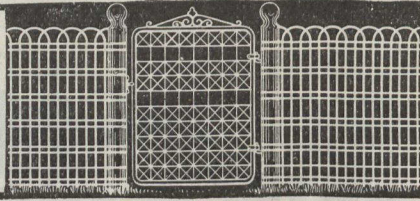
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Is a good Midland Centre for the distribution of Canadian Apples.

I can handle large quantities and solicit Consignments via

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**Tom King**

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1 BASINGHALL ST., LONDON, E.C.

**SOLICIT CONSIGNMENTS**

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

basket, 25c to 50c; pears, per basket, 15c to 40c; plums, per basket, 20c to 35c.

The following were the dealers' quotations at Winona, Glimsby, Beamsville, etc., for the week beginning Aug. 19th.

PEACHES	1 BASK. 10 BASK. 20 BASK.
Triumph and Hales	No. 1, 45c....42c....40c
Triumph and Hales	No. 2, 30c....27c....25
Leamington	.....60c....57c....55
PLUMS	1 BASK. 10 BASK. 20 BASK.
Fancy Blue and Red	.. 40c....37c....35
Medium	
Fancy Blue and Red	..30c....27c....25
PEARS	1 BASK. 10 BASK. 20 BASK.
Bartlett No. 1,	.. 50c....45c....40c
Bartlett No. 2,	.. 40c....35c....
Common	.....30c....25
Tomatoes	.....25c....24c....23c
—W.W.	

**Irrigation Convention**

The fourth annual convention of the Western Canada Irrigation Association was held at Kamloops, B.C., during August, lasting three days. Nearly every section of Saskatchewan, Alberta and British Columbia was represented, there being 119 delegates.

Premier McBride, of British Columbia, stated that a stocktaking of the water resources of the province was under way and that hereafter it would have to be shown that they were in use before a claim to a water right would be given. All development work for power purposes will have to be done with the approval of the government and the rates will be fixed by order in council. Martin Burrell, M.P., contended that the government was as capable of operating public utilities as efficiently as private owners.

Papers were read by A. E. Meighen, the engineer in charge of the Fruitland irrigation system, and by Mr. A. E. Ashcroft, of Coldstream. Other speakers were James White, Secretary of the Conservation Commission, and Hon. Duncan Marshall, Minister of Agriculture for Alberta.

A resolution was passed requesting the British Columbia government to take steps towards securing the better conservation and control of the sources of water supply in those districts in which governmental action would clearly make for a fuller supply of water and its more equitable distribution, and further that the government be asked to assist by guaranteeing the bonds of municipalities or companies in those districts where otherwise large tracts of land must remain unproductive for lack of adequate irrigation systems.

The Dominion and provincial governments were urged to investigate as speedily as possible for selection and reservation all water sites and to forestall as far as possible the creation of vested interests.

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**Medicinal and Toilet Preparations**

You certainly take no chances when you buy any toilet article or medicinal preparation which bears the name NA-DRU-CO and this trade mark.

As soon as you see "NA-DRU-CO" you can be absolutely certain that the article is the very best.

The National Drug and Chemical Company of Canada, Limited, has spent thousands of dollars in perfecting this line of over 125 NA-DRU-CO preparations.

The formulæ are the best known to medical science.

The purity and strength of the ingredients are assured by rigid tests.

The compounding is done by expert chemists, who are thoroughly qualified for a work so vital to your health.

Knowing that everything has been done to make them right, we guarantee, positively and unreservedly, each and every NA-DRU-CO preparation. If you find any one unsatisfactory we want you to return it to the druggist from whom you bought it and he will refund your money.

Ask your physician or druggist all about the NA-DRU-CO line. They are men of standing in your community, worthy of your confidence, and in position to tell you, for we will furnish to any member of either profession, on request, a full list of the ingredients in any NA-DRU-CO preparation.



ALWAYS LOOK FOR THIS TRADE MARK

**NA-DRU-CO Dyspepsia Tablets**

Cure sour stomach—heartburn—flatulence—indigestion—chronic dyspepsia.

**NA-DRU-CO Headache Wafers**

Stop a headache in 30 minutes. Contain no harmful drug.

**NA-DRU-CO Talcum Powder**

3 kinds—Violet—Rose—Flesh Color. Gems of refreshment and refinement.

**NA-DRU-CO Laxatives**

Act without any discomfort. Increased doses not needed.

**NA-DRU-CO Baby Tablets**

Relieve Baby's ills. Especially valuable during teething.

**NA-DRU-CO Tooth Paste**

Cleanses throughout—prevents decay—makes the teeth beautifully white.

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A very choice collection of the best named kinds Mixed Iris, \$1.00 per hundred.

**PAEONY—FESTIVA MAXIMA**

The Queen of Whites, and other named varieties Small Divisions, 25 cents.

**H. P. VAN WAGNER**

STONEY CREEK, ONT.



The next convention will be held in Calgary. The following officers were elected: President, Wm. Pearce, Calgary; 1st Vice President, F. J. Fulton, K.C.; Treasurer, C. W. Rowley, Calgary; Mr. Hall is the permanent secretary.

**Ontario Horticultural Exhibition**

P. W. Hodgetts, Secy., Toronto

The Ontario fruit show will be carried on again this year in the St. Lawrence Arena, Toronto, and the prospects are that the exhibit of apples will be away ahead of anything ever shown in the province. Already special exhibits from a number of the leading apple growing counties in the province have been promised and active committees are at work in each case looking after the collection of the fruit. The Ontario Fruit Growers' Association is duplicating the grants from individual counties to the extent of \$50.00 each and is also paying the cost of transportation and storage for these exhibits.

The United Counties of Northumberland and Durham have granted \$200 for the work and the committee there expects to make a display that will open the eyes of those parties who were under the impression that the best apples were grown in other provinces or in other parts of Ontario. Norfolk county will again be in line with an exhibit that will surpass the beautiful pyramid that was erected in 1909. Simcoe county from the north also expects to put up an effective and original display.

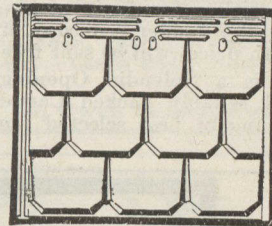
There will be \$4,000.00 offered in prizes. New features are being added to the list that should draw out some splendid exhibits. Notable among these will be the extension of the list of varieties in which prizes of \$10 and \$5 each will be offered for single apples. This is a section where skill in judgment of various varieties is called forth as there is a limit to the size and the judges are looking altogether to the color and quality. Additional varieties that are being largely grown in the province will be added to the lists in the barrel and box classes and it is likely that sections calling for ten boxes of the standard varieties will also be added.

The canned fruit section is being largely extended and the work of placing this on exhibit and the judging of the contents of the jars will be left entirely in the hands of the Women's Institutes of the province. The institutes are holding their annual winter meeting in Toronto during the week of the exhibition and some of their members will be in charge of the exhibits of bottled fruit and of cooked fruit and vegetables, which will be a feature of this year's show.

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**"EASTLAKE" METALLIC SHINGLES**



are called the ONLY right roofing for FACTORY, HOUSE, OFFICE or BARN.

And an "Eastlake" roof is permanent—just as weathertight 25 years after as the day it was laid. Actual wearing tests have proven it—you KNOW exactly when you roof with "Eastlakes."

Better write to-day for our free illustrated booklet "Eastlake Metallic Shingles." It gives the facts you should know—roofing information that means money to you.

**Other Reasons for "Metallic"**

"METALLIC" CEILINGS AND WALLS are more than mere decoration. They are a positive insurance against fire. For the home, office or store, "Metallic" Ceilings and Walls are handsome, clean—far cleaner than plaster, better than selected timber, and far more durable than any other material for this purpose.

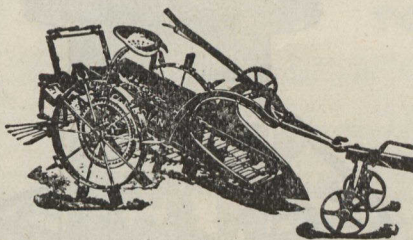
REMEMBER THE "METALLIC" LIST—Rock-Faced, Brick and Stone Siding, Sheet Steel Pressed Brick, Metallic Cornices and Skylights, Ventilators and Finials, Conductor Pipe, Pressed Zinc Ornaments, etc.

Manufacturers

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**POTATO MACHINERY**



The O. K. Canadian Two-Horse Elevator Digger will dig your crops and do it well. If you are in need of a digger you can do no better than to secure one of our machines.

Write for our catalogue and price.

**CANADIAN POTATO MACHINERY**

COMPANY, LIMITED

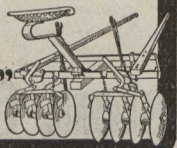
124 Stone Road, GALT, ONT.

Look for our Exhibits at all the Fairs.

The "Bissell" Garden Disk Harrow cuts clean and stays down to its work. You can close it up small enough to pass between vines and berry bushes—extend it out to go under limbs of fruit trees. A reversible Harrow. Can be used as "In-throw" or "Out-throw." Adjustable pole and shafts allow it to be used with single horse or team. High or low seat—strong, well-braced, light draught. Write Dept. N for particulars or inquire of nearest agent.

T. E. Bissell Co. Ltd.  
Elora, Ont.

**"The Bissell"**



See Page x for cut of Orchard Extension Disc Harrow.

**"CARY"**

**FIRE PROOF SAFES AND VAULT DOORS**

ALL SIZES

Ford & Featherstone

Hamilton, Ont.

W. J. SHERWOOD, Representative



### Items of Interest

A meeting of the Ontario Ginseng Growers' Association will be held at the Y.M.C.A. Hall, 1087 Queen Street West, Toronto on Sept. 7th at 10 a.m.

The Fruit Picking Season.—The Stratford Manufacturing Company, of Stratford, Ont., make a specialty of ladders designed for fruit growers. Their Perfect Fruit Picking Step Ladder is very popular as it can be used either for fruit picking or as an ordinary step ladder. A copy of their catalogue with prices will be sent free on request.

There is a Splendid Opening over here for good reliably packed Canadian apples. The placing of best selected fruit in boxes

is a decided step in the right direction. If the packing and selection is carefully seen to by the shippers only success should ensue. Growers should avoid sending No. 3 apples as much as possible as this grade affects the sale of No. 2. The latter grade would sell better were fewer No. 3 apples placed on the market.—Ridley Hculding & Co., Covent Garden, London, Eng.

At the Niagara District Horticultural Exhibition that will be held in St. Catharines Sept. 14, 15 and 16, a sterling cup will be donated by the local society for competition among the horticultural societies of the province, excepting only the St. Catharines Society, for the best exhibits as

follows: Asters, 50 blooms in five vases; gladioli, 50 spikes in ten vases; geraniums, double, 20 blooms in four vases; Hydrangea, three spikes in one vase; phlox Drummond, 50 in five vases; stocks, ten weeks, twelve spikes in three vases. The vases will be provided by the St. Catharines society. The cup will become the property of the Horticultural Society that is the first to win it twice.

Mr. Robert T. Pinkerton of Montreal has just returned from a somewhat extended visit to Europe. In the interest of his business he visited most of the noted growers and producers of nursery stock, seeds and bulbs in Great Britain, France,

# HECLA FURNACE

## And Its FOUR Big Features

The "Hecla" has four exclusive features that have brought it steadily to the front as the perfect warm air furnace.

These improvements are so vital—they mean so much in comfort and health and economy—that every man who is going to put in a furnace this year, should study them in detail.

### Fused Joints

are the only permanent joints between castiron and steel. By means of these joints, we prevent gas and smoke from getting in the Air-chamber and from there into the house.

Fused Joints are absolutely and permanently tight, and insure the warm air being fresh, pure and untainted by gas, smoke and dust.

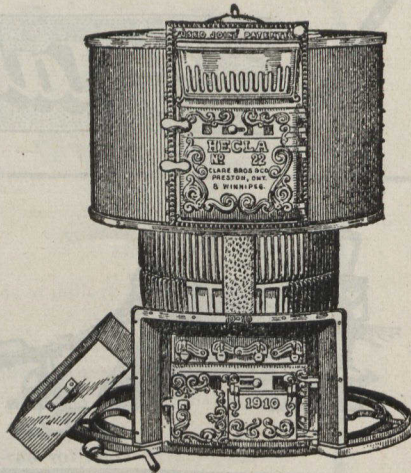
### Steel Ribbed Firepot

has three times the radiating surface of any other.

It never becomes red-hot—will not burn out—and will save  $\frac{1}{8}$  of your coal bill by actual test.

Our little book "Hecla Heated Homes" tells you a lot of things you ought to know about a furnace, besides the exclusive features mentioned above. Let us send you a copy. It's free. Write.

Send us rough plan of your house—and we will submit estimate of the cost of installing the proper size "Hecla" in your home.



### Individual Grate Bars

Each bar can be shaken separately. Fire can be cleaned thoroughly without using a poker or shaking down good coal or live fire.

No clinkers to clog the grate as is the case when bars are fastened together.

Of course, one bar is much easier to shake than four.

### Castiron Combustion Chamber

We found out, by careful tests, that steel would not stand the intense heat of the furnace

fire. So we perfected the Castiron Combustion Chamber, which has proved its wonderful strength, service and durability.

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

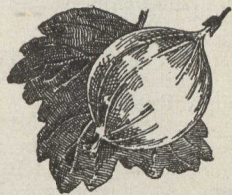


Belgium and Holland, and personally selected his requirements for the coming season. In Holland particularly, he made special selections of the finest varieties and quality of bulbs, directly on the farm of one of the most noted and reliable growers, and is introducing into Canada many new and rare Narcissi, Daffodils and Tulips.

For several years florists and market gardeners have been looking for a pot for transplanting purposes which would overcome some of the disadvantages of the earthen pot. In planting in the earthen pot the young shoots must be transplanted at the end of a certain period whether the outside conditions are light or not, because after the plant has reached that stage in its

growth it is injurious to it to be disturbed in any way. The paper pot is buried with the plant, and so there is no disturbance to retard the growth. This is of great value in a late or dry spring. The plant can be kept indoors until weather conditions are favorable for its planting. Then too, the

pot, being buried with the plant, forms a wall to protect the shoot until it is of a size to withstand the inroads of the cut worm and other insects which often kill the plant before it gets fairly started. These pots are manufactured by Thos. Gain & Son, of Toronto.



### SMALL FRUIT PLANTS

Gooseberries, Josselyn, Red Jacket, Downing, Pearl, Houghton.—Currants, Perfection, Ruby, Cherry, White Grape, Lee's Prolific, Champion, Black Naples, Victoria.—Raspberries, Herbert, Cuthbert, Marlboro, Brinckle's Orange, Golden Queen, Strawberry-Raspberry.—Garden Roots, Asparagus, Rhubarb, Perennial Celery,

WM. FLEMING, Nurseryman, Box 54, Owen Sound, Ontario

## Here is our New Fall & Winter Catalogue



## Free Delivery of Goods Throughout the Dominion

The aim of this store has been to reach a point in its development where it can serve on equal terms all the citizens of this great Dominion, and offer to every resident of Canada the advantage of Simpson Quality, Simpson Variety and Simpson Economy, right at your own door without extra cost and without trouble or risk.

The enormous increase of our Mail Order Business now enables us to respond to your good will by being the first store in Canada to extend FREE DELIVERY TO ALL CUSTOMERS.

*You need no longer figure out postage, express or freight rates, because the prices quoted in our catalogue are what the goods will cost you at your nearest station, except heavy or bulky goods, as stated in the catalogue.*

### OUR PART

The Simpson Store—the best constructed and best equipped mercantile building in the Dominion—is now practically your nearest store.

Its immense stocks bought direct from the manufacturers for cash mean economy to you.

The worthy, honest goods, made for service, and the prompt response to your request for return or exchange, mean comfort and satisfaction to you.

The latest, most stylish and up-to-date merchandise in every department means pleasure to you.

### YOUR PART

If your name is not already on our mailing list send post-card at once for catalogue.

Our new free delivery system makes it profitable for you to order your entire needs from this store.

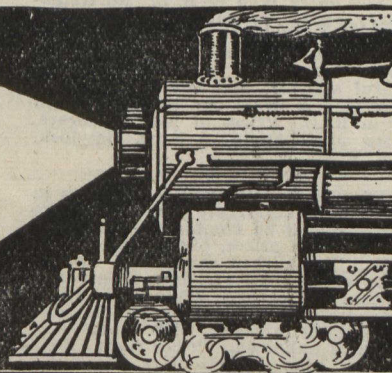
You can order any single article at any price, large or small, and we will send it cheerfully and promptly; but we suggest that you try to make each order as large as possible.

Follow carefully the instructions printed in the Catalogue.

N. B.—To get our New Fall and Winter Catalogue promptly send Post Card addressed to Dept. No. 3

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a Post Office, an Express  
Office or a Railroad  
**SIMPSON'S**  
Will deliver your  
Purchases **FREE**





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Advertisements in this department inserted at rate of two cents a word for each insertion, each figure, sign or single letter to count as one word, minimum cost, 25 cents, strictly cash in advance.

**BULBS** — At less than wholesale, direct from Holland. Send with me. For particulars write C. Mortimer Bezzo, Berlin, Ont.

**FOR FALL PLANTING**—Apples, Pears, Plums, Cherries, Small Fruits and Ornamentals.—J. Elmer Crow, Nurseryman, Ridgeville, Ont.

**PIPE FOR SALE**.—All sizes for steam, hot water heating, posts, green house construction work, etc., very cheap. Send for price list, stating your needs.—Imperial Waste and Metal Co., 7 Queen Street, Montreal.

**GINSENG**—Eig profits in the cultivation of Ginseng. Small garden gives wonderful results. Seeds and seedlings for sale at lowest prices. Write for particulars.—J. E. Janelle, Caughnawaga, Que.

**PURE CANADIAN GINSENG** seeds and roots, also Golden Seal and Senega, for sale; water tested seeds, and selected roots; careful supervision. Write for booklet and prices. Huronia Ginseng Garden, Blyth, Ont. Box 341.

**GINSENG ROOTS** for sale—Choicest one, two and three year old roots, cream of our 1910 beds; specially selected for vigor and hardiness; best suited to Canadian growing. A sure money making Ginseng. Delivery September and October. Order early.—Lanark Ginseng Gardens Co., Lanark, Ont.

**THE CANADIAN APPLE GROWERS' GUIDE** (just published). A thoroughly up-to-date treatise, covering every phase of apple culture, from the planting of the tree to the packing and sale of the fruit, by Linus Woolverton, M.A., Grimsby, Ont. Published by Wm. Briggs, Toronto, price \$2.25, postpaid.

**LANDSCAPE ARCHITECT**.—Charles Ernest Woolverton, Grimsby, Ontario, is prepared to make plans for the improvement of country estates, city parks or private grounds, giving lists of suitable trees, plants and shrubs for planting. He has no personal interest in the sale of any of these, but can direct clients for purchasing them at lowest wholesale prices. He will superintend the work of the gardeners in carrying out his plans where such service is needed.

**FRUIT LANDS**

**ALL KINDS** of Farms for sale. Fruit Farms a specialty.—W. B. Calder, Grimsby.

**FRUIT FARMS** sold and exchanged. List with us for quick sale. See us if you are thinking of buying a fruit farm.—F. J. Watson & Co., 1275 Queen Street W., Toronto, Ont.

**NIAGARA DISTRICT FRUIT FARMS**.—Before buying, it will pay you to consult me. I make a specialty of fruit and grain farms.—Melvin Gayman, St. Catharines

**LATEST—BEST**—British Columbia Fruit District —Kaleden in South Okanagan—4 miles lake frontage—Apricot and Peach Belt; high priced high grade varieties of apples, European grapes. Decomposed lava ash soil; reservoir gravity pipe water system to every lot. Finest domestic water. Very long summer season; early spring; dry climate. Illustrated Booklet Free. Send for it to-day.—T. G. Wanless, Kaleden, B. C.

**SALMON ARM**, Shuswap Lake, B. C., has the finest fruit and dairy land in B. C. No irrigation necessary, mild winters, moderate summers; no blizzards, or high winds; delightful climate; enormous yields of fruit, vegetables and hay; good fishing; fine boating amidst the most beautiful scenery, and the Salmon Arm fruit has realized 25 cents per box more than other fruit in B. C. Prices of land moderate, and terms to suit. Apply to F. C. Haydock, Salmon Arm, B. C.

**GROW APPLES AND GROW RICH** — 10 acres in British Columbia's finest fruit growing district will support a family in comfort. Prize fruit, enormous crops, high prices, big profits—\$200 to \$500 per acre. Established settlement, no isolation, plenty good neighbors, best transportation, good markets, grand scenery, hunting, office, hotel; daily trains. Splendid climate; fine summers, mild winters; high winds and low temperatures unknown. Prices right. Easy terms. Proofs, plans, particulars.—Fruitvale Limited, Land Dept., Nelson, B. C.

**COMING EVENTS**

Under this heading, notices of forthcoming exhibitions and meetings of horticultural importance will be published. Send the information as long in advance as possible.

- Toronto, Canadian National.....
- .....Aug. 27-Sept. 12
- Montreal Horticultural Exhibition Sept. 7-8
- St. John, N.B., Dominion Exhibition.....
- .....Sept. 5-15
- Niagara District Horticultural Exhibition..
- St. Catharines, Ont.....Sept. 14-16
- Ottawa, Central Canada.....Sept. 9-17
- London, Ont., Western Fair.....Sept. 9-17
- Charlottetown, P.E.I. Provincial.....
- .....Sept. 20-24
- Victoria, B.C.....Sept. 27-Oct. 1
- Halifax, N.S., Provincial.....Sept. 28-Oct. 6
- New Westminster, B.C., Provincial.....
- .....Oct. 4-8
- Vancouver, B.C., National Apple Show..
- .....Oct. 31-Nov. 6
- Toronto, Ontario Horticultural..Nov. 15-19
- London, Eng., Royal Horticultural Show
- (for colonial-grown fruit and vegetables)
- .....Dec. 1-3

**Experimental Peach Shipments**

J. A. Ruddick, Ottawa, Dairy and Cold Storage Commissioner

The Dominion Department of Agriculture is arranging to further test the practicability of shipping peaches to Great Britain. Probably about 2,000 cases will be purchased from the St. Catharines Cold Storage Co., at the price per pound which is paid by the canning companies, plus the extra expense of special packing. The peaches are to be packed in single layer cases, having the standard dimensions of 20 x 11 inches and three and one-half inches in depth. The peaches will be wrapped in paper and packed in wood wool. If these peaches realize more than the price agreed upon, the surplus will be distributed among the growers.

It is expected that shipments will be made on September 17th and 24th, and October 1st to London, Liverpool and Glasgow. A small shipment will also be made to Bristol on September 15th.

The matter of shipment to the sea-board has been very carefully considered. Some of the growers have favored express shipment, but after considering our own experience as well as the experience of others in connection with such shipments, we have arrived at the conclusion that shipment by refrigerator car will be preferable. In order to catch the Saturday steamer, the Express shipments would require to leave St. Catharines on Thursday. The same steamer will be reached by refrigerator car freight service, leaving on Wednesday. The refrigerator car can be switched alongside the steamer at Montreal. We believe that the matter of cool shipment is of greater importance than one day more or less in transit.

**NINETY ACRES LAND**, two houses, fifty acres in Peaches; twenty acres, Berries, Plums, Apples; ten, Woods. Mile to station. Twenty thousand. Seventy acres land, fine brick house, barn, eight thousand seven hundred. Ten fine small fruit farms.—Widdicombe, 21 James, St. Catharines.

**WILD LANDS** in blocks of 80 to 5,000 acres, in West Kootenay, British Columbia. Price depends on accessibility, value of timber and percentage of good land. State what is wanted, and terms preferred. If maps wanted, send \$1.00. Enquiries wanted from prospective purchasers, not agents. J. D. Anderson, Government Surveyor, Trail, B. C.

**Items of Interest**

A writ has been issued by The King Construction Co., of Toronto against W. F. Adams, and A. S. Jennings & Co., of the same city for infringement of patents No. 70769, and 97843, granted respectively in the years 1901 and 1906 by the Canadian Government to Rebt. W. King, controlled in Canada by the Company above referred to. This action results from an exhibition of a sash bar bracket at the florists' convention lately held in St. Catharines, Ont.

Send your consignments of APPLES to the Home Country to

**RIDLEY HOULDING & CO.**  
COVENT GARDEN  
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who specialize in APPLES and PEARS during the Season. Personal attention, prompt account sales and remittance.

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**1,000,000 Perennials**

One of the most complete collections in the world, suitable for all soils and climates.

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**IMPORTANT AND USEFUL BOOK**

**THE CANADIAN APPLE GROWERS' GUIDE**

This is the latest and most up-to-date work on Apple Culture now before the public. It has been prepared by Linus Woolverton, so long secretary of the Ontario Fruit Growers' Association and Experiment Stations, from a lifelong experience in growing and shipping apples.

Profusely and beautifully illustrated, a book which should be in the hands of every person interested in Apple Growing. The best book on the subject ever issued.

ORDER NOW. Cloth and gold, \$2.00, or postpaid, \$2.25.

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29-31 Richmond Street, West, - TORONTO, ONT.

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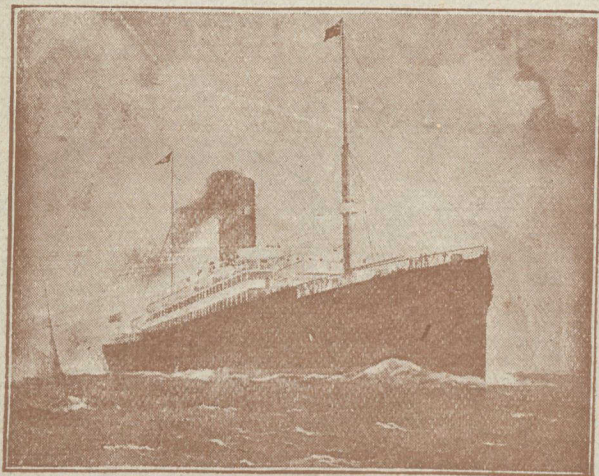


Because of their shape, plates of "Bissell"

Orchard Harrows turn over soil cleaner, better than you've been accustomed to have it done. Attach wings and Harrow extends out 12 ft. or more to cultivate under limbs of trees—closes up narrow enough to cultivate between grape vines. Combination Harrow too—reversible from "Out Throw" to "In Throw." Low seat, well-braced frame. Ask your dealer for information or write Dept. N. T. E. Bissell Co. Ltd., Elora, Ont.

See Page vii for cut of Garden Disc Harrow.





# DOMINION LINE

## MONTREAL TO LIVERPOOL

S.S. Canada, Sept., 10th                      S.S. Megantic, Sept. 17th  
 S.S. Dominion, Sept. 24th                  S.S. Laurantic, Oct. 1st  
 S.S. Canada, Oct. 8th

(All above Steamers carry passengers)

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Favorite steamers for all kinds of perishable cargo, having fan ventilation, cold storage and cool air chambers.

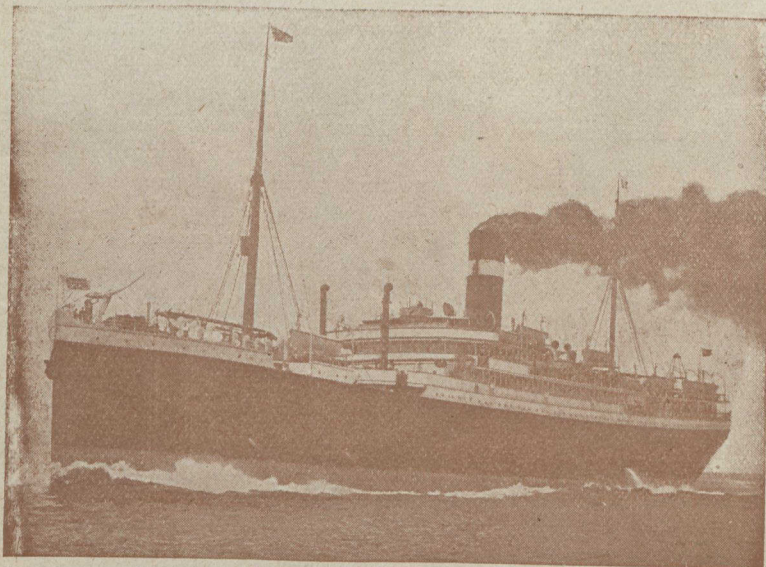
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The First Transatlantic Line to adopt Turbine Engines.

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Has Spared No Expense in Equipping Cold Storage, Cool Air and Ventilated Chambers, for the carriage of Fruits, Meats, Butter, Cheese and other Perishables.

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 VICTORIAN Turbine Engines                HESPERIAN } Twin Screw  
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Record Passage Liverpool, 6 days 15 hours, 3 minutes.  
Record Passage Glasgow, 6 days, 18 hours.

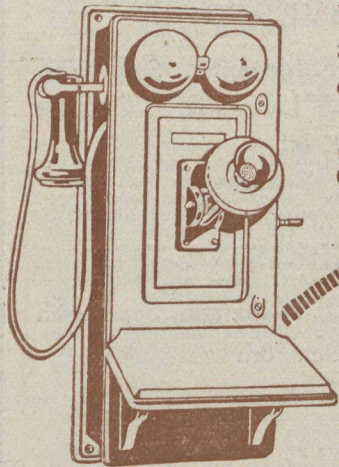
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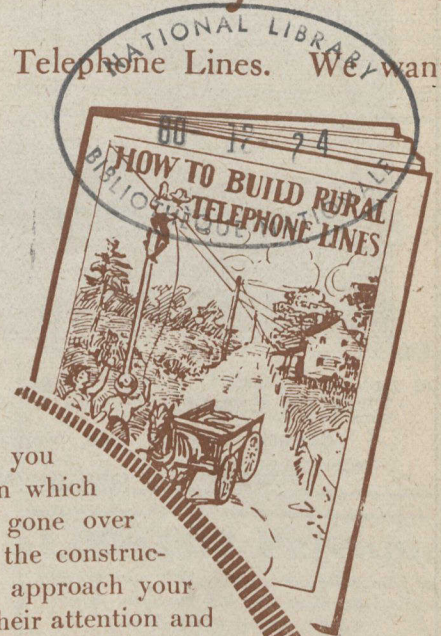
# We Want To Send This Book To Every Farmer In Whose Neighborhood There Is No Rural Telephone System!

WE want every farmer in Canada to know how to build Rural Telephone Lines. We want to put the whole story of Rural Telephones before you so that you will have all the details at your fingers' ends and so that you can go out among your own neighbors and organize a telephone system in your own community.



## Send Us YOUR Name And Address—

and we will be pleased to send this book to you absolutely free. On account of the clear manner in which it has been written, we believe that after having gone over this book carefully, you will know enough about the construction of Rural Telephone Lines, to enable you to approach your neighbors with every vital fact in detail, to command their attention and to secure their interest and support on a telephone system for your own community.



### Our No. 1317 Type Telephone Set

is the set with the famous No. 48 type generator, the most powerful and efficient generator on the market to-day; with a ringer having 3-inch gongs, the loudest ringing gongs ever put on any telephone set; with the standard long distance type transmitter and receiver. This set, which was specially designed for Rural Telephone work, by the most expert telephone engineers on this continent, is told about fully in the book.



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is a story that is full of interest and of vital importance to every farmer in Canada. We believe that every farmer realizes the advantages of a Farm Telephone; but we also believe that few farmers realize the simplicity of organizing and constructing a Rural Telephone System of their own. The details of organization are simple, the costs of installing the system are low and the only reason that a greater number of communities have no rural system of their own, is due to a lack of accurate knowledge on the question of the Rural Telephone.

We offer you this book that you may possess this knowledge; for, sooner or later, a Rural Telephone System is going to be started by you or somebody else in your own neighborhood. Now is the time for you to get busy. Write to-day for Bulletin No. 240. REMEMBER WE SEND IT FREE.

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