

# The Canadian Horticulturist

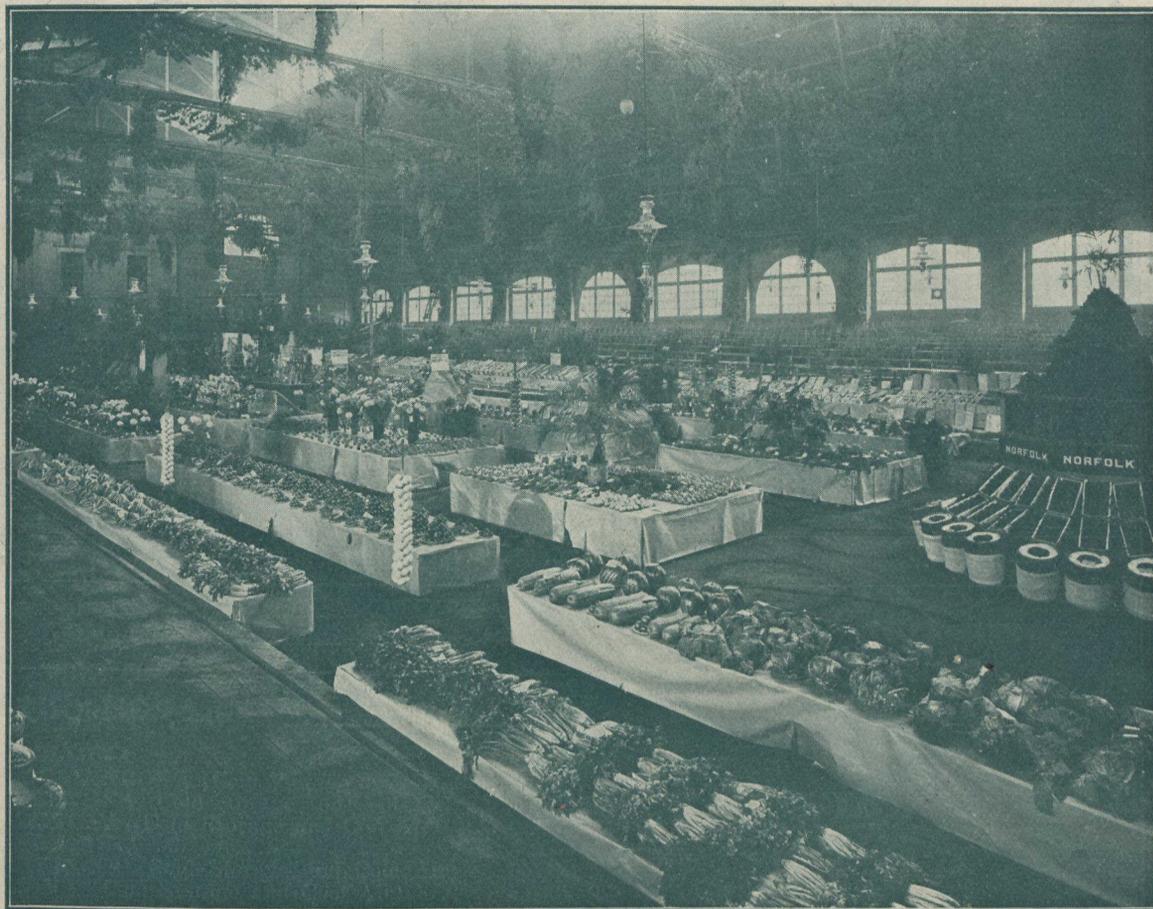
DECEMBER, 1909

Volume 32, No. 12

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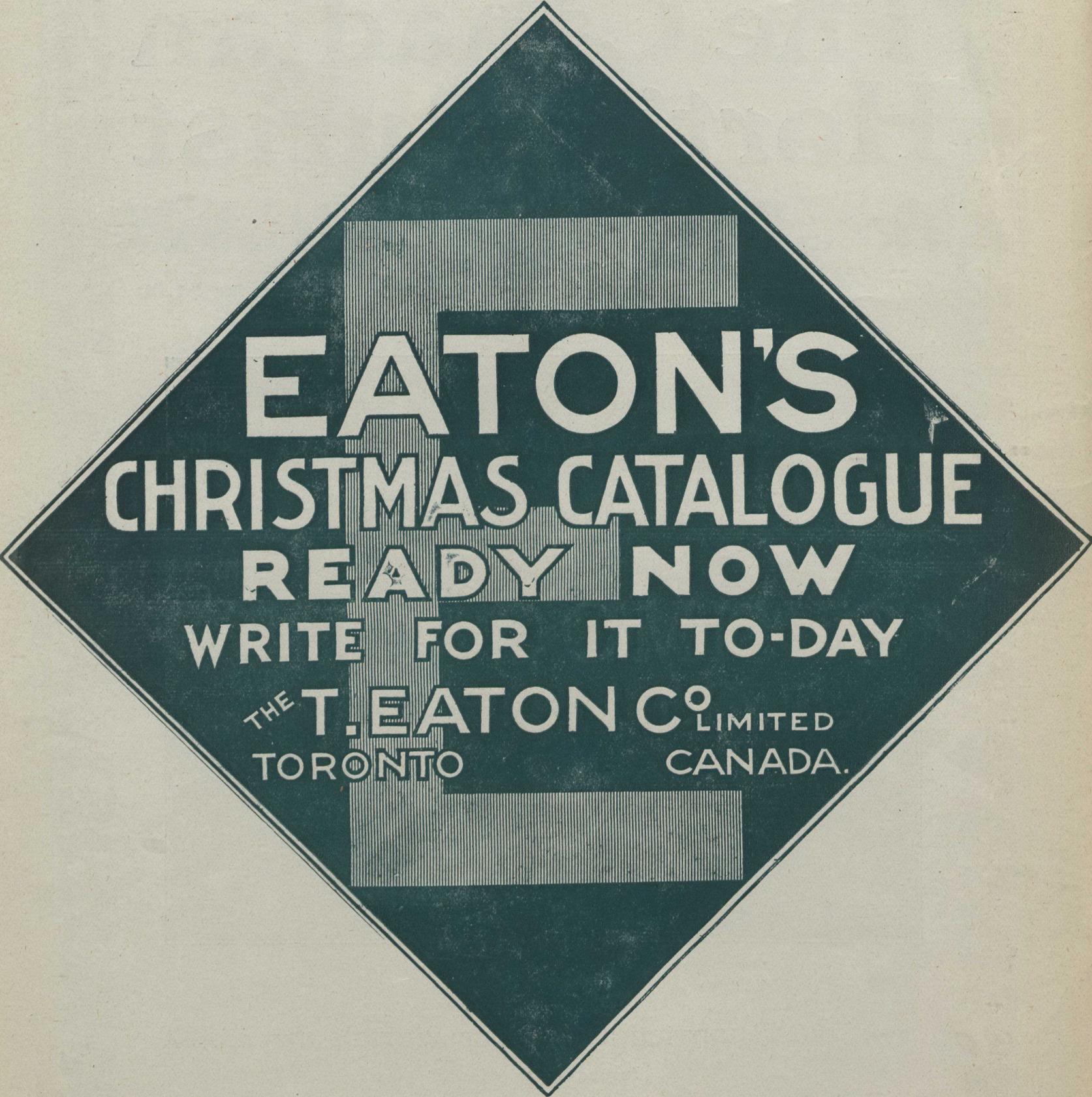
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# The Canadian Horticulturist

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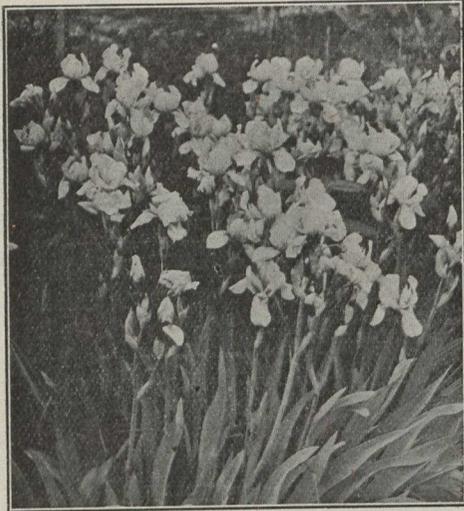


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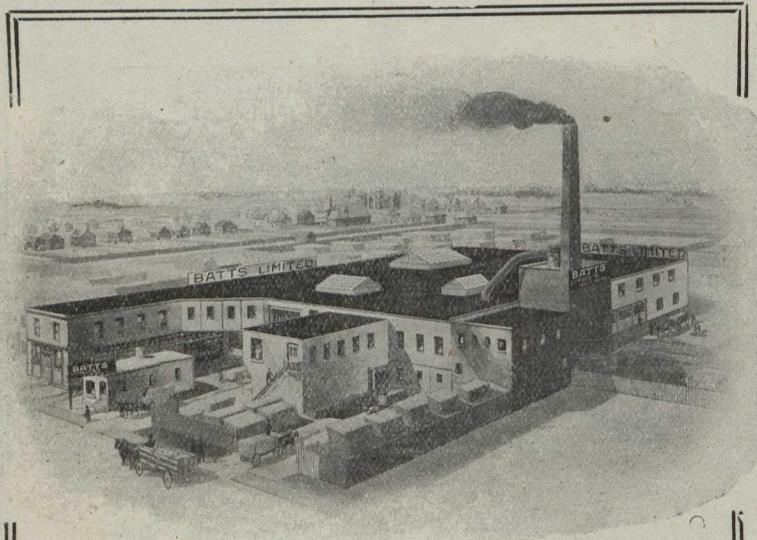
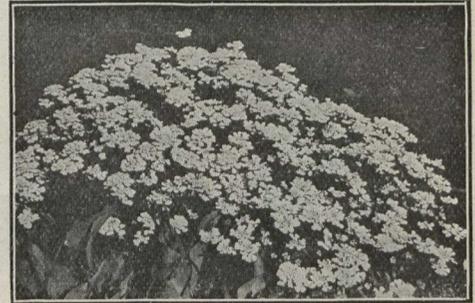
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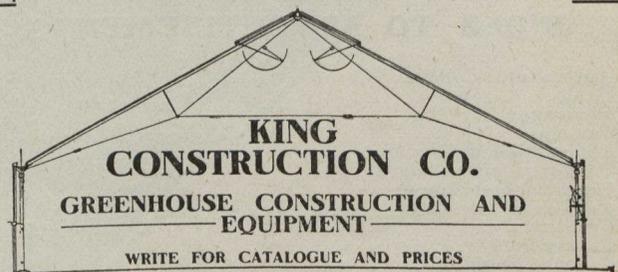
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# The Canadian Horticulturist

Vol. XXXII

DECEMBER, 1909

No. 12

## The Cold Storage of Apples and Other Fruits\*

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

ANYONE who has followed the matter closely, must be convinced that there is a fine opportunity to improve the fruit trade of Ontario by the intelligent employment of cold storage and refrigeration in transit. I could quote many instances where the value of apples stored or shipped in cold storage has been greatly enhanced. As an instance, a sales catalogue from Glasgow of recent date, shows that cold storage Kings ex- S. S. "Pretorian," fetched thirty-one shillings, while the highest price paid that day for the same variety shipped as ordinary cargo in the same steamer was twenty-four shillings and six pence. Other varieties show similar differences: Wealthys in cold storage sold for twenty-four shillings, as compared with fourteen shillings and six pence for those carried as ordinary cargo, and so on. I quote these figures merely to indicate the possibilities of shipping early apples in cold storage and not as an attempt to prove that such results could always be obtained.

As fruit growers, rather than shippers, you are more interested in cold storage on land, and I shall confine myself to that phase of the question and get as near to the orchard as possible, for that is where cold storage will be the most effective. There are, however, some things which cold storage will not do and it is just as well that we should have at the beginning a clear understanding of its limitations as well as its possibilities. Reference has frequently been made to the large quantities of apples which are wasted every year in Ontario orchards, especially when there is a heavy crop, and it has been urged that if cold storage were available, all this enormous loss would be avoided. I need hardly say to experienced fruit growers, that such an assumption is an absolute fallacy; that it is not cold storage which is needed primarily, but better orchard methods and management. The fruit grower who depends on cold storage to preserve windfalls, worm-eaten, bruised and skin punctured ap-

ples from early decay, will be grievously disappointed.

The lowest temperature which it is possible to employ does not absolutely stop either the life processes of the apple or all of those destructive changes which include various forms of rot, etc. It only checks them, but some forms of decay are checked more effectively than others. Experiments at Geneva showed that pink rot, black rot and bitter rot developed very little in cold storage,

but that the ordinary soft rot, which is due to the growth of the common blue mould (*Penicillium glaucum*) and which is probably the most common form of apple decay is not prevented to any marked extent. Fortunately, the apple resists the attacks of this mould, unless there has been some puncture or weakening of the skin due to fungus or bruising, until it begins to deteriorate with old age. The injury need only be of the slightest character—a mere pin prick, for instance—to provide an open door for the entrance of the spores of the destroying mould.

If you place over-mature or ripe apples in cold storage, they are bound to go down in a short time. Let me here digress to make myself clear on the two terms, "maturity" and "ripeness." I would call an apple mature when it is fully grown and well colored for the variety, and call it ripe when it reaches its best condition for eating. The length of time which elapses between maturity and ripeness varies greatly according to variety. In some earlier or quick ripening varieties, it is only a matter of days, while in others, it becomes a question of weeks and even months.

The foregoing is probably more of a practical definition than a scientific one, for I suppose nature intends all apples to ripen fully on the trees, but man with his perverseness has so shifted things around that he is growing many varieties in latitudes and climates where they cannot possibly do so. I do not say there is anything wrong in that. We call such apples mature when they reach the stage in which we are accustomed to find them as taken from the tree.

**EARLY VARIETIES SHOULD NOT BE HELD**  
The earliest varieties should be rushed to the market as quickly as possible to take advantage of the early trade. Prompt chilling before shipment is all that cold storage should be expected to do for apples of this class. Even with varieties whose qualities would commend them in competition with others past their regular season, some caution is necessary, because if an apple is carried much past the time when experience has taught every one that it has reached its best and may be expected to "go down", dealers would hesitate before handling it.

### Read and Heed

THE CANADIAN HORTICULTURIST is a splendid publication ably edited and artistic and attractive in make up. I would urge all the horticultural societies in Ontario to subscribe for this magazine for all their members. It gives the best value for the money. Some horticultural societies do not subscribe for any horticultural publication. Others are taking foreign periodicals. THE CANADIAN HORTICULTURIST is needed in Canada. It is the only horticultural publication of the kind in the Dominion. Were it not for the fact that thirty-five or forty horticultural societies now subscribe for THE CANADIAN HORTICULTURIST for all their members, it could not be published and Canada would be without a horticultural magazine. Our societies should look at this matter not only from a local standpoint but from a national standpoint as well and be willing to lend a helping hand to a publication that is working vigorously and courageously in the interests of all the societies. Remember that the field in Canada is restricted. In the United States it is practically unlimited. Let us stand by and support THE CANADIAN HORTICULTURIST if we are in favor of Canada for Canadians.—Major H. J. Snelgrove, Cobourg, Ont., in his presidential address before the Ontario Horticultural Association at its recent convention.

\*Extract from a paper read at the convention of the Ontario Fruit Growers' Association in Toronto last month. This will be followed in next issue by Mr. Ruddick's remarks on the pre-cooling of fruit and on the construction of cold storage warehouses and cooling rooms.

It is not an easy matter to determine experimentally as to the relative keeping quality of different varieties of apples in cold storage, because of the difficulty of securing the different varieties at exactly the same stage of maturity, and unless this is done, any test is unreliable and the results are misleading. Generally speaking, those varieties which ripen most slowly will keep the longest.

Some varieties hold their quality much better than others. That is to say, cer-

tain varieties retain their crisp juicy texture and characteristic flavor almost to the end, while others become mealy and insipid long before the structure of the apple breaks down. Of course, they act the same way in any kind of storage. This, it seems to me, is a rather important consideration.

#### LENGTH OF TIME IN COLD STORAGE

It is safe to say that any variety of apples may be kept as long as it is commercially desirable to do so. Late win-

ter apples may be kept a year without difficulty; fall and early winter varieties, from two to four months. Canadian Fameuse of the previous season's growth were shown in good condition at the Dublin Exhibition in the month of August. Of course, only a percentage of those originally stored were sound at that time, and the circumstance does not prove that it would pay to keep the Fameuse to that date.

(To be continued)

## Over-planting of Strawberries and the Western Markets

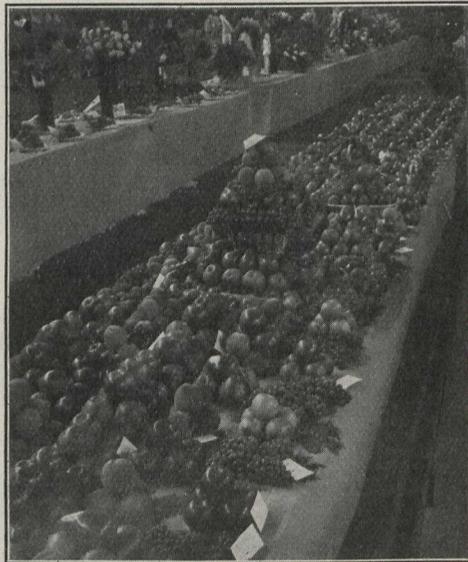
AT the convention of the Ontario Fruit Growers' Association in Toronto, last month, an address on the above subject was given by Mr. Robert Thompson, of St. Catharines. The following is a synopsis of it:

"In taking up this subject we must look at it from a disinterested standpoint. Strawberries are not overplanted, but there is an under-distribution. The great consuming public, except in a few centres, have not begun to get all of the berries they want, and, in many instances, they have had to pay very high prices. Of course the fruit growers, who have been induced by the fairy tales of the real estate agents and of others who have land to sell (and who are not over-exact in representations of profits derived from fruit growing) to purchase land at high prices expecting to obtain fancy prices for their fruit, will say that berries are overplanted and prices too low. But we must remember that berries can be grown over a large area of our country and, if there should at any time be too large profits, there will be many to enter into the production. We must expect to be prepared to sell at a reasonable price and at the same time be prepared to use common sense and good judgment in disposing of the fruit.

"The grower has many troubles to contend with. If he has by good care and cultivation secured a good crop, he need not feel that he is bound to sell to the canner or the jobber at the first price offered, if it is not deemed sufficient. The general market will always pay a fair average. If we have the promise of a full crop, we have growers who always get cold feet, and rush to sell at any price, and if they can get the promise of any rise in the market, they think they are making a good deal, when as a matter of fact, if any number sell this way they make it impossible to have any rise in price.

"Take the past spring, for example. The canners had sold all of their stock of canned strawberries and were bare but they anticipated a good crop of berries and put the price of berries from three and three-quarters to four and a half

cents a box. Many growers thought they had to take this price and sold; others held off. Owing to the cold weather, berries ripened late and came in a rush.



Two General Displays at Toronto Show

The very attractive display of mixed fruits in the foreground was put up by the St. Catharines Cold Storage and Forwarding Co., and won first prize. At the farther end of same table is the exhibit of the Grantham Fruit Growers' Association. See page 271.

Prices fell for three or four days and the factories bought at from two to three cents a box. Of course, this was a serious loss to the growers who so sold. Owing to the low offers, most of the berries were shipped and the shippers did better than factory prices.

"I have investigated the sales of many growers, and find that in every instance when they put up their berries properly they made more by shipping. I will give one grower's returns from this—about medium returns—and he shipped all of his crop to Toronto to commission houses, so that he had no fancy outlet. He had 512 crates and they netted him four and one-sixth cents a box after paying for crates, boxes and charges. He says that he had four advantages over the factory: First, disposal of whole crop; second, cash every week (impor-

tant); third, handling everything new (very important); fourth, no canning factory abuse (most important). When the berries were pretty well picked, the factories had not nearly filled their orders and the pack of strawberries was again short.

#### THE NORTHWEST MARKET

"In regard to the northwest market as an outlet: I feel confident that within a few years, that market will take a lot of our berries. Our growers sent out three cars of berries this season with, on the whole, fair success financially and gained a lot of valuable experience. Before sending the berries our growers were skeptical as to the berries carrying safely. The consumers in the west were doubtful also. After the berries were shipped, bought and used, we found that the berries would carry safely, that the buyers found that our berries were better in flavor and would stand up long enough to use and can, and they are prepared to buy Ontario berries more largely in the future.

"One word as to that market: Our association sent to the west this season nearly 150 carloads of small fruits, and there have been almost 500 cars sent from the Niagara district. Our experience is that if we go after this market in a business-like manner and arrange to supply the public regularly with Ontario fruit that the people out there are ready to give our fruit the preference; but to succeed we must use good packages, load the cars properly, see that the fruit is cooled quickly, have the fruit picked carefully, and at proper stage of ripeness for each variety.

"We must also see that the Railway Commission will have the rates lowered to points west of Brandon. The rate of from \$1.00 to \$1.60 a hundredweight to all points west of Brandon is largely prohibitive. If we can secure rates to the western points, in proportion to what we have to Winnipeg, Portage la Prairie and Brandon, inside of three years, more fruit will be shipped west from Ontario than will be shipped to Ontario and eastern markets."

# How Grapes are Grown in the Chautauqua Grape Belt\*

D. K. Falvay, Westfield, New York

**T**HERE are 35,000 acres of bearing vineyard in the Chautauqua grape belt. The Concord is the standard variety. Some Niagaras are raised, but of late years they have not found a ready market, the price rarely being equal to that of the Concord. Only very few of other varieties are grown, and are mostly sold in local markets.

Our grapes were formerly set eight feet in the row, the rows being nine feet apart. For the past few years the roots have been set six or seven feet apart in the row, the object being to put up fewer canes from each vine and still maintain an average. The posts should be between the third and fourth vines to prevent the wires from sagging when loaded.

The best roots obtainable should be purchased. They are now so graded that those designated "Extra Number Ones" are the kind to get. Other grades are set, but the best are always the most satisfactory. During recent years newly set vineyards have not done as well as in former years. The cause has not been definitely determined. It is believed by some that the vitality of the grape cuttings has been weakened by the general deterioration of the vines from which the grape bush is taken for cuttings. With all the fungous diseases that infest the vines, the grape root grower should use extra precaution in obtaining grape brush for cuttings. No wood should be used unless taken from sprayed vineyards.

These roots are set very deep, from fourteen to eighteen inches below the general surface of the soil. As the ground is worked, the high centres are gradually worked toward the roots. Corn or potatoes are usually planted between

the grape rows the first year. The first year's growth is cut back to two or three buds the second spring. The third spring the canes are tied up; not more than two canes should be used. One and a half canes are better, that is, one cane to the top wire and a shorter one to the bottom wire, the shorter cane making the better wood growth for the following year. Invariably the best growth of wood is near the top of the cane, and if both canes are tied to the top wire the growth of wood will be too far from the ground to make a good shaped vine. The first wire is usually twenty-four inches from the ground; the second wire is from twenty-six inches to twenty-eight inches from the lower wire.

The canes are tied with No. 21 wire cut about five inches long, and so twisted around the cane and trellis wire as to come off with the old wood. String is used when necessary to tie any of the canes to the lower wire. Tie a loose knot to prevent girdling. We tie but once, unless some of the vines should be broken down with wind or other causes. A good tier can tie an acre a day in a vineyard with four canes to the vine. There are from 540 to 600 vines per acre according to distance apart in the row.

It requires about six years to get a strong vineyard; that is, one that is capable of supporting from four to six canes. The constant temptation among vineyardists is to tie up too many canes on young vines; and by so doing they injure their vineyards seriously.

In old vineyards we usually put up from four to six canes if the vine will support that many. The judgment of the trimmer must be exercised constantly. He must treat each vine individually, and not only train for the present year but also must have in view which canes and buds will produce wood in the proper place for the following year's crop.

An extra good trimmer will trim an acre of heavy vines in from ten to twelve hours. The work is done during the winter months. After the brush is pulled from the wires it is drawn out by a team hitched to a long pole. Two men with a team can pull out and burn the brush from ten to twelve acres in a day. The work in the vineyard is all done by horse power except the hand hoeing. The one-horse plow, the gang plow, the spring-tooth harrow, and the two-horse vineyard cultivator with the disc wheel to guide it, are the principal tools used during the season. The horse-hoe, of course, is used for cleaning out under the wire.

The Chautauqua grape grower has the method of cultivation reduced to a science. Nowhere are grapes cultivated so cheaply or rapidly as in Chautauqua County.

A vineyard should be gang-plowed twice during the season, horse-hoed and hand-hoed once, and be cultivated every ten days, at least, up to August 10 or 15. The cost of trimming, tying and care should be about \$13.00 an acre up to time of harvesting. Vineyards that are infested with grape pests, such as the root worm and leaf hopper, require special treatment—that is, cultivation and spraying—which adds to the expense, quoted.

Cox's Orange Pippin, an English apple greatly in favor with English consumers, is being planted at Vernon, B. C., and other places in the Okanagan Valley for export. Newtown Pippin promises to succeed well in Kelowna district.

Photographs of orchards and of orchard operations, such as spraying and pruning, are wanted for publication in these columns.



A Glimpse of the Vineyards in the Chautauqua Grape Belt of New York State where 35,000 Acres of Grapes are in Bearing.

# How to Make Work of Horticultural Societies Effective\*

Prof. H. L. Hutt, Ontario Agricultural College, Guelph

THE sixty or more horticultural societies of the province of Ontario are doing a splendid work for the general uplift of the communities where they are organized. The aim and object of these societies as stated in the Act under which they are organized is to encourage improvements in horticulture as follows:

(a) By holding meetings for discussion and for hearing lectures on subjects connected with the theory and practice of improved horticulture.

(b) By promoting the circulation of horticultural periodicals;

(c) By importing and otherwise procuring seeds and plants of new and valuable kinds;

(d) By offering prizes for essays on questions of scientific inquiry relating to horticulture;

(e) By awarding premiums for the invention or improvement of horticultural implements and machinery for the production of all kinds of vegetables, plants, flowers and fruits, and generally for excellence in any horticultural production and operation.

Many of the societies are accomplishing probably all or more than the Act originally aimed at. There are others, however, which we believe are not yet living up to their full opportunity. It is for the purpose of helping these to do better that we have consented to lead the discussion upon this subject.

The twofold purpose of the work of the horticultural societies is to benefit the members themselves and the whole community about them. The success of the work is usually in direct proportion to the unselfishness of the members in seeking their own good and their desire to benefit the community at large. We wish to call attention first to some of the means by which the work of the society may be made a benefit to the members.

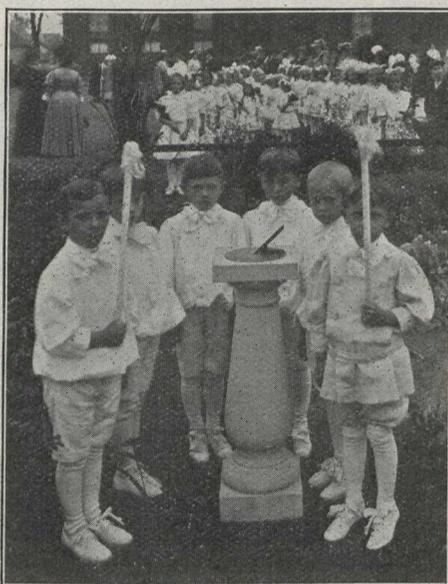
First, by holding at least four or five meetings during the year at which timely topics are introduced and fully discussed, the members being encouraged to introduce subjects themselves and take an active part in all discussion.

Second, by furnishing good literature in a choice of two or more of the leading horticultural magazines, or good horticultural books, either as a premium or at a greatly reduced rate.

Third, a choice of a small selection of good reliable seeds, bulbs, plants or trees. The premium list should be prepared with a view to enabling each member to choose something of particular value to himself, either for house or outdoor culture. Great care should be taken in the selection of varieties that they are suitable for the locality.

There is a danger, however, of societies putting too much stress upon their premium list, thus over-emphasizing the importance of the value of the work to members and not emphasizing enough the good the society may do as an educational institution to encourage the work through the whole community. With respect to the benefit of the societies to the communities in which they are organized I would like to call attention to some of the means by which the work may be made more effective:

First, by interesting school children in the work through the distribution of seeds, bulbs and plants for growing



The Dedication of the Sun-dial

An interesting ceremony for children in school gardens as described by Miss Louise Klein Miller of Cleveland, Ohio, in an illustrated talk at convention of Ontario Horticultural Association. The proceedings of the convention are reported on another page of this issue.

either in their home gardens or school gardens wherever these may be established. In connection with such a distribution, there should be held a flower show at which the children bring their flowers and plants for competition, thus arousing enthusiasm and keeping up the interest in the work.

Second, interesting citizens in beautifying their home surroundings by instituting lawn and garden competitions. Such competitions have proved valuable in encouraging civic improvement at Guelph and in many other sections of the country, and might be adopted to advantage in many others.

Third, interesting all citizens by meetings and the use of the press in the general improvement of the streets and walks, grading and keeping of boulevards, planting and care of shade trees, removal of unsightly fences, buildings and bill boards, checking telegraph and

telephone companies in their unlawful mutilation of shade trees, and pressing for the removal of overhead wires wherever they enter the town limits or interfere with street trees.

These are some of the objects which every horticultural society should aim at for the good of the whole community. To accomplish the best results there should be united effort. The officers of the society should try to get the hearty co-operation of every influential citizen and organization in the community. There is strength in numbers, and horticultural societies may add greatly to their strength by getting the co-operation of teachers, school boards, boards of education, boards of trade, town or city councils and, especially, committees, boards or commissions having in hand the care of parks, streets and boulevards.

I know of several small struggling societies with but limited funds at their disposal, which are undertaking the task of making and maintaining town parks for the good of the citizens generally. Such efforts are certainly commendable, but we believe in some cases more effective work could be done by the societies seeking for the appointment of park boards or commissions, under the Ontario Parks Act, which provides for the appointment of a park board or commission by the council in any town or city where the citizens duly petition for the same. This Act places at the disposal of such boards funds to the extent of one-half mill on the assessment. Such boards, therefore, are in a much better position to undertake the work of making and maintaining parks and boulevards than a horticultural society with but meagre funds.

As to what such boards can do in the improvement of towns and cities through the improvement of boulevards and planting of trees, is not as fully appreciated here in Ontario as it should be. In this respect, we in old Ontario, have much to learn from the newer towns and cities of the western provinces. In the cities of Winnipeg, Brandon, Regina, Calgary, Edmonton, Vancouver and others, park boards level and grade the boulevards from the curb to the property line, seed, mow and, where necessary water the grass on such boulevards. They are also planting trees and shrubs upon them in a way that these western cities will soon be as far ahead of our eastern cities from a standpoint of beauty and neatness as we can well imagine.

There are one or two other particulars that I wish to refer to in which the work of the societies may be made more effective. One is by the more extensive use of printers' ink in properly advertising meetings and reporting the proceedings

\*A paper read at the recent convention of the Ontario Horticultural Association.

more or less fully in the local papers. We find, as a rule, the societies which are doing the best work are those in which the newspaper men are prominent members, where they use their ability in this particular to place the work prominently before the public. A strong effort should be made by every society to secure the hearty co-operation and support of the local newspaper men, and where these are not to be depended upon, the secretary should see that meetings are duly

advertised and good reports published.

One other point I wish to refer to, and that is that every society, particularly the weaker ones, should endeavor to get in touch with what other and stronger societies are doing, by sending one or more delegates to the annual convention of the Ontario Horticultural Association that they may take note of what is being done elsewhere, and be in a better position to help on the work in their own community when they return.

## List of Best Phloxes

At the convention of the Ontario Horticultural Association in Toronto, in November, the committee on plant nomenclature made the following report: "The members of the committee are gratified to learn that within the past year a movement has been inaugurated in one or more of the colleges of higher learning in this country to give horticulture a place in the curricula of these institutions. This movement is still in its incipient stage. Your committee recommends the movement as one deserving of all the encouragement that can be given to it by this association. It is hoped that the day is not far distant when it will be generally recognized that to know the principal economic and ornamental plants suitable for growth in this country—to know them not only as to their genera and species, but to know the important varieties accurately by name, including the correct spelling and pronunciation of the names, and also to know the chief characteristics that distinguish one variety from another,—is an essential part of a liberal education. This feature of education if it be intelligently promoted and liberally supported must assuredly have the effect of adding much to the pleasure and happiness of the people of our country.

"The efforts of your committee in the past year have been confined chiefly to the completion of the lists of four flowers, viz., perennial phlox, dahlia, gladiolus and iris,—referred to in last year's report as being incomplete. It is hoped that these lists will be helpful to the members of the horticultural societies, and the publication of them will lead to a large increase in the planting of these important flowers."

### PHLOX PANICULATA (DECUSSATA)

Antonin Mercie.—Height 3½ feet; flowers, bright violet suffused with white, large, white centre.

Argon.—Height, 2 feet, 9 inches; flowers, lilac pink suffused with white with narrow rosy ring about centre.

Berenice.—Height, 3½ feet; flowers, pure white.

Cameron.—Height, 3 feet; flowers, pure white with bright purplish red centre.

Capt. Wilhelmy.—Flowers, Tyrian rose.

Consul H. Trost.—Flowers, pure red with French purple centre.

Coquelicot.—Height, 2½ feet; flowers, orange scarlet with purplish centre.

D. Bois.—Height, 2½ feet; flowers, bright rose magenta.

Daniel Lesueur.—Height, 3 feet; flowers, bright violet and white.

Eclairer.—Height, 2½ to 3 feet; flowers, bright rose magenta shading lighter.

Etna.—Height, 2 feet 8 inches; flowers, bright crimson red with darker centre.

Faust.—Height, 3 feet to 3½ feet; flowers, pure white with large mauve centre.

Fiancee.—Height, 3 feet; flowers, white.

Jocelyn.—Height, 2 feet to 3 inches; flowers, crimson carmine shading paler.

Lamartine.—Height, 3 to 3½ feet; flowers, bright violet with large white centre.

Le Cygne.—Height, 3½ to 4 feet; flowers, creamy white.

Mounet-Sully.—Flowers, old carmine red with crimson carmine centre.

Pantheon.—Height, 2 to 2½ feet;

flowers, crimson pink suffused white about centre.

Pyramide.—Height, 3 to 3½ feet; flowers, pure white.

Selma.—Flowers, lilac rose with conspicuous crimson eye.

Sir Richard Wallace.—Height, 3½ feet; flowers, pure white with rosy magenta centre.

Tapis Blanc.—Height, 3 feet; flowers, crimson pink suffused with white.

Tragedie.—Flowers, carmine with darker centre.

Wm. Robinson.—Height, 3½ feet; flowers, violet rose suffused with white, darker centre.

### PHLOX GLABERRIMA (SUFFRUTICOSA)

Beauty of Edinburgh.—Height, 2 feet; flowers, white shaded with light lilac.

Burns.—Height, 2 feet; flowers, rosy purple.

Clouded Gem.—Height, 2 feet; flowers, white shaded with rosy purple.

Forerunner.—Height, 3 feet to 3½ feet; flowers, creamy white.

Snowden.—Height, 2½ feet; flowers, pure white, rose centre.

Miss Lingard.—Flowers, white with lilac eye.

### EARLY BLOOMING PHLOXES

*P. amoena*, Simms.—North America; height, 5 to 6 inches; flowers, bright rosy pink.

*P. divaricata*, L. (Wild Sweet William).—North America; height, 6 to 12 inches; flowers, lilac to mauve.

*P. ovata*, L. (Syn. *P. carolina*, L.).—North America; height, 12 to 14 inches; flowers, deep pink.

*P. subulata atropurpurea*.—Height, 6 to 8 inches; flowers, purplish rose.

*P. subulata* Newry Seedling.—Height, 6 to 8 inches; flowers, lilac, paler towards centre.

*P. subulata verna*.—Height, 6 inches; flowers, deep rose.



Summer House and Pergolas, with Children at work in one of the School Gardens of Cleveland, Ohio.

This school was referred to by Miss Louise Klein Miller, Curator of School Gardens, Cleveland, in one of her addresses before the convention of the Ontario Horticultural Association in Toronto last month. See report of convention on page 277.

# The Arrangement of a Flower Garden\*

M. E. Blacklock, Toronto

THESE are certain underlying principles that make for beauty, and having due regard for them, we can each work out our own ideas, and not be mere servile imitators of others. Very many people have exquisite flowers, in endless variety—very few people have really beautiful gardens. A great deal more depends on the laying out of a garden than on what is grown in it. Two or three shrubs and a clump of hollyhocks, if well placed, may give the greatest pleasure and satisfaction to the owner, and to every passer-by, but, if the shrubs are dotted over the lawn, and the hollyhocks planted in a straight row, while you might admire the individual flowers, the effect would be irritating to any one with any artistic feelings. A clear central space is needed in order to see things with a little distance to add to the enchantment, and, planting in straight rows is the least beautiful way of growing flowers.

What is true of shrubs being dotted over a lawn, is equally true of flower beds. If one has a very small lot, the temptation to increase the garden's capacity in this way is a very natural one, but it is far better to increase the width of one's borders and leave the central space for grass. The small lot of, say, twenty by fifty feet long, does not give room for many shrubs, but two or three should go in at the end of the lot, or if there has to be a small plot for vegetables, of, say, twenty feet square, at the end, then place your shrubs to hide the vegetable garden, and they will at the same time, form a back-ground for some of the flowers.

## CHOICE SHRUBS

A very difficult matter it would be, to choose three shrubs, and three only, but my first choice would be a Persian lilac—they are so graceful in growth and so prodigal of their gerat fragrant plumes of purple bloom—this I would put in the far corner. My next choice would be a rugosa rose (preferably a pale pink one) which would flower more or less all summer, after the wealth of June blossoms were past, and with its decorative rose apples and the glory of its autumn foliage, would be a constant source of joy to its owner. *Spiraea Van Houttei* would be the next best to have. If the lot were mine, small as it might be, I should add another lilac or two along the side, either "Marie Legraye" single white, or "Mad. Casimir Perrier" double white, and the dark purple "Congo" with its huge flowers."

## CLOTHING THE FENCES

The fences are the next important part to clothe. We have for the shady side the wild clematis (*C. Virginica*),

the climbing bitter-sweet (*Celastrus scandens*) and the other bitter-sweet with purple blossoms (*Solanum Dulcamara*) and the moon-seed (*Menispermum Canadense*) to choose from, also the good old Virginia creeper. These will all grow readily in fact, they will grow in either sun or shade, provided they have enough moisture at their roots. But honeysuckles (*Loniceras*) of all kinds prefer a sunny spot and so does the trumpet vine, and the new and charming *Polygonum baldschuanicum*, with its slightly rose-tinted buckwheat-like flowers. The homely old scarlet runner is a vine not to be despised in certain positions, (and its delicious beans add usefulness to its other good qualities); this with nasturtiums and morning glories form a trio of annual vines that are not fastidious and will grow for any one.

## THE BORDERS

With a good background of shrubs and vines, the borders almost arrange themselves. Plant your flowers where they are most likely to do well and, in nine cases out of ten, you will have them where they will look their best. For instance, the majority of lilies like their roots to be kept cool; therefore, put them where shrubs will give them a partial shade. Note the effect of lilies with shrubs for a background, and lilies planted in a bed by themselves in the open, and you will see how much more effective are the ones where the green background throws out their loveliness. A good large clump of Madonna lilies (*L. candidum*) in such a position, will rouse even the dullest clod to admiration. Poppies, on the contrary, like a sunny spot open to the passing breeze, which seems to love to wave their petals—and how gorgeous they look in such a position! So it is with other things. Nature seems to have specially designed them for certain places and though we may have succeeded in making them grow under different conditions, like the iris, which is naturally a water-side plant, and yet we see it flourishing in a dry sandy border, but we must own that it never shows off its beauty to such perfection as when it adorns the sides of a little slow running stream or is mirrored in the smooth waters of a pond.

In laying out your borders if you will only give up the "two by four" effect of straight lines, you will add immensely to the appearance of your garden. If you will think of your lawn as being a small lake, with vegetation of various kinds coming down to its edges—you can see in your mind's eye the kind of irregularities that would form an attractive picture,—which you can carry out in miniature. A lake never has an absolutely straight shore line,—there are

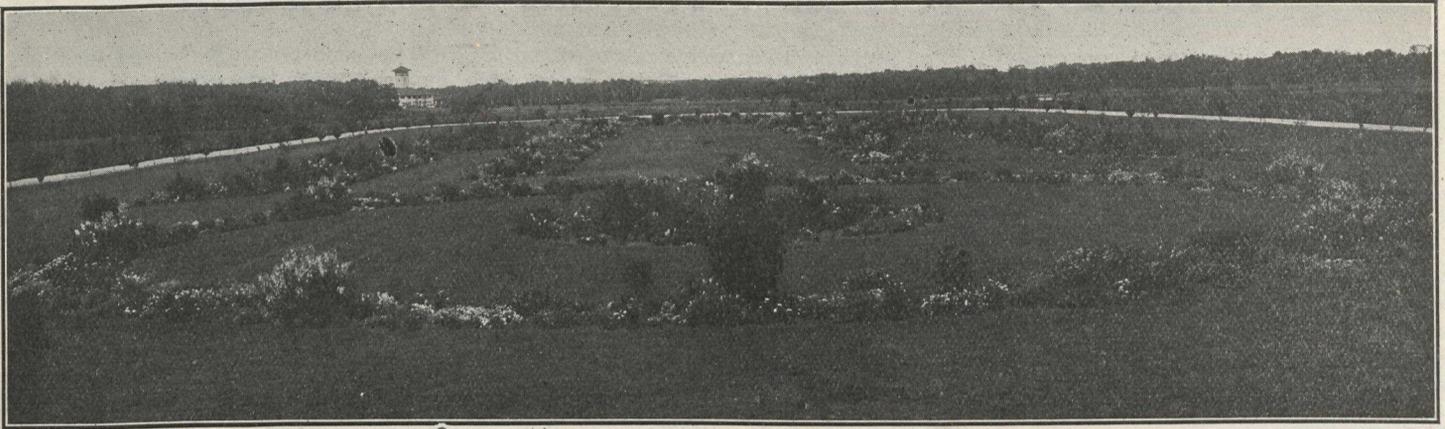
points jutting out here and there which form little bays, these will probably have bullrushes, or iris or some sword-leaved or arrow-leaved plants for their adornment, and so we get two ideas from our imaginings, a curving "shore line" (as it were) and the wonderful effects to be had from contrasting leaf forms and habits of growth.

You can have a beautiful garden, restful in the extreme, with but few flowers in bloom at any one time in it, if—and I must acknowledge it is a big "if"—you study the growth, form, texture and coloring of your shrubs and plants, so as to make the straight lines (it may be) of one, enhance the beautiful curves of another. For example, take the tall sword-shaped grey-green leaves of the water flag (*Iris pseudacorus*) grown near the beautiful arching leaves of richest green, of the lemon lily (or any other *Hemerocallis*) and observe the result; again, note how the dark, glossy deeply-cleft leaves of Fischer's monkshood (*Aconitum Fischeri*) act as a foil to the light green, much grooved leaves of the white day lily, (*Funkia subcordata* var. *grandiflora*); and still again notice the dainty beauty of the fine stemmed, cleanly cut, crimson-tinted leaves of the barrenwort overhanging a velvety grey carpet of mouse-ear chickweed (*Cerastium tomentosum*). And so it is with shrubs and trees. The somewhat gushing gracefulness of Van Houtte's spirea suggests companionship with the stronger, more reticent lilac—the one we can fancy talks, while the other listens quietly.

If you are the happy possessor of a large lot, there are endless possibilities before you. You can indulge in shrubs to your heart's content, and have plenty of room for bold groups of tall stately plants, such as foxgloves, hollyhocks, delphiniums, plume poppies, giant daisies, boltonias, heleniums, sunflowers, and so forth, which with vines and shrubs form a background for things of shorter growth such as peonies, iris, phloxes, campanulas, spireas, etc., down to dwarf plants like the polyanthus, primrose and daisy.

No border can be perfect without a plentiful supply of prostrate plants to carpet the ground. The earth itself is not particularly beautiful, therefore the less seen of it the better and if you put small plants of the white rock cress (*Arabis albidula*), both double and single, golden-tuft (*Alyssum sextatile*), white moss pink (*Phlox subulata alba*), lovely phlox (*P. amoera*), a lovely rose color, *Veronica prostrata*, sky blue, mouse-ear chickweed and the moss-like compact variety of cerastium (*C. arvense compactum*) white, alpine catchfly (*Silene alpestris*), white maiden pink (*Dianthus deltoides*),

\*A portion of a paper read at the convention of the Ontario Horticultural Association in Toronto last month.



The Arrangement of Beds in Assiniboine Park, Winnipeg.—A Plan for Planting on a Large Scale  
This park was designed by Mr. Todd, and its superintendent is Mr. George Champion.

magenta crimson, purple rock cress, of which there are many shades, chiefly of purple and lavender, soapwort (*Saponaria ocymoides*) pink—all these, with various stonecrops (*Sedums*) and houseleeks (*Sempervivums*), and sandworts (*Arenarias*) for very dry sunny spots, will give you a carpet of lovely flowers, and scarcely less lovely foliage. In addition to their beauty they can be relied on for keeping the roots of such plants as need mulching, from drying out, if planted close enough to them, and borders so covered need but little watering.

These same plants, if you want to have a "rock garden" will clothe the stones with beauty, for they are rock plants by nature, and there are a host of other charming dwarf plants which will only thrive under such conditions. Rock gardens need great care in the making and before attempting one, I would advise reading up thoroughly on the subject.

A straight wide path leading from one part of the garden to another might be made most attractive by building a pergola over it. In England, they are chiefly covered with roses, though occasionally other vines are used; here, it would no doubt be wiser to have clematis or other hardy vines, as well as a rose at each pillar, if we wanted it well covered, or grape vines alone would cover it well, and be both ornamental and useful.

Another fascinating adjunct to a garden is a pond, with bullrushes, iris and arrowheads growing on its farthest side and rounding one end, and water lilies floating about in the centre. Do not make the mistake of placing your pond in a conspicuous spot in the middle of the lawn—rather put it down towards the end of your lot and let shrubs screen it slightly, so that as you walk towards it you only see a glint of the water through the leaves. So situated, your friends will come upon it almost as a surprise—a little reserve in gardens is as necessary as in people. We soon tire of those in which we can see at a glance all there is in them. Ponds also require special care in the making.

## What Amateurs Can Do in December

**F** LOWERING and ornamental plants make excellent Christmas gifts.

Jerusalem cherries, genistas, cyclamen, potted bulbs, primulas, azaleas, rubber plants, araucarias, poinsettias, screw pines, Baby Rambler roses and Gloire de Lorraine begonias are some of the kinds, that may be selected. Place your orders with the florists early this month so that good specimens may be reserved for you. Should you have any of these plants grown by yourself, so much the better as they will be more appreciated when this fact is known by the recipient.

Books on gardening or fruit growing also make acceptable gifts. There are many to choose from. Send to THE CANADIAN HORTICULTURIST for our book catalogue. Why not give to your horticultural friends, one or two year's subscriptions to THE CANADIAN HORTICULTURIST? No gift would be more appreciated, and it would serve as a monthly reminder of the donor's good wishes.

### THE WINDOW GARDEN

Perhaps you are growing some bulbs for Christmas gifts. If so, give them constant attention so that they may give satisfaction. Keep them well watered, and not too warm. They delight in plenty of sunlight but the roots should be kept cool.

House plants should not be kept in an atmosphere that is too dry. Moist air and judicious watering at the roots are necessary. Cacti, century plants, hydrangeas and oleanders do not require much watering.

Geraniums, lantanas, heliotropes and all light-loving plants should be kept in the south window. Begonias and other plants that do best in sunlight only in the forenoon may be placed in the east window. When plants are grown in a western exposure, which usually gives too much heat, the temperature may be diminished by means of a curtain of thin muslin. Ferns, palms, aspidistras, rubber plants, lycopodiums, tradescantias and plants of like nature, will grow suc-

cessfully in a north window.

Avoid drafts of cold air on plants as they check the growth and often induce attacks of mildew. Ventilate on mild, warm days.

When repotting plants, place them in pots only one or two sizes larger than the ones in which they have been growing. It is a common mistake to use pots that are much too large.

Newly-potted plants should be watered once and thoroughly as soon as potted. Do not repeat until the soil shows signs of dryness.

### SOME WORK OUTDOORS

Cover the bulb beds if they have not been mulched already. Use strawy manure, spruce bows, leaves held in place by brush, or anything that will serve to hold back freezing in fall and prevent alternate thawing and freezing in the spring.

Protect the tender and half hardy perennials. Mulch the lily beds, especially the Japanese varieties.

Make a compost of the fallen leaves. It will come in useful next spring. Saw dead limbs from trees. Wrap and protect tender vines and shrubs. Lay down climbing roses that are not too old and mulch the hybrid perpetuals with strawy manure. Mulch the strawberry bed. Remove and burn garden rubbish. Clean garden tools that will not be used again this season and cover the iron work with grease to keep it from rusting. Prepare for winter.

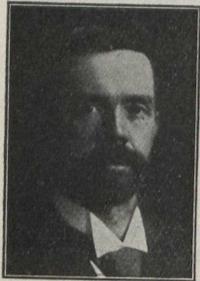
Make a plan for next year's garden.

Enquirers who sign "subscriber," "reader," and so forth, must send name and address before their questions can be answered in these columns.

If you have learned something new about gardening during the past summer give others the benefit of your experience by telling about it in a letter for publication in THE CANADIAN HORTICULTURIST.

# Ontario Vegetable Growers' Convention

IN opening the fifth annual convention of the Ontario Vegetable Growers' Association, that was held in Toronto on November 11th, the president, Mr. T. Delworth, Weston, in his address, dwelt on the importance of getting the best seed possible, and on the difficulties in securing the same. He said that in the United States, there has been considerable agitation in the direction of controlling the purity of seed, but there are difficulties in the way of getting satisfactory legislation. In reference to the



President Delworth

the testing of onion seed, the speaker stated that with one exception, California grown seed is the best. The exception was in Essex county, Ont., where the season was the longest. The president spoke of methods of marketing in vogue in parts of the United States which might be copied to some extent here so as to return our growers a greater profit instead of the middleman securing all the advantages.

The report of the secretary-treasurer, Mr. J. Lockie Wilson, dwelt on the prosperous year that the association has experienced. The branches are increasing their membership, Kingston showing 125 per cent. of increase; London, 110 per cent., and Sarnia, 76 per cent. Strong new branches have been organized at Woodstock, St. Thomas and Dunnville. In the prize competition for the largest comparative percentage of increase in membership during 1908, London stood first and Sarnia second. Similar prizes are offered this year. Prizes to the amount of \$35.00 are being offered at the Ontario Horticultural Exhibition by the Association for canned vegetables in quart sealers to be competed for by wives and daughters of the members. The finances of the association are in a satisfactory condition.

## CABBAGE AND CAULIFLOWER GROWING

Mr. A. McMeans, O. A. C., Guelph, made a report on his investigation on cabbage and cauliflower growing in the United States. The average price to growers the past few years, who have not contracted, was \$5.50 a ton. Owing to the bad season this year the price went up to \$40.00 a ton. Planting is done with a special machine, two boys planting alternately; the machine waters the place where the plants are planted and then covers the wet spot with dry earth.

The large growers in the United States reduce expenses by conveniences in storage and shipping. Where possible, railway sidings are run alongside storage buildings. Shrinkage in cabbage stored

is as much as twenty-five per cent. up to April 1st. The wetter the season of growth, the greater the shrinkage. In the shelf method of storage, cabbages are put one deep, stump down, in rack. A large quantity of cabbage is used in the manufacture of sauer-kraut, the consumption of which is not confined to the German element. At Saginaw, the average crop is ten to twelve tons an acre, and prices from \$6.00 to \$10.00.

## THE JORDAN STATION

A report on vegetable growing at the Jordan Experimental Station was made by Mr. H. S. Peart, the director. There was a number of varieties and fertilizers tested including varieties of corn, squash, melons, carrots, beets, tomatoes and potatoes. Over 4,000 cross-bred tomatoes were fruited and two at least give promise of future usefulness. Fertilizers caused a decided increase in yield of tomatoes and cabbage, where a complete fertilizer was used. In potatoes no decided results were evident. In corn, potash and phosphoric acid gave largest yield of ear. For onions, potash gave best and heaviest bulbs.

## FORCING VEGETABLES

Mr. W. C. Waid, New Carlisle, Ohio, gave an address on "Greenhouse Growing of Vegetables." Development in this line has taken place during the last twenty-five years. As a rule, vegetable growing under glass has been remunerative. Mostly lettuce, cucumbers and tomatoes are thus grown. An increase in the number of the vegetables forced is probable.

The soil in the forcing houses is seldom renewed, but well-rotted manure is added each year. The speaker spreads manure over the soil and uses a sprinkler system of watering in order to extract the fertility for the use of the plants. Sterilizing the soil is sometimes necessary when disease has been present the previous season. The overhead system of watering is the best, but sub-irrigation has given good results with lettuce and radishes. The higher the temperature, other things being equal, the more rapid the growth, but the greater the risk of disease. Good ventilation is a requisite.

## ADDRESS BY SEED COMMISSIONER

Mr. G. H. Clark, Seed Commissioner, Ottawa, gave an interesting address on matters relating to seeds in Europe and Great Britain, prefacing his remarks with a resume of the work done at Ottawa in connection with seeds. Already many of the evils in connection with clover and grass seeds have been remedied by legislation as a result of the work. It is a hard thing to control the seed question so long as seeds are brought in from abroad. When home-grown seed is used exclusively, then control will become possible.

The reports of the inspectors of the experimental plots were put in. In many sections the late spring prevented the results being conclusive. In Toronto and Ojibway sections, the crops were the best. The English-grown seed did not give satisfactory returns in many districts. California-grown seed seemed to be the best.

Mr. C. W. Baker, Byron, made suggestions as to the best method of increasing membership and furthering the interests of the association. Enthusiasm is needed in the individual to get out and secure members. The vegetable grower must be intelligent and up-to-date, and he can be helped by joining the association and the increased membership helps the association and gives it weight, as for instance, when approaching the government on tariff matters. The membership can and should be doubled. The speaker mentioned how in his branch they had secured reduced prices on boxes, crates, etc., on account of having a good membership. Advertise the meetings well. The newspapers are always ready to aid. Socials and picnics also help.

## POTATO CULTURE

"Potato Culture, with Special Reference to Using Seed of Strong Vitality," was the subject of an excellent address by Mr. W. T. Macoun of the Central Experimental Farm, Ottawa. In a test at Ottawa with home seed and with seed from Nappan, N. S., the latter yielded five times as much and more per acre. In England, seed from the south of England yielded less than seed from Scotland or Ireland. The reason is that the farther north the tubers are grown, maturity is not so hurried and the potato has more time to develop. Immature potato seed yielded more than seed from matured. Immature potatoes must not be confounded with prematurely ripe ones. Immature ones are those whose tops may have been cut off by frost before being ripened. This address will be reported at greater length in a later issue.

## A MESSAGE FROM QUEBEC

Mr. Emile Planto, a representative of the Quebec Department of Agriculture, expressed his pleasure at being present. He had learned much at these meetings. It is through education that progress is made in agriculture and he was in thorough sympathy with the idea of educating the children in agricultural subjects.

## SMALL FRUITS

"Small Fruits in Connection with Vegetable Growing," was ably dwelt on by Mr. W. C. McCalla, St. Catharines. In a bad season a variety of crops is desirable, because loss is minimized; if one fails, another succeeds. There is room for development of local small fruit markets. The market gar-

dener, who is an intensive grower, is the fittest man to grow small fruits.

#### GARDEN INSECTS

Mr. C. W. Nash's address on "Insects that Affect Market Gardens," was very interesting and instructive. He stated that Toronto is the breeding ground of scale insects and other injurious pests. The worst class of insect pests are those below the surface of the ground. Cutworms do an immense lot of harm. They are hatched from eggs laid by small moths. The white grub also does great mischief. They come from eggs of the June bug or May beetle. The larva stays in the ground for two years. The rose beetle is another injurious insect, as is the striped cucumber beetle. It is difficult to destroy these underground insects. By driving holes into the ground with a blunt stick and pouring into them bisulphide of carbon, which is heavier than air, and works down, they can be

ground and using soap along rows. The radish fly is troublesome. Dust them with fine wood ashes early in the morning. Insects which feed with jaws, as potato bugs and larvæ of white cabbage butterfly can be killed with arsenate of lead sprayed on, and there is no danger of burning the foliage with the poison. Use two pounds to fifty gallons of water. As an alternative, use four ounces pyrethrum to one pound of phenyle powder.

The slug is destroyed by dusting over the ground while they are feeding, or early in morning, with salt or quicklime. For wireworms dress the ground with kainit or nitrate of soda, and rotate crops as frequently as possible. For asparagus beetle spray with arsenate of lead.

#### THE MINISTER OF AGRICULTURE

At the evening session an address was given by Hon. James S. Duff, Minister of Agriculture, who received a splendid reception. In his remarks he dwelt on

was school trustee, where they were greatly valued.

#### Soil for Ginseng

What kind of soil is best for ginseng? How should the roots be planted?—T.M.A., St. John, N.B.

A rich deep and mellow loam is the ideal soil for ginseng. If the ground is a heavy clay, it may be used by spreading an inch of sharp sand over it a few times and mixing the sand well through the clay; such soils are generally rich and the sand gives it a mellow, loose texture. If the soil is of light, sandy nature but deep, put on a liberal supply of well rotted manure and swamp muck and mix this well with the soil. Good drainage and thorough preparation of the beds also are of the utmost importance. The ground must remain for four or five years without any further cultivation or until the roots are dug for market. The bud or crown of the roots should be about two inches below the surface. The root grows to a length of five to eight inches and some of the feeding rootlets penetrate to a depth of ten inches or more. This shows the necessity of making the ground rich all through.—Wm. Gilgore.

#### Preparing Land for Trees

J. O. Duke, Ruthven, Ont.

I always begin to prepare the land for planting an orchard of peach trees the year before the trees are set, by planting the field to some hoe crop, usually corn or tobacco, plowing deeply, and giving very thorough cultivation. No grass or weeds should be allowed to be in the soil in the fall.

In the spring, I always plant the trees before plowing the field. I strike out the tree rows one way with a plow, throwing a good furrow each way, when very little digging will be required to make a hole large enough for any tree. As soon as the trees are set and a little earth well firmed around the roots, I plow two furrows around each row with one horse and complete the lands with a two-horse team.

As soon as possible and before the soil has an opportunity to dry out, I cultivate with one horse cultivator close to trees and drag the avenues both ways with harrows, and I have very little trouble in making even the poor stock we sometimes get from nurserymen grow and do well.

The stock I got last year was exceptionally poor. I would not have planted it at all, but the nurseryman had my money, so I set the trees giving them the same care I would have had they been the quality I ordered, and though it was many weeks before many of them showed signs of life, I found on looking them over that I have lost very few.

Make the garden pay better next year.



General Collections of Vegetables at the Ontario Horticultural Exhibition

In these collections there were some specimen vegetables that were perfect. It is regrettable that more growers did not enter the competition. There should be at least one dozen entries in this section instead of three as was the case this year.

killed. For cutworms, take bran, mix with molasses and water, and to every fifty parts put one part of Paris green, and drop the mixture along the rows in the infested bed. They prefer this to green food. Two varieties of stem borers give trouble.

Insects that attack foliage are countless. Some suck, others bite. Among the former are green plant lice. To kill them use whale oil soap, or even common soap. This closes the spiracles through which they breathe. Do not use kerosene emulsion. Continual use of this injures the plant owing to the mineral oil in it. Larvæ of onion or cabbage fly are killed by cultivating the

the importance of conventions where vegetable growers can come together and discuss the work of the year with benefit to all concerned. He referred to the excellent reports sent out by the department in recent years, which have been in such demand, and thought that copies of these should be sent to teachers in the public and separate schools in the province to help to instruct the children in the various phases of agriculture, and thus cultivate a love for it.

Mr. W. C. McCalla, St. Catharines, in moving a vote of thanks to the Minister, said that he made it his business to have these agricultural reports in the library of the public schools of which he

# The Canadian Horticulturist

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## The Only Horticultural Magazine in the Dominion

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### CIRCULATION STATEMENT.

Since the subscription price of The Canadian Horticulturist was reduced from \$1.00 to 60 cents a year, the circulation has grown rapidly. The following is a sworn statement of the net paid circulation of The Canadian Horticulturist for the year ending with Dec., 1908. The figures given are exclusive of samples and spoiled copies, and of papers sent to advertisers. Some months, including the sample copies, from 10,000 to 12,000 copies of The Canadian Horticulturist are mailed to people known to be interested in the growing of fruit, flowers or vegetables.

January, 1908.....7,650	January, 1909.....9,456
February, 1908.....7,824	February, 1909.....9,310
March, 1908.....8,056	March, 1909.....9,405
April, 1908.....8,250	April, 1909.....9,482
May, 1908.....8,573	May, 1909.....9,172
June, 1908.....8,840	June, 1909.....8,891
July, 1908.....9,015	July, 1909.....8,447
August, 1908.....9,070	August, 1909.....8,570
September, 1908.....9,121	September, 1909.....8,605
October, 1908.....9,215	October, 1909.....8,675
November, 1908.....9,323	November, 1909.....8,750
December, 1908.....9,400	

Total for the year.....104,337

Average each issue in 1907, 6,627  
Average each issue in 1908, 8,695  
(Increased circulation in one year 2,068)

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## EDITORIAL

### THE SOCIETIES' GRANT

At the convention of the Ontario Horticultural Association, a resolution asking the government to increase the grant to horticultural societies by \$5,000 was passed unanimously. There is urgent need that this resolution meets the favor of the government. The organization of new societies at Oshawa, Whitty, Vankleek Hill, Milton and elsewhere has tended to decrease the amount available for the other societies and the applications from Fort William, Port Arthur, Springbrook and other places for the organization of horticultural societies, indicates that more societies will be organized and that the grants available for the old societies will be reduced still further.

No better work is done by any organization than that performed by our horticultural societies. Their request for an increase of \$5,000 in the grant should be recognized at the coming session of the Legislature by a full compliance with same. The horticultural societies need the money and will use it in a manner that will benefit the province at large.

### QUEEN VICTORIA PARK

Following his reference to Queen Victoria Park at the convention of the Ontario Horticultural Association, Major H. J. Snelgrove, the late president, was invited by Chairman Langmuir of the Park Commissioners to attend a meeting of the Board in Toronto on November 19th and furnish the commissioners with such information as he possessed. This invitation indicates that the park commissioners are awakening to their responsibilities and that necessary reforms in the management of the park may be made. It will be gratifying to the public to learn that this is the case. Many times during the past year or more, attention has been drawn in these columns to the incompetence of the park management. The words of the ex-president confirmed our stand. He deserves credit for bringing the matter so forcibly to the attention of the public and of the park commissioners.

Major Snelgrove did not accept the invitation of the park commissioners and in this we believe that he acted wisely. Instead, he reiterated in reply his statements at the convention and intimated his willingness to appear before a board of investigation should such be appointed. Had Major Snelgrove complied with the request of the commissioners, he would have been placed in an impossible position. When rumors of park management in Toronto were rife, what chance would one man have had in substantiating them before the committee of the city council responsible for the management of the parks? Such an investigation would have been farcical. Instead, scores of witnesses were called to give evidence before competent and impartial judges, and the charges were proved. The situation regarding Queen Victoria Park is analogous. If an investigation is to be made, it should be conducted by judges, unprejudiced and disinterested, with power to summon as many witnesses as are necessary to a full understanding of the situation. An investigation of this nature should not be necessary. Now that the park commissioners themselves have asserted a desire to see an improvement, it

should not be difficult for them to investigate the charges of incompetence that have been made and to institute the needed reforms. The people of Ontario look to them for a change.

At the convention of the Ontario Fruit Growers' Association the pillaging of fruit by employees of express companies was condemned in vigorous terms. This is a practice that is becoming altogether too common. It is a disgrace. Many growers present told of specific cases. It is the duty of the officials of the express companies to use means, including "spotters," to locate the culprits. A term in prison for those found guilty would teach a well-earned lesson and show the companies' employees that pillaging fruit is stealing and will not be tolerated.

At the Ontario Horticultural Exhibition, visiting fruit growers showed keenest interest in the exhibits of fruit packed in boxes and barrels. Some of the judges were kept busy answering questions on best methods of packing and on why one pack and package received awards over the others. Special credit is due to Mr. P. J. Carey, Dominion Fruit Inspector, for his kindness in this matter. For next year's and future shows we would suggest that the exhibition management arrange for one or more experts to be on hand during certain hours of each day after the judging is completed to make such explanations and that such be announced by placards and at the fruit growers' convention. More can be learned in short time by giving reasons for placing awards than by most any other way.

Much dissatisfaction was expressed by visitors to Toronto during horticultural week at the over-lapping of conventions. The convention of the Ontario Horticultural Association over-lapped that of the Ontario Fruit Growers' Association, the latter, that of the Ontario Vegetable Growers' Association. The officials in charge of the arrangements know this difficulty and would change matters if it were possible. One difficulty lies in the desire of each association to hold its convention as early in the week as possible. It is impossible to get a satisfactory attendance on Monday, on account not only of the distance that some delegates live from Toronto but because the cheap railway rates cannot be secured for that day. Saturday is "going home" day and few care to remain even until Friday. It is regrettable that the over-lapping occurs, but it is unavoidable. The interests of the majority must be considered.

## PUBLISHERS' DESK

The national character of THE CANADIAN HORTICULTURIST makes it necessary for us to proportion the space allotted in each issue to the various provinces in accordance with our circulation in each of them. Some of our readers imagine that we should confine practically all the space in this magazine to the interests of the province in which they reside. Occasionally a friend in Nova Scotia will tell us that we are not giving enough consideration to the horticulture of that province. Words of similar nature come sometimes from British Columbia, as is indicated by the following from a gentleman on Vancouver Island, who said, when sending his subscription: "I dropped my subscription before only because your paper is for eastern Canada." About the same

time a letter was received from Ottawa which said: "People in this locality complain that your paper is prepared for Nova Scotia, Prince Edward Island and British Columbia and that Ontario is a back number."

We aim, through THE CANADIAN HORTICULTURIST to help every fruit and vegetable grower and flower lover too, in every province across our broad country. If some issues appear to favor one province more than another, circumstances usually will acquit us of any attempt at partiality; as, for instance, this issue which chronicles the most important events in horticulture that occurred during the past month and they happen all to have been centred in Ontario. Our January issue will, in addition to matters of general interest, record the proceedings of fruit conventions in Quebec and maritime provinces; the February number will give special attention to British Columbia on account of its fruit conventions; and so it goes.

THE CANADIAN HORTICULTURIST alone gives the horticultural public of Canada particulars of Canadian doings, Canadian practices, Canadian news, Canadian markets and so forth along with the most interesting happenings everywhere. Its subscribers get value many times the investment. While occasional letters like those quoted are received, most of our readers know that THE CANADIAN HORTICULTURIST is the only publication of its kind in Canada that can and does furnish reliable and up-to-date news and information for all the provinces.

Frequently we are asked why we do not publish more horticultural society news and reports of local meetings. Briefly the answer is that we have not the space. We receive many reports from local horticultural societies and copies of local papers containing similar information. These are much appreciated as they keep us informed on the doings of the societies but in a monthly publication whose scope is national there is not room for the publication of all of them and, as we do not wish to discriminate, we must confine publication only to those features of the work that are new and of general interest. If space were available we would gladly publish lists of officers and other items of local interest but a little thought on the part of our friends will show that such is impossible. For instance, were we to publish the reports of all annual meetings held last month one entire issue of THE CANADIAN HORTICULTURIST would be required to hold them. Furthermore, these reports, for the most part, are of only local interest and they are published in the local papers. For these reasons THE CANADIAN HORTICULTURIST finds it necessary to feature news of greater general interest to all its readers. If any of the local organizations feel that they have been slighted through the non-publication of their reports we hope that they will consider our position and accept this explanation.

During the week of the conventions and exhibition in Toronto, Mr. D. Johnson, president of the Co-operative Fruit Growers of Ontario and manager of the Forest Fruit Growers' and Forwarding Association, in company with others interested in the development of the fruit industry of Lambton county, asked the Hon. J. S. Duff, Minister of Agriculture to send a demonstrator to that district to give instruction in the growing of peaches. Mr. Johnson said that there is a good future for peach culture in that locality. Curl leaf that did so much damage in the past can now be controlled.

## The Ontario Horticultural Exhibition

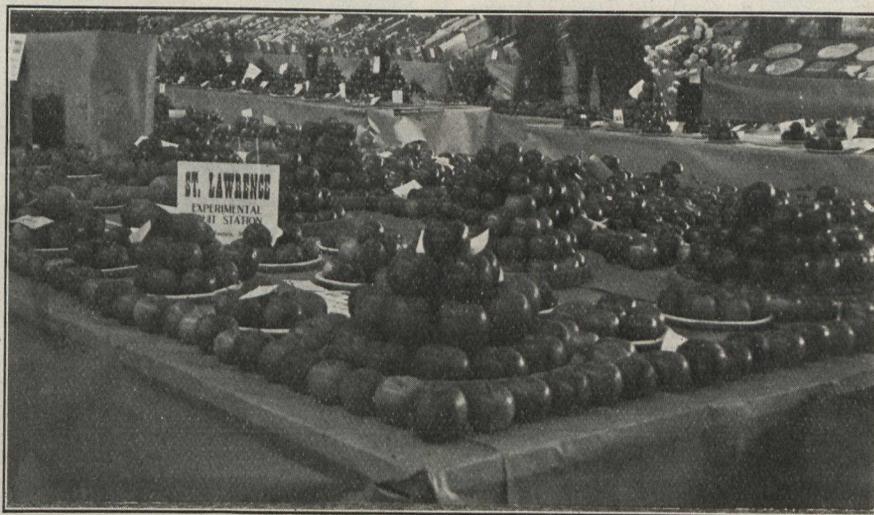
THE Ontario Horticultural Exhibition has shown steady growth each year since its inception. The show held last month in Toronto was no exception. There were 2336 entries in the fruit sections alone. These comprised apples in boxes, 321; apples in barrels, 137; apples in pyramids, 97; apples in plates, 1288; pears in plates, 146; pears in boxes, 57; grapes in plates, 46; grapes in boxes, 15; grapes in packages, 9; peaches, total number of exhibits, 45; fruit in jars, 175. There was a noticeable increase in boxes, barrels and pyramids.

In box packing of fruits there was a marked advancement shown over last year and all previous years. The character and finish of the boxes indicated that this factor is rapidly nearing perfection in this province. Faulty packing was in the minority. A few boxes were slack, some contained fruit not properly graded, a few contained too much tissue-paper, but on the whole they showed the greatest advancement in packing methods that has yet been seen at an

went to the East Simcoe Agricultural Society.

The St. Lawrence Experiment Station at Maitland, of which Mr. Harold Jones is director, made an excellent display of the varieties grown there. A striking feature of this display were the large, perfect, highly-colored specimens of Fameuse which Mr. Jones is developing through propagating from a bearing tree in his orchard that produces a superior strain of that variety. Lake Huron Experiment Station, at Walkerton, through its director, Mr. A. E. Sherrington, put up a large and attractive exhibit of fruits in the fresh state and in bottles.

The county exhibits were very attractive. Leeds and Grenville had an exceptionally fine display of large, clean, highly colored fruit. It was staged by Mr. Harold Jones, who also won a number of prizes. Halton and Huron counties had some high-class fruit on display. Among the prize winners were noticed the names of A. W. Peart, C. A. Bennett, A. Riach, in Halton and J. W.



Some of the Best Apples at the Ontario Horticultural Exhibition were seen in this Display

Display of St. Lawrence Experimental Fruit Station in foreground and of Leeds-Grenville counties in background on same table. Both these exhibits were collected and arranged by Mr. Harold Jones, Maitland.

exhibition in Ontario. It was noticed that those boxes that contained what is known as a "solid pack" contained also the most bruised fruit. In some cases apples had their sides torn off by the edges of the box when they would have been uninjured had a diagonal or some other kind of pack been used. The barrel exhibits were fine. Prominent among the winners in boxes and barrels were the Norfolk, Chatham, Oshawa, Newcastle, Burlington and St. Catharines associations. Many individuals had exhibits equally as good but space will not permit mention of their names.

The first prize for best display of fruits in commercial packages was won by the St. Catharines Cold Storage & Forwarding Company for a well packed lot of well grown apples, pears, peaches and grapes. Second prize in this section went to the Grantham Fruit Growers' Association and third to the Norfolk Fruit Growers' Association. The St. Catharines Cold Storage Company also won first for best display of fruits not in commercial packages; 2nd, Norfolk; 3rd, Grantham. The first award for display of apples not in commercial packages and exhibited by a society or an association in semi-northern counties

Edgar, K. Cameron, Geo. Fothergill & Son and others in Huron. There was some equally good stuff shown in the exhibits from Brant and York counties.

The Norfolk Fruit Growers' Association had a large number of entries in the competitive classes and also put up the most striking exhibit of the exhibition. This grand display of Norfolk fruit attracted much attention and will prove an excellent advertisement for that district. Northumberland and Durham also had a fine display of about 40 or 50 varieties of apples. Exhibits of this nature, with the names of the districts standing out prominently amply repay the trouble and expense connected with them.

The large increase in number of pyramids was most commendable. This aided in making the whole exhibition more attractive. The quality of fruit in most of the pyramids this year was high class. Something should be said in the prize list, however, to distinguish between quality of fruit and attractiveness for guidance in judging. Some pyramids contained fruit of the best quality but were not constructed properly, while others that were very attractive contained fruit of poor quality. Cases of this kind were difficult to judge. A word in particular should be said respecting the superior

quality of the Ontarios in these pyramids. Mr. W. H. Dempsey, Trenton, won 1st prize in this section.

The specimen apples of standard varieties for which first prize of \$10 and second prizes of \$5 were offered, were the subjects of much interest and comment. For most perfect Baldwin, first prize went to Norfolk F.G.A., and second to Robert Thompson, St. Catharines. Greening:—1st, C. W. Challand, Marburg; 2nd, R. T. Michael, Brooklin; King:—1st, C. W. Challand; 2nd, W. C. Parker, Humber Bay. McIntosh:—1st, John McDonald, Cornwall; 2nd, W. M. Robson, Lindsay. Spy:—1st, W. C. Oughtred, Clarkson; 2nd, R. T. Michael. Some of the best apples in these sections were ruled out because they measured one thirty-second of an inch or more over the diameter required by the prize list. Undoubtedly the best McIntosh was ruled out on this account. The same may be said also of Kings. We are informed that the size limitations will be changed for next show.

Only passing mention can be made of the pears, apples, grapes and peaches on plates. The samples mostly were of the best. Prominent among winners in apples were H. Jones, Maitland; C. L. Stevens, Orillia; W. C. Parker, Humber Bay; Fred Doan, Port Dover; J. B. Guthrie, Dixie; Brown Bros., Humber Bay; W. G. Watson, Dixie; Norfolk F.G.A.; John D. McDonald, Cornwall; and others. Among the winners in pears were, Norfolk F.G.A.; A. M. Smith, Port Dalhousie; R. Thompson, St. Catharines; W. H. Bunting, St. Catharines. Among the winners in grapes were R. Thompson, W. H. Bunting, F. G. Stewart, Homer. Mr. W. M. Robson of Lindsay, was successful in winning 1st on Agawam, and some other prizes. A large number of entries in preserved fruits and in honey attracted much attention.

The Ontario Agricultural College had an exhibit of much educational value. Chrysanthemums, fruit and specimen insects and diseases made up the display.

#### VEGETABLES

The vegetable department vied with the fruit in quality if not in quantity. The stuff mostly was perfect in variety type and well grown. First prize for best general collection of vegetables shown went to W. Harris; 2nd, Brown Bros.; 3rd, J. W. Rush, all of Humber Bay. All the vegetables were displayed to better advantage than in past years, but there is still room for improvement. The judge was Geo. Syne, Jr., Carlton West, Ont. The Essex station had an excellent general display.

#### FLOWERS AND PLANTS

The floral features of the exhibition were very fine. The cut chrysanthemums, carnations, roses and violets were as good as can be grown anywhere. The plant sections contained some fine specimens. First prize for best decorated dining table went to Geo. D. Manton, Eglinton; 2nd, Thos. Manton, Eglinton; 3rd, was divided between H. Wilshire and Wm. Jay & Son. For best group of chrysanthemums and foliage plants E. F. Collins won 1st, and W. Jay & Son 2nd. For best display of orchids, Thos. Manton won 1st, and E. F. Collins 2nd.

#### TRADE EXHIBITS

A number of our most prominent firms that handle commodities for the use of horticulturists were on hand with instructive and attractive exhibits. Among them were the Niagara Brand Spray Co., of Burlington, Ont.; E. C. Brown sprayers, Rochester, N.Y.; Batts Limited, Toronto; Standard Chemical Co., Toronto; Biggs Fruit and Produce Co., Burlington; Wm. Cooper & Nephews, Toronto; King Construction Co., Toronto; Grasselli Chemical Co., Cleveland, Ohio; Chemical Laboratories, Toronto; and Foster Pottery Co., Hamilton.

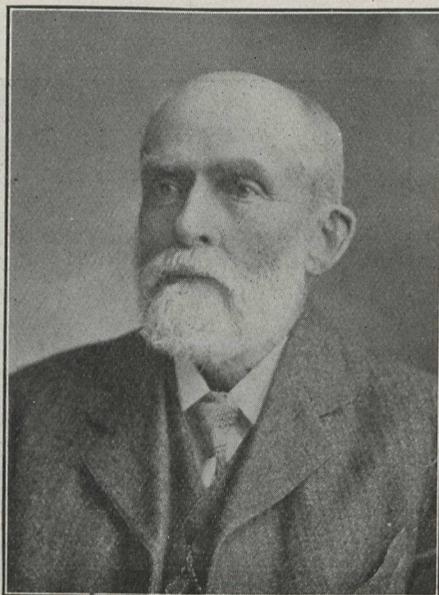
#### CORNELL EXHIBIT

An exhibit of much educational value was made by the Department of Plant Pathology, Cornell University. Illustrations and specimen fruits were shown to demonstrate the value of lime-sulphur as a summer spray for apple orchards. Niagara Brand was used in the experiments as the Niagara Sprayer Co., of Middleport, N.Y., has given a fellowship to Cornell University for investigation work in determining the worth of commercial lime-sulphur. It is understood in the agreement between this company and the university that results, good and bad, are to be published for the benefit of fruit growers.

The results of the past season showed that the percentage of wormy apples was reduced from 25 per cent. on unsprayed trees to 3 per cent., where arsenate of lead was used with Bordeaux mixture, and to 1.2 per cent. where arsenate of lead was used with lime-sulphur. In the case of scab the difference was practically the same. The lime-sulphur was diluted one to thirty. It is known that under certain conditions, Bordeaux injury may result from the use of this fungicide. The moral, therefore, is to use lime-sulphur and be safe. This exhibit was in charge of Mr. Errett Wallace, of Cornell. More will be said about this fellowship and the work in a later issue.

## Ontario F. G. A.---50th Anniversary

FIFTY years ago the Ontario Fruit Growers Association was organized in the city of Hamilton. Eighteen persons were present at the first meeting which was held on Jan 19, 1859. The only one of them now living is Mr. A. M. Smith



Mr. A. M. Smith

A member of the Ontario Fruit Growers' Association for fifty years, and the only one now living of those who organized the Association. During the last half century great progress has been made in the fruit industry of the province. No person has had more to do with this progress than Mr. Smith. His business integrity and ability, his wide and exact knowledge of horticulture and his constant allegiance to the association which he helped to organize, were recognized by an illuminated address and a purse of gold presented to Mr. Smith at the recent fiftieth anniversary of the association held in Toronto. Mr. Smith is 77 years old, having been born on September 24, 1832.

of St. Catharines. At the 50th anniversary of the association which was celebrated in Toronto on Nov. 10 and 11, Mr. Smith was present and was presented with a purse of \$175 as a slight token of appreciation and esteem and the following address was read:

"On this the 50th anniversary of the Fruit Growers' Association of Ontario, the members of 1909 desire to extend to you as the only living charter member, the warmest congratulations of the association. Together with Arnold, Dempsey, Woolverton and others, you were largely instrumental, not only in the organization, but subsequently in the maintenance and furtherance of the work of the association.

"As a pioneer fruit grower and nurseryman, you deserve credit for so faithfully spreading the propaganda for the planting of the splendid orchards now found every-

where throughout the province. These have given to Ontario her present enviable position as the premier fruit growing province of the Dominion, and the largest producer of export apples of any province or state on the continent. We feel that to you and your fellow members of 1859 there has been erected a lasting memorial in the millions of trees which yearly yield such handsome returns to the horticulturists of Ontario.

"As representing the commercial fruit growers of the province, the association wishes you continued success in your life occupation, and the best wishes of your fellow fruit growers will follow you in the future as in the past.—Signed on behalf of the Association: E. D. Smith, Winona, president; Jas. E. Johnson, Simcoe, vice-president; P. W. Hodgetts, Toronto, secretary-treasurer."

The address was read on behalf of the association by Mr. Murray Pettit, Winona, and the purse was presented by Mr. R. B. Whyte of Ottawa. Prof. John Craig of Cornell University and formerly of the Central Experimental Farm, Ottawa; Mr. E. D. Smith, Winona, president of the association this year and the chairman of the convention, Mr. Thos. Berriman, Niagara Falls, and others supplemented the address by personal words of regard and respect. The entire assembly expressed its approval of these things by great applause. In a few gracious words Mr. A. M. Smith expressed acknowledgment. Preceding this presentation and the accompanying addresses, Mr. Smith told the story of "Fifty Years of Peach Culture in Ontario." His remarks on this subject will appear in a later issue of THE CANADIAN HORTICULTURIST.

#### THE PRESIDENT'S ADDRESS

In an excellent address that reviewed the progress of fruit growing for 50 years, and chiefly during the past 35 years, President E. D. Smith stated that the time has come when laws that have to do with the control of orchard pests should be provincial in their enforcement rather than local. Compulsory legislation is necessary to compel the proper care of orchards. The future of apple growing lies in producing the largest quantity possible of perfect specimens. We have about 7,000,000 apple trees in the province. A school is needed to teach apple growers and packers how to pack apples. Short courses should be given in all fruit districts. Not only should packing methods be taught but also the identification and proper naming of varieties.

The president said that individual growers can produce fruit and sell it to as good advantage as can co-operative associations. Marketing is of equal importance to production. Selling by commission should be resorted to as little as possible. He pointed out that new varieties are wanted for cer-

tain seasons. Pears are wanted that will not blight and peaches and plums that will ship to the West. The speaker complimented the Dominion government on the work of its fruit inspectors in the Niagara district and complimented the G.T.R. and C.P.R. on their improved freight service to the West.



President E. D. Smith

**PROPOSED LEGISLATION**

A draft bill was placed before the association and passed that will repeal the present provincial acts that have to do with the control of yellows, black knot, and noxious insects. It is to be called the Fruit Pests Act, and is similar in form to the present San Jose Scale Act. The bill as carried by the association includes San Jose scale, codling moth, little peach, black knot, yellows, crown gall, pear blight and pear psylla. This bill differs from the San Jose Scale Act, besides the addition of other insects, only in requiring that "25 or more fruit growers," instead of "15 or more rate-payers," shall sign a petition for the appointment of inspectors to enforce the provisions of the Act. The government will be asked to have the proposed Act passed at the coming session of the legislature.

The Ontario government will be asked also to amend the Pharmacy Act so that white arsenic may be added to the list of poisons that may be handled by grocers and others outside of druggists and chemists. This is a commodity that is becoming largely used by fruit growers and it should be more easily purchased.

It was decided also to ask the Dominion government to pass an Act that will control the adulteration of chemicals used in the control of orchard and garden pests. The framing of the bill was left to a committee. The idea is to prevent the manufacture, sale or transportation of adulterated or misbranded fungicides, Paris green, lead arsenate and other insecticides and for regulating traffic therein.

**ELECTION OF DIRECTORS**

The directors elected for the various districts are as follows: 1, R. B. Whyte, Ottawa; 2, Harold Jones, Maitland; 3, F. S. Wallbridge, Belleville; 4, W. H. Gibson, Newcastle; 5, R. W. Grierson, Oshawa; 6, L. A. Hamilton, Lorne Park; 7, E. D. Smith, Winona; 8, A. Onslow, Niagara-on-the-lake; 9, J. E. Johnson, Simcoe; 10, J. L. Hilborn, Leamington; 11, F. Metcalfe, Blyth; 12, C. W. Gurney, Paris; 13, Adam Brown, Owen Sound.

**COMMITTEE REPORTS**

A report on new and promising fruits was made by Mr. W. T. Macoun, C.E.F., Ottawa. This report was illustrated by specimens of many of the varieties and seedlings mentioned. The report of the transportation committee was presented by Mr. W. H. Bunting, and that of the cooperative committee, by Mr. Jas. E. Johnson. These reports will appear in full in a later issue of THE CANADIAN HORTICULTURIST.

**SMALL FRUIT CULTURE**

The history of small fruit culture in Ontario during the past 50 years was told by Mr. A. W. Peart of Burlington. Fifty years ago there were few strawberries grown in Upper Canada and altogether only about 50 or 75 acres of small fruits. The speaker referred to some of the old varieties that

have gone out of date. There is no part of the province where some varieties of small fruits cannot be grown. Mr. Peart reviewed the history of small fruit culture by periods of 10 years. The most recent decade has been marked by much progress. Canning and jam factories absorb thousands of cases. They consume one-third to one-half of the strawberries and raspberries grown in the province. Mr. Peart's estimated acreage in 1909 is: Strawberries, 4,500; raspberries, 2,000; blackberries, 1,000; currants, 1,000; gooseberries, 500; total 9,000 acres and a value of \$3,150,000.

The following varieties were recommended by the speaker: Strawberries, Bederwood, Splendid, Warfield, Grenville, Williams, Sample, Saunders, Irene, Buster; red raspberries: Marlboro, Cuthbert, and probably Herbert; black raspberries: Hilborn, Older, Gregg, Smith's Giant; purple raspberries: Columbian, Shaffer; white raspberries: Golden Queen; red currants: Fay, Cherry, Pomona, Red Cross, Wilder; white currants: White Grape; black currants: Victoria, Champion, Lee, Naples, Saunders; blackberries: Agawam, Snyder, Kittatinny; gooseberries: Pearl, Downing, Red Jacket. The adaptability of some of these varieties is very local.

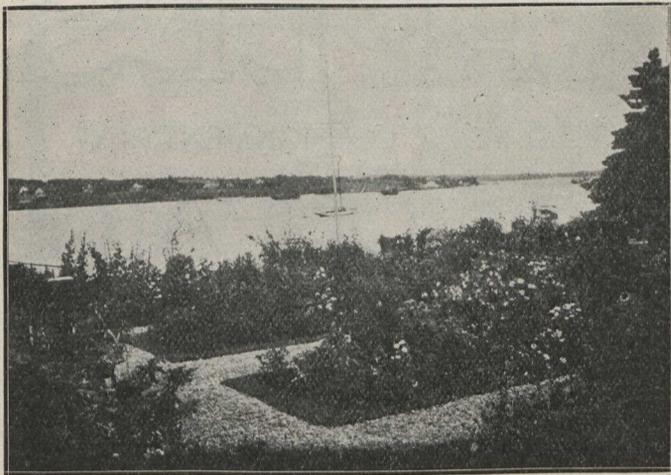
"Many questions are pressing for solution," said Mr. Peart. "These include varieties best adapted to certain soils and localities; proper care, cultivation and pruning; how to dispose of injurious insects; lowering the cost of production; and finding



Secretary P. W. Hodgetts

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good markets. The outlook is promising, however. Better systems of distribution, the increase in population and the advancing tide of immigration into the Northwest are creating a demand for our fruits, both fresh and canned, the potentialities of which are unlimited."

"The Over-planting of Strawberries and the Western Markets," was the subject of an address by Mr. Robert Thompson, St. Catharines. "Small Fruits in the Young Apple Orchard," was dealt with by Mr. L. A. Hamilton of Lorne Park. The former appears elsewhere in this issue. Mr. Hamilton's address will be published later.

#### CHERRIES

Mr. F. G. Stewart, Homer, discussed the subject "Sweet Cherries for South-western Ontario." He said that the soil for this fruit must be light and dry. The trees must be well cared for, particularly in the matter of spraying. Plenty of spraying material should be applied. Among the varieties recommended were Governor Wood, Alton, Napoleon Biggareau, Black Tartarian and Windsor. Mr. C. E. Bassett, Fennville, Mich., pointed out the absolute necessity for air drainage in the cherry orchard. He said that a free circulation of air will largely prevent fungous diseases.

In an address on "Cherries for the Commercial orchards of Ontario." Mr. A. E. Sherrington, Walkerton, said that sweet cherries are not a success in the northern parts of the province. Yellow Spanish is the most successful. To prevent rot in cherries the trees should be sprayed in the spring before any growth appears with three pounds of bluestone to 40 gallons of water, again with Bordeaux just before the bloom opens, repeat after the blossoms fall and again 10 days later. The soil should be warm, dry and sandy. The Mor-

ello class can be grown on well drained clay loams. On sandy soils the trees may be planted 20 feet apart and on clay loams 25 feet. In pruning direct the growth by pinching when young. Some varieties recommended by the speaker were: Early Richmond, if well cared for and fed, English Morello, profitable but the tree is short lived; Montmorency, best commercial variety; Olivet, satisfactory.

"Do Cherries Pay?" This question was answered by Mr. Sherrington with figures. At 25 feet apart there are 70 trees to the acre which should yield 8 to 10 baskets a tree at 8 to 10 years of age, or 560 baskets an acre. At a net price of 60 cents per 11 quart basket, this gives \$336 to the acre. This shows that it is profitable to grow cherries of this class. Harvesting, the package and the market are the problems. Cherries can be shipped to the west successfully. They should be harvested when ripe, and when dry as they will then stand up much better. Three or four pickings should be made from a tree. The fruit should not be handled but picked by the stem, clipped or pulled. Mr. Sherrington pays 12 cents a basket for picking. He said that the 11-quart basket is not the best package for cherries. We require a smaller package or a box which should be flat.

#### GRAPES

"Is Grape Growing Profitable at Present Prices?" was discussed by Mr. Murray Pettit, Winona, who answered in the negative. He said that there is no profit in grapes when they sell below 13 cents a basket. The cost of producing an acre of grapes is as follows: Land, \$125; 430 vines at 3 cents; \$12.90; preparing land and planting, \$8; 136 posts at 16 cents, \$21.76; setting posts, at 15 cents, \$6.80; 390 pounds of wire at 3 cents, \$11.70; bracing end posts and stap-

ling wire, \$6; cultivating and pruning for three years, \$30; this makes a total of \$222.16; add to this interest, \$33.32 and we have a grand total expense for the first three years of \$255.48.

After the vine is established the cost of production on an acre according to Mr. Pettit is: Interest on investment, \$12.74; pruning and tying, \$6; cultivation, \$8; spraying and fertilizing, \$9; picking, packing and delivering, \$13; baskets, \$26; interest and repairs on machinery, \$16; total, \$90.99. Supposing the production were 750 baskets an acre and they sold at 10 cents each, or \$75 an acre, the producer would sustain a loss of \$15.99; if they sold at 11 cents he would lose \$8.49; if at 12 cents, the loss would be 99 cents to the acre. Mr. Pettit reasoned, therefore, that grapes must sell at least for 13 cents to commence to pay profit. He said that the grower should have 15 cents for Concords and Niagaras, and 20 cents for Rogers, and that if they would co-operate they could get these prices. The fruit inspectors and the growers should be more careful in keeping poor stuff off the market.

An interesting discussion followed Mr. Pettit's address, most of the growers stating that Mr. Pettit's estimated cost of production was a little high. Mr. Fred Goring, St. David's, who has earlier soil and an earlier location said that he finds the cost of production much less than the figures given by Mr. Pettit and that his prices are better. Mr. Robt. Thompson claimed that grapes can be grown for one-half the cost mentioned. Mr. E. D. Smith also thought that Mr. Pettit's figures were a little high. He said the growers should not be discouraged because grapes sold at a loss towards the end of this season. Wine men have been off the market for two years. Unfermented

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wine will be made in the near future in this province, and will take one half of the crop. Mr. Smith expressed the opinion that co-operation in itself will not raise prices. He stated that there are no middle men in the business to-day except those absolutely necessary to the collection, distribution and sale of the crop.

The premature marketing of grapes came in for considerable discussion. Mr. Robt. Thompson said that it would work its own cure. The man who cuts early will get less money than if he had waited a little while. Prices will drop in two or three days and stay down. Mr. M. Pettit thought that it required more than education. He believed that legislation is necessary to prevent this kind of fraud. Mr. C. E. Bassett said that the matter is within the control of co-operative associations as far as their members are concerned. Such associations find that it does not pay and they will not open their cars early enough in the season for the reception of green grapes. Immature grapes at all seasons should be refused.

An interesting and instructive address was given by Mr. D. K. Falvey, Westfield, N.Y., on the subject "New York Grape Growing Methods." A portion of this address appears elsewhere in this issue and the remainder will be published later.

#### PEACHES

Pruning the peach was discussed by Messrs. J. W. Smith, Winona, and Wm. Armstrong, Queenston. The main features of this discussion will appear later with illustrations. A valuable address on "Practical Principles for Profitable Peach Production" was given by Mr. C. E. Bassett, Fennville, Mich. Soil and location, preparation of soil, varieties, cultivation, pruning, thinning, diseases, insects, fertilizers

and cover crops were discussed by Mr. Bassett. This address will be reported in full in a later issue. Mr. J. L. Hilborn, of Leamington, told of the reverses that peach orcharding has met with in south-western Ontario and pointed out the possibilities of the future. This paper will appear in full in another issue.

#### PEARS

Pear growing methods in New York State were described by Mr. J. R. Cornell, Newburgh, N.Y. He said that cultivation and fertility are needed to produce fruit. Pruning should not be practised too severely. Under-prune rather than over-prune. Do not head back too much. Thin out. The worst enemy of the pear is the psylla. Whale oil soap will keep this in control. This paper will be reported at greater length in another issue.

"Profits in the Pear Orchard," was the subject of an address by Mr. W. F. W. Fisher, Burlington. This address will be reported in full later.

#### APPLES

In an address on the marketing of apples, Mr. R. J. Graham, Belleville, said that success depends upon finding profitable customers, upon making them permanent and upon establishing confidence. He said that there are too many varieties in the country. There are innumerable things to learn and to know about marketing apples. The ideal condition is to make it a matter between producer and consumer. Buyers and dealers are necessary in moving the crop. There is a splendid opportunity to popularize our apples in Great Britain. Though many thousands of barrels are exported only a small percentage of the population of the British Isles eats Canadian apples. Mr. Graham advocated the estab-

lishment of a system of selling by hand carts and hawkers. These could sell our apples in three grades—three pence, two pence and one penny a pound. If apples are treated properly and the supply is maintained continuously this could be done. According to Mr. Graham, the grower would get by this system \$3.70 net a barrel.

In discussing the relative merits of boxes and barrels, Mr. Graham said that we must give the market what it wants both in package and in variety. Nothing should be packed below No. 2. There is a market for lower grades but they never should be packed and palmed off upon the public for anything better. Apples should be sold when they are wanted and not at any other time. No one should sell varieties that are out of season.

In an address on "Getting Together," Mr. Bassett elaborated upon the value of co-operation and of central packing houses. He said that it is a difficult thing to get good men at the head of these concerns and incidentally paid a high compliment to the worth and work of Mr. Robt. Thompson of the St. Catharines Cold Storage and Forwarding Company. Mr. Bassett said that a good man should be paid a good salary. Co-operative associations should not expect to secure a \$10,000 man for \$1,000. A capable man will return to the growers many thousands of dollars and, therefore, he should get a share of it. The organized grape growers of Lawton, Mich., received on the average this season 2¼ cents a basket for their grapes more than the price received by growers outside of the association. Co-operation saves also in the buying of supplies, including spraying materials and apparatus, baskets, fertilizers and so on. Mr. Bassett strongly advocated the establishment of co-operative fruit growers' as-

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sociations in all parts of Canada where they do not now exist.

A report on orchard survey work done during the past season in the apple orchards of the Lake Huron shore, was made by Mr. S. E. Todd, O.A.C., Guelph, who had charge of the work. Mr. Todd showed by charts that a large part of the district is admirably located for the production of fruit. He showed that most of Lambton county is farther south than the Niagara and Burlington fruit districts. Except a very small area, the whole section along the Lake Huron shore could be made into one large orchard. By charts and tables Mr. Todd showed that it pays to spray, fertilize, cultivate and to organize. He said that much educational work is needed in that district in respect to spraying and the control of orchard pests. Much of the nursery stock there is very good but the substitution of varieties is complained of by many of the planters.

#### MISCELLANEOUS

Space in this issue will not permit mention in detail of the remaining addresses. Mr. J. A. Ruddick's address on "Cold Storage of Apples and other Fruits," appears as the leading article of this issue. An exceedingly interesting talk on orcharding on the Pacific coast illustrated by limelight views, was given by Prof. John Craig, of Cornell University, at the concluding session which was presided over by the Hon. J. S. Duff, Minister of Agriculture. At this session an address was given by Mr. C. C. James, the Deputy Minister.

Earlier in the proceedings were addresses on "Spraying 10 Acres of Apples: Cost, Equipment and Results," by M. C. Smith, Burlington; on "Lime-sulphur vs. Bordeaux for Summer Spraying of Apple and Pear Orchards," by Mr. L. Caesar, O.A.C.,

Guelph; and on "Pointers from the West," by Mr. J. W. Crow, O.A.C., Guelph. These addresses will appear in part or in full in subsequent issues. Pointers from Mr. W. T. Macoun's address on "Uniformity in Judging Systems for Eastern Canada," appear on another page.

#### Entomological Society

The 46th annual meeting of the Entomological Society of Canada was held at Guelph on Nov. 4 and 5. The meeting throughout was characterised by the many good papers that were presented. As space is limited, only a few of the papers can be referred to in this issue.

Mr. L. Caesar, in his address, dealt principally with the white pine borer, which appears to be fairly abundant in the old Niagara district and also with the plum curculio and its relation to the fall attacks on apples.

Mr. McArthur Gibson read an extract from his annual report, relating to the prevalence of the brown-tail moth in French importations of nursery stock. The prompt action of the Dominion government in stamping out so quickly this pest, which is causing so much consternation in the States of Maine and Massachusetts, is highly to be commended.

An interesting and instructive address was given by Dr. Gordon Hewitt, the Dominion entomologist, recently appointed from England to take the place of the late lamented Dr. Fletcher. Dr. Hewitt showed some admirable slides of the internal anatomy of the house fly and pointed out to the audience the various points to be taken into consideration when dealing with the economic importance of this obnoxious household pest. He also showed slides of other flies of close alliance to the house fly

and showed the differences so as not to allow the public to confuse them. The latter part of his address was chiefly taken up in showing the fly's relation to disease. In the discussion of this address, Dr. Bethune pointed out that the fly's name was being changed from the "house fly" to the "typhoid fly," impressing the audience with a few statements which go to prove the desirability of the change.

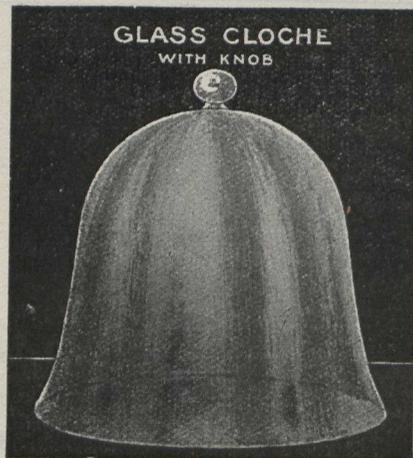
Mr. R. C. Treherne gave a paper on the nursery work in Ontario. After showing the importance of the industry, he showed the various insects that had been prevalent in the nurseries during the past season.

Dr. Bethune closed the proceedings with an address on the insects of the year. He said that there had been no serious outbreak of any kind but that the aphids which are always present were found this year in alarming numbers. These aphids were very bad on turnips, grain, lettuce, roses, cabbages, elms, beech and other forest trees, on apple, plum, cherry, and also on the conifers. The usual remedies of kerosene and whale oil soap were recommended. For aphids on roots of plants he suggested fumigation of nearby ant nests with carbon bisulphide. The spruce gall louse was also bad this year. Spraying with lime-sulphur and mechanical trimming were recommended. Various scale insects were in prominence also: e.g., San Jose, oyster-shell, ter-rapin, and the cottony maple scale. The squash bug, absent last year, was found again this year.

Household insects, such as carpet beetle, cockroaches, fleas and bed bugs still retained their prominence. Borax and Roach Food for cockroaches and tar paper and pyrethrum powder for fleas and bed bugs were recommended. Finally the speaker stated that cleanliness in the house and out in the fields and orchards was the best remedy for any insect pest.—R.C.T.

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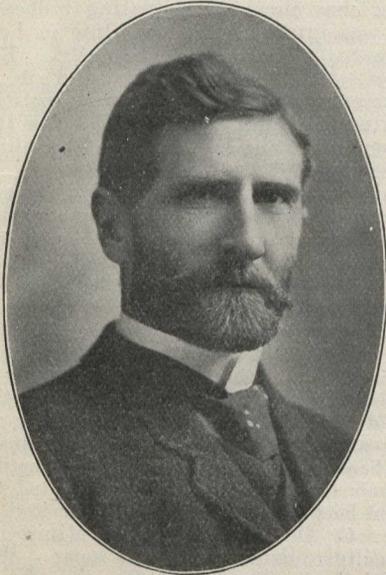
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## Conference of Horticultural Societies

INTEREST and enthusiasm were manifest all through the various sessions of the fourth annual convention of the Ontario Horticultural Association held in Toronto, Nov. 9 and 10. Delegates were present from horticultural societies in all parts of



Mr. J. Lockie Wilson

Superintendent of Horticultural Societies and Secretary of the Ontario Horticultural Association. At the convention of the latter in Toronto last month, Mr. Wilson was presented with a Royal Crown Derby plate encircled with silver as a testimonial of recognition by the association for services rendered to the societies. Mr. Wilson is also the secretary of the Ontario Vegetable Growers' Association.

the province. They were amply repaid for their attendance by the inspiring and helpful addresses given not only by our own Canadian authorities but by speakers from the United States. Chief among the visitors were Prof. John Craig, of Cornell University, R. F. Powell, of Fairhope, Alabama and Miss Louise Klein Miller, Curator of School Gardens, Cleveland, Ohio. The addresses of Mr. Powell and Miss Miller were along the lines of school garden work and vacant lot gardening. The grand results that are attending this form of effort in various cities in the States were ably described by both speakers. Miss Miller illustrated her address by a series of splendid stereopticon views.

Mr. R. B. Whyte, the newly elected president, upon assuming office expressed the view that the work of the association should be extended to include matters relating to the growing of fruit and vegetables by amateurs. This form of work, he claimed, is not now covered by either the fruit or the vegetable growers' associations.

The convention decided unanimously to urge the Ontario Government to increase the annual grant to the societies by \$5,000 a year.

### OFFICERS ELECTED

The following officers were elected:

Pres., R. B. Whyte, Ottawa; 1st vice-pres., Rev. A. H. Scott, Perth; 2nd vice-pres., J. P. Jaffray, Galt; sec., J. Lockie Wilson, Toronto; treasurer, H. B. Cowan, Peterboro.

Hon. directors, W. T. Macoun, Ottawa; Prof. H. L. Hutt, Guelph; W. B. Burgoyne, St. Catharines; Major H. J. Snelgrove, Cobourg.

Directors, District 1, F. B. Bowden, Vanleek Hill. District 2, W. J. Diamond, Belle-

ville. District 3, Miss M. E. Balcklock, Toronto. District 4, J. O. McCulloch, Hamilton. District 5, Jas. Mitchell, Goderich. District 6, Geo. W. Tebbs, Hespeler. District 7, H. J. McKay, Windsor.

Auditors, A. O. Jeffrey, London; Col. R. E. Kent, Kingston.

Representative to the Canadian National Exhibition: Major H. J. Snelgrove, Cobourg.

Representatives to convention of American Civic Association: W. B. Bugoyne, St. Catharines, Ont.; J. Lockie Wilson, Toronto.

Nomenclature Committee: J. Cavers, Oakville; W. T. Macoun, Ottawa; Prof. H. L. Hutt, Guelph; R. Cameron, Toronto; H. B. Cowan, Peterboro.

Novelties Committee: W. T. Macoun, Ottawa; R. Cameron, Toronto; Wm. Hunt, Guelph, Miss Blacklock, Toronto.

### PRESIDENT'S ADDRESS

Major H. J. Snelgrove, of Cobourg, in his presidential address, reviewed the splendid progress made by the Association and touched on the principal horticultural events of the year. On hearing of the deterioration that was taking place in the condition of Queen Victoria Park, Niagara Falls, as the result of its present management, he had written to Premier Whitney and drawn the matter to his attention.

Premier Whitney had replied, expressing surprise and promising to have the matter investigated. Major Snelgrove pointed out that Queen Victoria Park is a national park that is visited by thousands of strangers every year. Its appearance therefore, concerns our national pride.

The suggestion that was made recently in the editorial columns of THE CANADIAN HORTICULTURIST that the Ontario Horticultural Association should extend the scope of its work and include fruit and vegetable growing for amateurs was endorsed. It was pointed out that the fruit and vegetable growers' associations are commercial in character and ignore this branch of work. Mention was made of the splendid work being done by the C.P.R. to encourage flower growing around its stations throughout Canada and of the excellent bulletin issued last summer on perennials and prepared by Mr. W. T. Macoun, of the Experimental Farm, Ottawa. The bill board nuisance was condemned.

### TREASURER'S REPORT

The report of the treasurer, Mr. H. B. Cowan of Peterboro, showed total receipts of \$201.85 and total expenditures of \$106.60 leaving a balance of \$95.25 on hand. Some 38 societies had paid two dollars each to affiliate with the provincial association.

### SUPERINTENDENT'S REPORT

Superintendent J. Lockie Wilson, of Toronto, reported that the year had been a

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successful one for the horticultural societies of Ontario. While the final returns had not been received it was evident that the expenditures as well as the membership for 1909 had largely increased. When the societies which had applied for organization had attained a legal status there would be nearly 10,000 members of horticultural societies. Haileybury had filed its application and begun its work of civic improvement with a membership of over 100. The Twin Cities of Port Arthur and Fort William had caught the spirit of floriculture and were beginning to organize societies. The towns of Milton, Oshawa and Whitby had formed societies during the year.

Comparing 1908 with the previous year, the total expenditures, in the following branches of all of the societies were:

	1907	1908
Lectures and periodicals.	\$2593.00	\$3280.00
For Exhibitions . . . . .	\$4172.00	\$4543.00
Seeds, bulbs, and plants	\$5649.00	\$6854.00
The total actual amount expended in		

1907, was \$17,353.00 and in 1908, \$20,882.00. Returns for 1909 received from 46 societies since the annual meetings held during the first week in November showed a net gain in membership of 500. The increase in expenditure was \$2,400.

A number of successful meetings had been held in different parts of the Province during the year at which Mr. Everet Weed, Landscape Architect, of Chicago, was the principal speaker. Mr. Weed was a practical gardener and his lectures were illustrated by lantern slides which made them attractive.

A number of towns and cities had applied to the Department for assistance in laying out their public parks and squares and Prof. Hutt had done good work in this connection. School teachers, too, were turning their attention to the study of plants and flowers with the greatest educational uplift to all concerned.

Two amendments had been made to the Horticultural Societies Act during 1909.

The first reduced the maximum grant to new societies during the first year of their existence from \$100 to \$75. The second amendment set the maximum grant any society could receive at \$800.

BILL BOARD NUISANCE

The bill board nuisance received considerable attention. Pres. Snelgrove expressed regret that the bill, regulating billboards, that was introduced in the Ontario Legislature at its last session, by Mr. Evan Fraser, M.L.A., had been killed in the municipal committee. Numerous petitions favoring its adoption were sent, at the time, to members of the Legislature. The bill had been supported by Hon. Mr. Hanna. The agitation was one that should be pushed vigorously. Bill boards are supported by men who object to pay taxes on vacant land. Such men rejoice to see their neighbors build nice houses as the value of their property is thus increased and they are enabled to derive a greater revenue from the bill boards they erect on their own vacant land. While the neighbors of these men do what they can to improve and beautify the district these men debase the neighborhood by their ugly signs and they do so sordidly and selfishly. Bill boards ought to be taxed to the hilt. If their erection cannot be prevented they should be properly taxed and restricted.

Mr. C. C. James, Deputy Minister of Agriculture, drove this point home. While in Kristiania, Norway, last summer he had noticed a number of closed boxes on the streets something like those used by the police of Toronto from which to telephone for the patrol. On making inquiries he was informed that they were used as municipal billboards. The city owned them all. Bills could not be posted anywhere in the city until they had been inspected and approved by municipal officers and then only on the civic bill boards. A charge was made by the municipality for the use of these boards. Mr. James thought that in Canada we might well follow such an example.

SOME OF THE ADDRESSES

The addresses by the various speakers were of a high order of merit. Space does



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not permit their publication in full. Elsewhere in this issue appear the papers of Miss M. E. Blacklock, of Toronto, on "Arrangement of a Flower Garden," and Prof. H. L. Hutt, on "Making the Work of Horticultural Societies more Effective." The report of the Nomenclature Committee will be published in full at the first opportunity. A portion of it appears on another page of this issue.

SCHOOL GARDENS

In the United States school gardening is of comparatively recent introduction, but is spreading. School authorities are generally indifferent. In 1904 in Cleveland there were four school gardens, three in school yards and one in a vacant lot. In 1905 a department of school gardens was created with Miss Miller as Curator. Now 36 school yards have been improved and 25 others are being planted this fall. These school gardens have lessened vandalism and the behaviour of the children is vastly improved. Mr. R. B. Whyte, Ottawa spoke of work on similar lines done in Carleton County through the benefactions of Sir W. C. McDonald.

Mr. C. C. James, Deputy Minister of Agriculture in commenting on Miss Miller's address, reminded the audience of the work at the Broadview Boys' Institute in Toronto, which is producing excellent results. An English visitor stated that she had to come to Canada to get pointers on such work among boys. In New Brunswick there is also a farm where weakly boys from the old land are kept and brought into good health before being sent out to work on farms. There seemed to be something in connection with work on the land which acted as a regenerating influence on mankind.

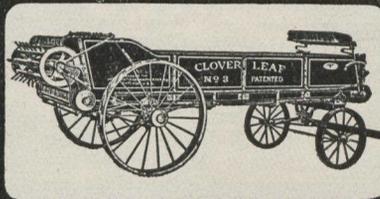
Mr. R. F. Powell, Fairhope, Alabama, a member of the Gardening Association of America, spoke of the aims and aspirations of that organization. At Detroit in 1894 vacant lots were beyond expectation. In 1897 the work was started in Philadelphia and from a small beginning 700 to 800 families were now helped by their cultivation of these vacant lots. The lots were divided

into sizes of a quarter of an acre or any size desired, and strict rules were laid down to prevent trespassers, etc. Improved health was also brought about by the people being in the open air. In Buffalo, too, the good work had been carried on, and beautiful gardens now replace weeds and rubbish heaps, and vigor is seen instead of pale faces and ill health. An increased improvement is seen in the gardens every year, and rivalry is keen as to who shall have the best garden.

Mr. H. H. Groff, Simcoe, the well known hybridist, spoke on "Physical Disintegration of the Tissues, or Natural Death of Plants." While there is little difficulty in perpetuating plants of vitality the moment the experimenter tries to reproduce charac-

teristics as to color or other desirable qualities then the question of vitality becomes acute. There is a theory that death of plants is due to auto-intoxication, but this is based on the fact that certain lower plants, as bacteria and yeasts die by self produced poison. Taking the gladiolus, color can be reproduced up to 25 per cent. and quality up to 75 per cent. The first strain on plant is in flowering then in seed bearing, also in intense cultivation. The latter often develops tissue directly opposite to that making for longevity. Field culture is more favorable. In Canada gladioli are being produced superior in point of quality, variety, and vigor, fully 90 per cent. ahead of the old world.

"Improvement of Parks," was the theme



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You know further that it costs more, and trebles your labor, to spread manure by hand than it does to use a well-made manure spreader.

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### Eastlake Steel Shingle

is the only shingle that has that much. The so-called four-lock shingles have only an inch and a quarter overlap—not enough to keep out the drifting snow and rain, so this proves the "Eastlake" the only waterproof shingle. The roofing problem solved. Our free booklet, "Eastlake Metallic Shingles," tells how.



"'Eastlake' shingles can be laid in one quarter the time it takes to lay a four-lock shingle."—The Philosopher of Metal Town.

MANUFACTURERS 1753



Agents wanted in some sections. Write for particulars.

of Mr. J. P. Jaffray of Galt. Berlin Park was the first organized in Canada. There are 8 or 9 Park Commissions now in Ontario. One is badly needed in Toronto. Island Park should be one of the finest on

this continent. Philadelphia has 25 miles of boulevard, running from park to park. That city has a continuous policy as to parks. Toronto should do the same. There must be playgrounds for children. A continuous policy is absolutely necessary.

GOVERNMENT GRANT

Rev. A. H. Scott of Perth and Mr. W. B. Burgoyne of St. Catharines, showed convincingly the reasons that have led the horticultural societies to apply for an increase in their government grant.

HORTICULTURAL SOCIETY WORK

"How to Increase the Usefulness of the Smaller Horticultural Societies," was the title of a paper by James Mitchell, Goderich. Among the lines suggested were beautifying school grounds, and encouraging a love of horticulture among the scholars; offering prizes for best kept lawns and gardens, distributing seeds, bulbs and plants, also civic improvement in many ways, especially as regards public buildings.

Prof. John Craig, Cornell University, spoke on Civic Improvement in America, showing how all things depend upon the individual. Civic improvement was not limited to beautifying the city, but was concerned in the improvement of morals. Improvement should not be confined to the towns, but should spread to the country.

James Wilson, Park Commissioner, Toronto, reviewed the history of Public Playgrounds in the United States and Canada. Many of these playgrounds are equipped with the simplest apparatus, but served their purpose well and were always crowded with children. Supervisors are necessary to keep out hoodlums. Separate divisions for boys and girls are advisable and shelters from the weather must be provided. Open air bathing grounds for summer and closed for winter use are features that can be added.

In Toronto in 1908 a start was made. This year seven schools were provided with grounds, which are kept open even during the holidays. The first municipal play ground here was opened this year.

DIRECTORS' REPORTS

Reports of the directors representing the seven districts of Ontario were presented and were of an encouraging nature, showing the excellent work being done by the societies.



RELIABLE SPRAYERS

THE Experienced Fruit Grower is the man who realizes the importance of using only high-class Sprayers. He knows that spraying is what you make it—a hard job or an easy proposition, depending on the outfit. Most Growers have learned that it doesn't pay to bother with cheap ones. Goulds' Sprayers have a reputation to maintain. They comprise a line of

Over 25 Styles

for both Hand and Power—all simple—all working parts brass to withstand wear and the chemical action of the solutions. Don't be caught experimenting with a cheap sprayer—see that the name Goulds is cast on the pump. Its presence is the assurance you are buying the very best Sprayer made. It guarantees satisfaction and reliability. Write for book.

"HOW TO SPRAY, WHEN TO SPRAY, WHAT SPRAYER TO USE"

It is full of interesting information and contains many valuable formulas for spray mixtures. Copy sent free on request.

The GOULDS Manufacturing Co. 17 W. Fall Street Seneca Falls, N. Y.

We build Pumps for Every Service



USE FOSTER'S POTS

THEY ARE THE BEST ON THE MARKET



- WE MANUFACTURE
- STANDARD POTS
- FERN PANS
- AZALEA POTS
- HANGING BASKETS
- SAUCERS AND
- STRAIGHT PANS

Canada's Leading Pot Manufacturers

The FOSTER POTTERY CO., Limited Main St. West, Hamilton, Ont.

Mention The Canadian Horticulturist when writing

If You Have a Big Wash To Do

tell your husband he must get you a

"Puritan"

Reacting Washing Machine

It takes all the work out of wash day. Improved Roller Gear makes washing quick and easy.

The "Puritan" is the latest and most improved. If your dealer does not handle the "Puritan," write us for literature and illustrations.

DAVID MAXWELL & SONS, St. Mary's, Ont.



GOES LIKE SIXTY SELLERS FOR \$65 GILSON GASOLINE ENGINE For Pumping, Cream Separators, Churns, Wash Machines, etc. FREE TRIAL Ask for catalog—all sizes

GILSON MFG. Co. 104 York St. GUELPH, ONT



BLACK KNIGHT STOVE POLISH

Has the "Black Knight" come to your home?

Let him show you the quick and easy way to shine the stoves.

"Black Knight" takes all the hard work and dirty work out of stove polishing.

It's a paste—so there is no watery mixture to be prepared.

Just a few rubs with cloth or brush brings a mirror-like shine that "you can see your face in". And the shine lasts!

Most dealers handle and recommend "Black Knight" Stove Polish. If your dealer cannot supply it, send 10c. for a big can—sent postpaid.

THE F. F. DALLEY CO. LIMITED, Hamilton, Ont.

Makers of the famous "2 in 1" Shoe Polish.

I would not be without THE CANADIAN HORTICULTURIST for three times the subscription price. I get a great deal of useful information from it.—J. E. Laphorn, Queen's Co., P. E. I.

Don't Throw it Away

Does Your Granite Dish or Hot Water Bag Leak?

USE MENDETS

A PATENT PATCH

They mend all leaks in all utensils—tin, brass, copper, graniteware, hot water bags, etc. No solder, cement or rivet. Anyone can use them; fit any surface, two million in use. Send for sample pkg., 10c. COMPLETE PACKAGE ASSorted SIZES, 25c., POSTPAID. Agents wanted. Collette Mfg. Co., Dept. V. Collingwood, Ont.

# A Short Course in Fruit Growing

At the Ontario Agricultural College, Guelph, Canada

This  
Course  
absolutely  
**FREE**

January  
25th

to

February  
5th

1910

Send

**TO-DAY**

for an

Illustrated

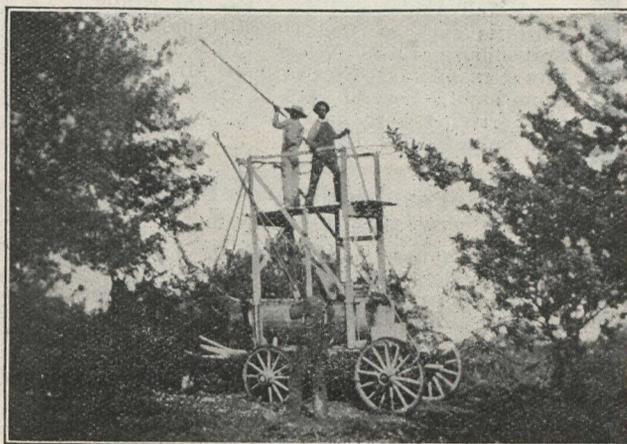
Calendar

It will be

mailed free

on applica-

tion to:



Spraying Outfit

During the two weeks between January 25th and February 5th, 1910, we offer you free THE BEST CHANCE YOU EVER HAD to secure the most up-to-date and useful information on the growing and handling of fruit for both local and distant markets.

Fruit growing has proved very profitable to many young men in Ontario. Every farmer owning an orchard, or land suitable for growing an orchard, should wake up to the fact that such parts of his farm will bring in returns from fruit away above what is possible from the ordinary farm crop.

The Short Course in fruit growing is specially arranged for the practical farmer, either old or young, who cannot find the time to take a College Course in this subject, but who desires more accurate information than can be obtained by reading.

The subjects discussed will embrace ALL MATTERS OF IMPORTANCE TO FRUIT GROWERS, including selection of land for fruit; varieties budding and grafting; strawberry growing; care of young orchards; spraying outfits; preparation and application of sprays; peach growing; packing, handling and shipping; requirements of different markets; organization and management of selling associations.



Demonstration in Packing

There are  
No Fees  
and No  
Examina-  
tions

Special  
Railway Rates

Delegates  
should be care-  
ful to secure  
the  
**STANDARD**  
**CONVENTION**  
**CERTIFICATE**  
when purchas-  
ing their one-  
way Ticket

Do Your  
Friends  
a Favour.

Send us  
their Names  
that we may  
forward them  
a copy of our  
Calendar

**G. C. CREELMAN, B.S.A., M.S., President**

# Imperial Bank

OF CANADA

HEAD OFFICE—TORONTO

Capital Authorized, \$10,000,000.00

Capital Paid-up. . . 5,000,000.00

Reserve Fund . . . 5,000,000.00

D. R. WILKIE, President

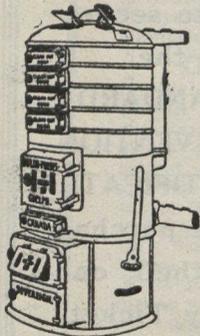
HON. R. JAFFRAY, Vice-President

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the Dominion of Canada

Drafts, Money Orders and Letters of Credit  
issued available in any part of the world  
Special attention given to collections

Savings Department—Interest allowed on deposits from date of deposit.

# "SOVEREIGN" HOT WATER BOILER



'Sovereign'  
Hot Water  
Boiler

Its advantages cannot be overestimated for hot house heating. It is reliable and economical and no accidental injury will disable it from work.

Built in sections it will stand endless use—the parts most subject to wear being readily replaceable.

Write for booklet "Hot House Heating"

MADE BY

## TAYLOR-FORBES COMPANY, LIMITED

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OFFICE:

**GUELPH**

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FOUNDRIES

TORONTO - - - 1088 King St. West  
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WINNIPEG - - - Vulcan Iron Works  
ST. JOHN, N. B. - - - H. G. Rogers  
QUEBEC - - - Mechanics Supply Co.  
CALGARY - - - The Barnes Co., Limited

## British Columbia

This province sent about 800 boxes of fruit to England in charge of Mr. W. E. Scott, Deputy Minister of Agriculture, for display at the Royal Horticultural Show and at about 20 other exhibitions in Great Britain. The fruit was contributed from all over the province by associations, exchanges, dealers and growers.

Mr. James Johnstone, Nelson, reports that his yield of apples was quite up to the average. He received \$2.25 a box for choice grade fall apples and \$3 a box for winter varieties such as Red Cheek Pippin and Spitzenburg, f.o.b., Nelson. In a letter to THE CANADIAN HORTICULTURIST Mr. Johnstone says, "Several cars of Ontario's apples arriving here have been condemned and destroyed for disease."

## Uniform Judging of Fruits

R. W. Starr, Wolfville N. S.

At the annual meeting of Nova Scotia Fruit Growers' Association held in Berwick last December, the subject of judging fruits at exhibitions was brought up and pretty thoroughly discussed. The idea seemed to be general, that some practical system that could be understood by both exhibitor and judges, and so arranged as to be acceptable to the whole Dominion, is what is wanted.

A committee was appointed to carry out this idea, and to draft score cards for plates and collections, to be submitted to the executive for approval. After some delay and correspondence a rough draft was prepared and submitted. This was referred to Mr. W. T. Macoun of Ottawa for revision and approval, and we must thank him for very efficient assistance in perfecting the work so far as we have gone.

Printed copies of these cards, with explanations have been sent to fruit growers' associations, agricultural colleges, horticultural magazines and papers of Canada, asking for full discussion and comment, with the view to make the work acceptable to the fruit growers of the Dominion, and that the cards may be used as a standard to decide all cases of close competition, if not required in every case.

Up to the present time answers have been received from a number of those to whom copies were sent and so far all have approved of the movement and promise support in their several positions and capacities.

NOTE.—Lack of space in this issue prevents the publication of comments, further than to mention that the proposed cards have been approved of in most particulars by Mr. W. T. Macoun, Central Experimental Farm, Ottawa; Prof. W. S. Blair, Macdonald College, Que.; Prof. H. L. Hutt, O.A.C., Guelph; Mr. S. B. Hatheway, Fredericton, secretary of the new Brunswick Fruit Growers' Associations; and others. At the recent convention of the Ontario Fruit Growers' Association the proposed cards were discussed and the general feeling was in favor of their adoption, except in one essential, but the matter was left in the hands of a committee. Exception was taken to the fact that no allowance is made for quality in the score card for plates. Prof. John Craig of Cornell University said that quality should not be overlooked in plate exhibits. He stated also that uniformity in score cards should be adopted by all the provinces. Mr. W. T. Macoun suggested that a second score card for plates be adopted that would include quality so that this might be used when needed. The N.S. proposed cards are printed on this page. Fruit growers in all the provinces are invited to discuss their merits through these columns. Comments already received by Mr. Starr and by THE

CANADIAN HORTICULTURIST will be published in next issue.—Editor.

## Scale of Points for Judging Fruit

Proposed by the Fruit Growers' Association of  
Nova Scotia, 1909

### SCORE CARD FOR SINGLE PLATES NAMED

POINTS.  
25 Freedom from Blemish.  
25 Color.  
20 Uniformity.  
15 Form.  
15 Size.

100

### SCORE CARD FOR COLLECTIONS

POINTS.  
20 Freedom from Blemish.  
15 Color.  
10 Uniformity.  
10 Form.  
13 Size.  
10 Commercial Value  
10 Quality.  
10 Nomenclature.  
5 Arrangement.

100

### EXPLANATION OF TERMS

**Freedom from Blemish.**—Any injury by insects, Fungus, Bruises, Loss of Stem or other cause, lessening the value or appearance of the exhibit, may be called a Blemish.

**Color.**—Bright, clear, well developed color, characteristic of the variety preferred.

**Form.**—Represents the perfect or normal type of the variety.

**Uniformity.**—Specimens should be as nearly alike in size, form and color as possible.

**Size.**—Indicates care and skill in production, and usually, other points being equal, size wins.

**Commercial Value.**—Standard, known market varieties as grown in and suited to the district, preferred.

**Quality.**—To be considered in collections, Seedlings, new varieties on trial, or other sorts in competition.

**Nomenclature.**—Exhibits must be correctly named according to the nomenclature adopted by the Society, Association or Exhibition at which they are shown.

**Arrangement.**—Taste and skill in staging so as to attract attention and add to the general appearance of the exhibit.

A few hundred cases of apples have been sent from Nova Scotia to Great Britain for distribution among the various shows held there, other than the Royal Horticultural Show. Competent men of the province were chosen to select and pack the fruit and the government has guaranteed a fair price for same when sold after being exhibited.

At the convention of the Ontario Fruit Growers' Association, the visiting speakers from the United States, Messrs. Bassett, Cornell and Falvey, gave valuable information and helped materially to make the meetings a success. They deserved the thanks of the association which was tendered to them by vote at the concluding session. Come again.

## FOR SALE AND WANTED

Advertisements under this heading 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.

**AGENTS** make big money selling "Vol-peek" Granite Cement. Mends holes in Granite, Iron, Agate, Tinware, etc. Mends a hole in one minute. Every housewife buys. Greatest seller on the market. Agents make over 100 per cent. profits. N. Nagle, Westmount, Que.

**WANTED.**—Persons to grow mushrooms for us during Fall and Winter Months. Waste space in cellar, outhouse or barn can be made to yield \$15 to \$25 per week all Winter. Send for illustrated booklet and full particulars. Montreal Supply Co., Montreal.

**FOR SALE.**—Steam pipes, all sizes, nearly new, cheap—also belting, pulleys, etc. Write for prices, Imperial Waste and Metal Co., 7 Queen Street, Montreal.

**POULTRY DEPT.**

Conducted by S. Short, Ottawa

Frequently the question arises as to which are the best females to keep for winter laying. In weeding out sometimes it is either the hens or pullets that have to go for lack of room. Experience has taught the writer that the best winter layers are yearling hens that have moulted early and that were late-hatched pullets the preceding season. Next comes early-hatched pullets. As a rule the yearling hens will lay larger eggs. The late-hatched pullets rarely lay before the middle of winter. In any event, if yearling hens and pullets are available, they are likely to be more profitable than older hens. This applies to the heavy utility breeds such as Brahmans, Cochins, Plymouth Rocks, Orpingtons and Wyandottes. Hens two and three years old sometimes prove exceedingly profitable of such breeds as the Minorcas, Leghorns and Andalusians.

Care should be exercised not to overfeed the laying stock when they are first shut in their winter quarters or in fact at any time. Enclosed fowl will not get the exercise they have been enjoying when running at large and are more susceptible to crop binding and going off their food. Keep them fairly hungry for the first week and then increase allowances. By feeling their crops at night, a good idea may be obtained as to whether or not they are getting enough or too much. When feeding in the morning, a general inspection of the fowl may be made and any birds that appear mopey and indifferent about eating should be

caught and the crops felt to see if they have indigestion. If so, they should be put in hospital for a day without food and plenty of water. If no change has taken place, the bird should be treated by feeding with lukewarm water from a spoon and the crop kneaded until the contents are soft and the fowl returned to the hospital for another day. Usually one treatment of this kind will effect a cure.

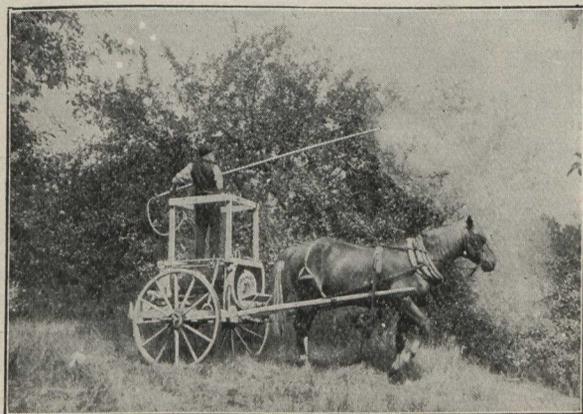
Government authorities and others advocate the curtain front house as being the best adapted for this climate. Descriptions and plans tell us they are easily and cheaply built and results from fowl so kept are better than any other method. They are made with one thickness of boards so do not cost much. The curtain front is cheaper than glass and the fowls are better housed and appear healthy and lay better because the air is fresher. These statements bear some explanation. Any curtain front houses I have inspected and I have seen a good many have especially constructed sleeping rooms, double-walled and double ceiling, either sealed under the rafters or else a small loft made of slatted wood and the space between the slats and the roof stuffed with six or eight inches of dry hay or straw. The fowl, therefore, sleep in a warm and most comfortable sleeping apartment which I think is absolutely necessary for laying fowl. The curtain front is on the scratching pen adjoining which is sometimes very small and made of one thickness of first-class matched lumber so that there are no cracks or creases for the cold wind to get through. The fowl go out into these whenever they are disposed to scratch and dust themselves. On the whole the arrangements are good and very comfortable and better than some of the old time double boarded houses almost hermetically sealed and which admit no fresh air and are damp and deadly. These curtain houses seem specially suited to small combed fowl. I have not seen Minorcas or Leghorns kept under these conditions nor do I think the scratching room would be warm enough for them in zero weather for their large combs easily freeze and frost bites will stop hens from laying.

**SOMETHING NEW IN FRUIT TREES**

We offer you PEDIGREED TREES. This is a New Departure in the Nursery Business. We Propagate from Selected Bearing Trees. Our Stock is High-class, and we want your trade.

**AUBURN NURSERIES,**  
QUEENSTON, ONTARIO.

Renew Your Subscription Now.



The horse does all the work, except holding the pole, with the **H. P. Spramotor**. It can be operated by either horse or hand. Has 8 nozzles at 175 lbs. pressure, which practically smoke the tree with spray. All automatic. The number of nozzles can be arranged to suit size of trees. The largest tree may be sprayed. Same price for 1 or 2 horses.

The **H. P. Spramotor** can be arranged for vineyards, row crops, strawberries or grain crops. The nozzles will not clog. **Agents Wanted.**

Get our Free Treatise on Crop Diseases

**HEARD SPRAMOTOR CO.**  
1388 KING STREET, LONDON



The tone, touch and magnificent wearing qualities of the New Scale Williams Piano are the logical results of the faultless materials and superb workmanship which enter into its construction.

The Harmonic Tone Prolonging Bridge—Acoustic Rim and Special Method of Ribbing—Grand Piano Scale and Construction—and many other exclusive features add musical excellence and durability to **New Scale Williams**

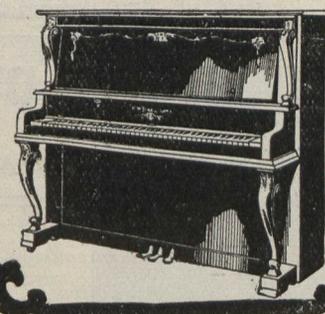
When you buy a piano, you want the best. May we send you our richly illustrated booklets, in which we give some of the reasons why the New Scale Williams is the universal choice of discriminating musicians and artists?

We also invite your investigation of our easy payment plan, full particulars of which will be sent on request.

**The Williams Piano Co. Limited,**  
OSHAWA, Ont.

**BRANCH OFFICES:**

Winnipeg, Man., 323 Portage Ave.  
Montreal, Que., 733 St. Catherine St. W.  
London, Ont., 261 Dundas St. 112 A



**Learn to MOUNT BIRDS**

**Animals and Game Heads**

We teach you by mail to prepare and mount all kinds of **Birds, Animals, Heads, Fish, Tan Skins** and make **Rugs**, etc. Our school teaches the latest and best methods. Easily, quickly learned at home by men, women and boys. Taxidermy is a necessity for hunters, trappers and Nature lovers.

**Big Profits** You can earn from \$25.00 to \$50.00 a month, during spare time, by mounting for others, or \$2,000 to \$3,000 a year as a profession. Low rate of tuition, expert instructors. **Success Guaranteed or no cost.** Write today for full particulars.



**FREE** We send splendid book on Taxidermy for a short time free, also free Taxidermy Magazine and sample Diploma. Don't delay, but write today. Learn all about our unique school. Send a postal or letter NOW.

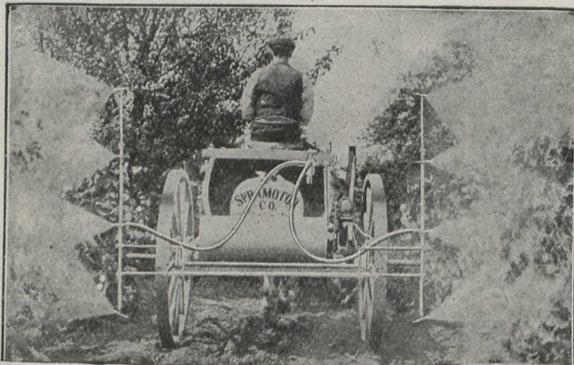
**NORTHWESTERN SCHOOL OF TAXIDERMY**  
Elwood Building OMAHA, NEBRASKA  
5159

# OXO

is the perfect fluid beef — the crowning achievement of the Company that originated concentrated beef extracts more than forty years ago.

Try it to-day—then you will use it all the winter.

21

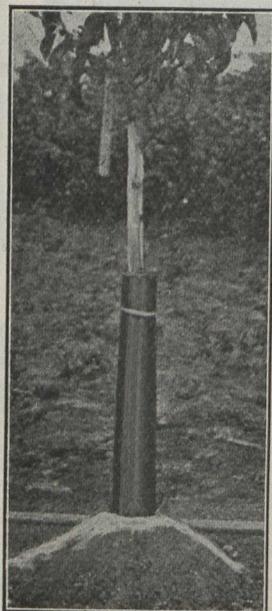


This picture shows the **Horse Power Spramotor** spraying vineyard.

If stand pipe hits a post it folds back behind rig and rights itself, each side independently. Has auto. control for height, width and direction of nozzles. 12-gallon air chamber, nozzle protector.

The **Horse Power Spramotor** can be rigged for potatoes, orchard or weed destruction. Send for free particulars and free Treatise on Crop Diseases. **Agents Wanted.**

**HEARD SPRAMOTOR CO., 1386 King Street London, Ont.**



Tree protected by **Wooden Veneer** and banked up with earth to prevent entrance of pests at bottom.

## PROTECT YOUR TREES

Against Rabbits, Mice and other vermin

Many young orchards are greatly injured each year by these pests. Wrap the trunks with

### Wooden Veneers

and damage will be prevented. These veneers will protect also against sun-scald.

Send at once to  
**THE OAKVILLE BASKET CO.**  
OAKVILLE, ONT.

## 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.

### CONVENTIONS.

- Charlottetown, Prince Edward Island Fruit Growers' Association . . . . . Dec. 2-3.
- Kentville, N.S., Nova Scotia Fruit Growers' Association . . . . . Dec. 8-9.
- Omaha, Neb., American Breeders' Association, . . . . . Dec. 8-10
- Macdonald College, Que., Quebec Pomological Society . . . . . Dec. 8-9.
- Victoria, British Columbia Fruit Growers' Association . . . . . Jan. 28.

### EXHIBITIONS.

- Denver, Colo., Colorado National Apple Exposition . . . . . Jan. 3-8.

## Horticultural Societies' Grant

The need for an increase in their grant from the government is felt by the horticultural societies of Ontario. At the convention of the Ontario Horticultural Association in Toronto last month a resolution was passed asking the government to increase the grant by \$5,000. The present grant is \$8,000. The following letter sent recently to Mr. J. Lockie Wilson of the Department of Agriculture, Toronto, by Mr. Thomas Natress, sec-treas. of the Amherstburg Horticultural Society, is typical of the general feeling in this matter:

"I am instructed to report to you as Superintendent of Horticultural Societies for the province that the Horticultural Society of Amherstburg, 90 members, in annual session assembled, did, on Nov. 5, pass the following resolution and order a copy thereof forwarded to you with the request that the matter be brought before the government, viz., That, in the estimation of this society, and in view of the importance of the work of civic improvement being done by local horticultural societies, and because of the annually increasing number of these societies throughout the province, and the developing interest of the people; the time has come when the government of the province of Ontario could, to the great advantage of the people, increase the appropriation made for horticultural societies' use."

A copy of the first report of the fruit branch of the Department of Agriculture of Ontario has been received. It is full of useful information and contains many illustrations of educational value. The report has been well compiled and reflects much credit upon Mr. P. W. Hodgetts, the director of the branch. It reviews the work of the fruit branch for 1908 and includes reports from the experimental fruit stations in the province.

Messrs. Wm. Cooper & Nephews wish it to be understood that they do not claim at present to kill San Jose scale, and are not selling their spray fluids for that purpose. They have been most successful in dealing with oyster-shell bark-louse this season and have not had one complaint from their customers as to the effectiveness of their fluids in dealing with this orchard pest. No better and cleaner fruit has been grown anywhere than in the Bowmanville district from trees sprayed with V.1., V.2. and V.3. Fluids. The results from the use of these fluids this year have been most satisfactory.

# 40 Million Square Feet of Oshawa Shingles

## Cover Canadian Roofs Today

A ROOFER'S square is 10 x 10 ft.—100 square feet. There are 400,000 such squares of Oshawa Steel Shingles in use

**THEY DO ALL WE SAY THEY WILL AND MORE TOO**

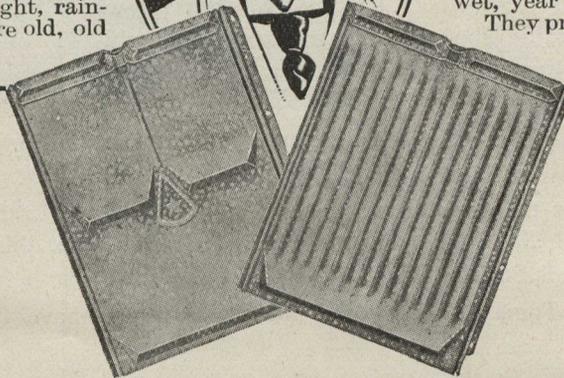
to-day in Canada. Enough steel, that, to make a pathway a foot wide and 7,576 miles long. Almost thrice the length of the C.P.R. tracks. Nearly enough to roof in a thousand acres of land! And the greater part of those Oshawa Shingles will be right on the job, good, weather-tight, rain-proof roofs, when your grandsons are old, old men. They are good for 100 years.

### THIS IS THE ONE ROOFING IT PAYS BEST TO BUY

Figured by price-cost, "Oshawa" Guaranteed Steel Shingles are as cheap as the poorest wood shingles. Figured by service-cost—the length of time they will make even a passably good roof—wood shingles cost Ten Times as much; slate costs six times as much; and the stuff they call "ready roofing" costs Thirty-Three Times as much! These are facts. They can be proved to you. Proved by figures: by the experience of hundreds of other people who doubted at first, just as you perhaps doubt. Proved, absolutely! You want that proof before you roof. Get it! Send for it to-day.

### No Other Roofing Does This

Stays rain-and-snow-and-wet-proof for fully a hundred years. Absolutely fireproofs the top of the building for a hundred years. Protects the building from lightning for a hundred years. Resists the hardest winds that blow for a hundred years. Keeps the building it covers cooler in summer, warmer in winter, for a hundred years. Gathers no moisture, and never sweats on the underside for a hundred years. Needs no painting, no patching, no care nor attention for a hundred years. **WHAT MORE CAN YOU ASK OF A ROOF?**



The picture above, on the right, shows the new Spanish pattern Oshawa Galvanized Steel Shingle (Guaranteed). That on left is the standard pattern.

Probably 1935 seems a long way off to you. By that time, I suppose, aeroplanes will be as numerous in the skies as steamers are on the seas now. I don't believe the fall of an aeroplane upon it would harm a Pedlarized-roof.

Yet, when 1935 begins the guarantee that goes with every square foot of my shingles will still have twelve months to run.

You may not be around then. I may not be here. But this powerful Company I head will be doing business; and the price of putting a new roof on your building will still stand as a mortgage upon our assets.

Understand me clearly:

If the Oshawa-shingled roof you put on this year fails—even on the last day of 1935—to make good to the letter the plain promises of our Guarantee, there's a new roof for nothing going on that building just as soon as we can get a man there.

Think that over for a minute. Think if it isn't a pretty clear evidence of merit in roofing.

That is what I call making good with Oshawa shingles. That is what you pay five cents per year per square for.

Seems to be worth the money, doesn't it?

*G. A. Pedlar*

ADVERTISING alone never sold that vast area of Pedlar Shingles. Smooth salesmanship never kept them selling; nor glib

talk; nor lying abuse of competing goods; nor cut price. Those things do sell shingles, right here in Canada's roofing trade. But Oshawa Shingles sell, and keep on selling, for a different reason. They make good. They keep out the wet, year after year, as we say they will. They protect buildings from fire and lightning, as we say they will.

**THEY KEEP ON SELLING BECAUSE THEY MAKE GOOD**

### THIS IS THE ONE ROOFING THAT IS GUARANTEED

Some makers of 'metal shingles' (ever notice how careful they are to avoid saying steel?) point with pride to roofs of theirs 25 years in service. BUT THEY DON'T GUARANTEE their shingles for 25 years to come. You buy Oshawa Steel Shingles—the only kind that IS guaranteed—upon the plain English warranty that if the roof goes back on you in the next quarter-century you get a new roof for nothing. You can read the Guarantee before you decide. Send for it. See if it isn't as fair as your own lawyer would make it on your behalf. Isn't that square?

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NIAGARA Brand Lime-Sulphur Solution has been proven by the highest authorities, after several years' work, equal to Bordeaux as a fungicide, and far less dangerous to use. It is also cheaper and always ready to use.

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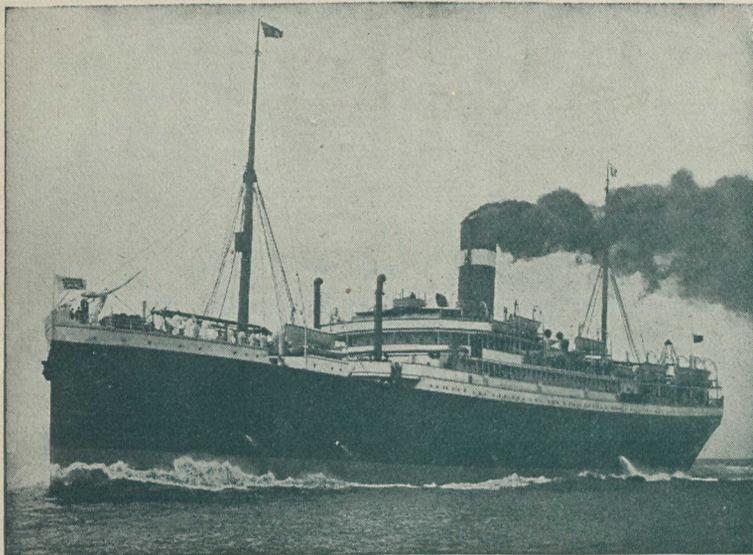
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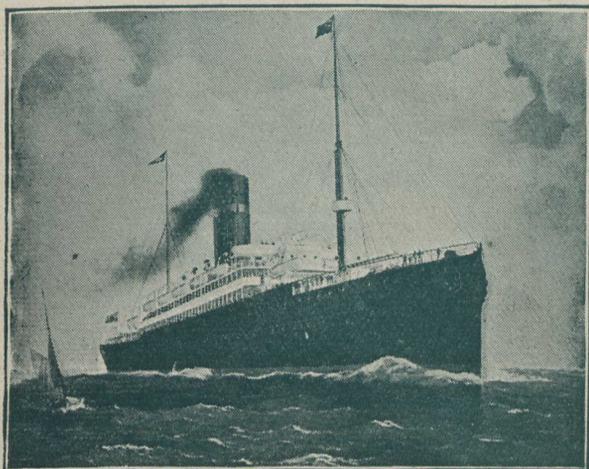
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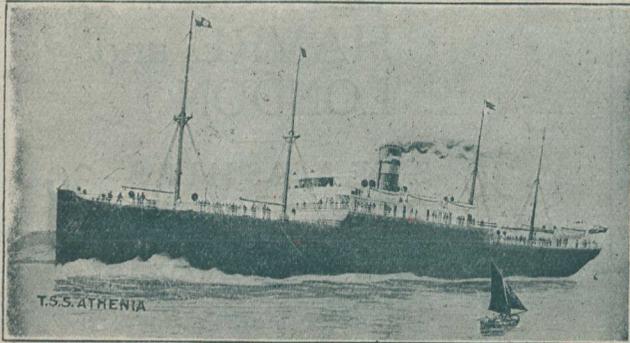
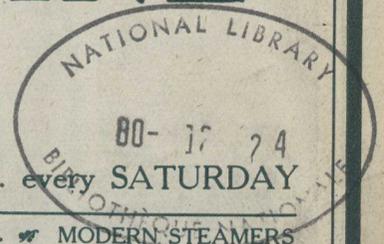
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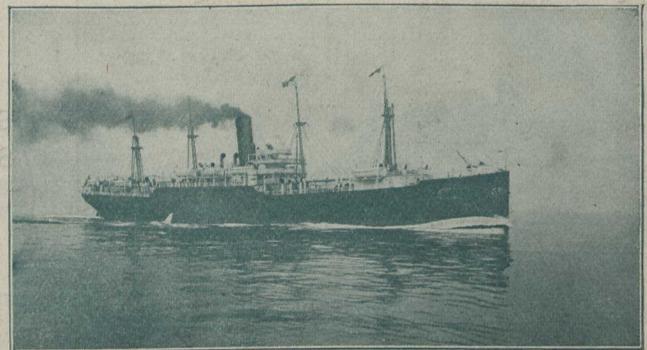
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