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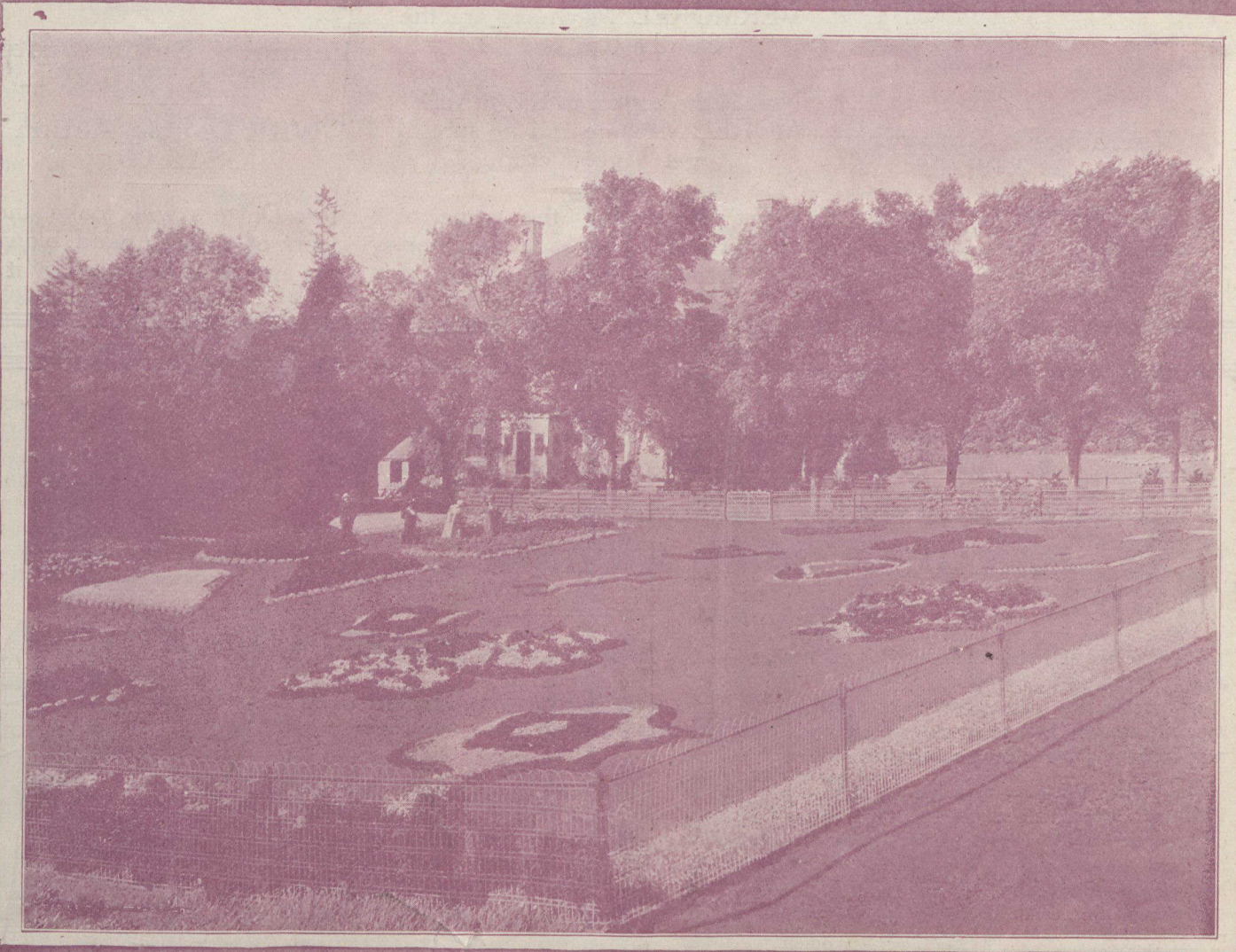
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JULY - 1911
Vol. 34 No. 7

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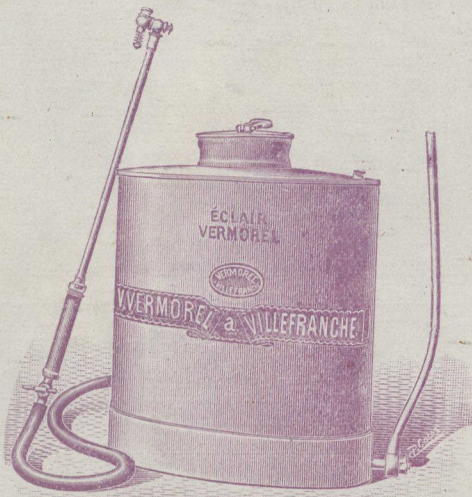
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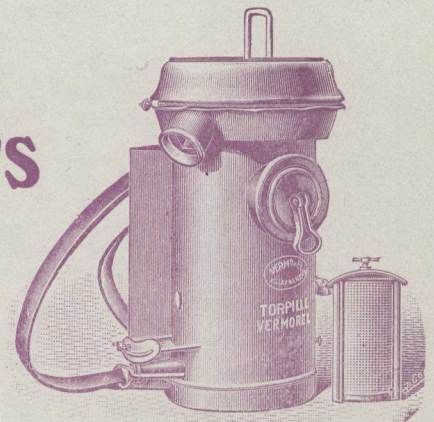
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The Canadian Horticulturist

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TALKS ON ADVERTISING

By the Advertising Manager

No. 10

SOMETHING ABOUT OUR SEPTEMBER NUMBER

In point of real live interest, practical information and dollars and cents value to Canadian fruit growers, buyers and shippers, the September issue of *The Canadian Horticulturist* will eclipse anything yet published in Canada. Plans are already well advanced for this number, which is to be a combined Exhibition and Fall Packing Number. Judging by the character of the articles and the educational value of the illustrations already received, we can assure our readers and advertisers that this number will prove of unusual value to them.

One of the special features of our Exhibition and Fall Packing Number which will add greatly to its attractiveness will be a special cover illustration printed in three colors. The illustration which has been selected will prove of particular interest to all fruit growers, and will be a feature which alone will lead many of our readers to preserve their copies of this number.

The size of the issue will be considerably increased to allow adequate space for publishing the varied list of special articles which are being secured from the best known authorities on Canadian fruit growing. The September number will contain two or three times the usual amount of information on subjects relating to fruit growing, which will allow us to cover a wider range of subjects, and to go into them more fully than could be done in an issue of the usual size. We are aiming to give our readers in this special number information such as will be of use to them in connection with the harvesting, packing and marketing of their fruit crop—the time when they are turning into money the result of their year's work.

Mr. J. A. Ruddick, Dairy and Cold Storage Commissioner, will furnish an article dealing with the importance and methods of precooling fruit for shipment; A. McNeill, Chief of the Fruit Division, will write on the packing of fruit; P. J. Carey, Dominion Fruit Inspector for Ontario, on modern methods of handling the apple harvest; P. W. Hodgetts, Director of the Fruit Branch of the Department of Agriculture, on the benefits of co-operation among fruit growers; G. H. Vroom, Dominion Fruit Inspector for Nova Scotia, on methods of handling the Nova Scotia apple crop, and R. M. Winslow, Provincial Horticulturist for B. C., will describe the improved methods of handling the fruit crop as practised in that province. These are but a few of the contributors and subjects to be dealt with in our September number, but they are sufficient to give an idea of the high standard and educational value of the information which this issue will contain. Every reader will want to keep his copy where he can refer to it frequently.

The circulation of the Exhibition and Fall Packing Number will be greatly increased by the distribution of sample copies among selected lists of fruit growers and fruit shippers throughout Canada. Representatives will also be present at all the leading exhibitions and fall fairs distributing sample copies and taking subscriptions. Thousands of persons interested in fruit growing and other branches of horticulture who do not take *The Canadian Horticulturist* regularly, will see this number.

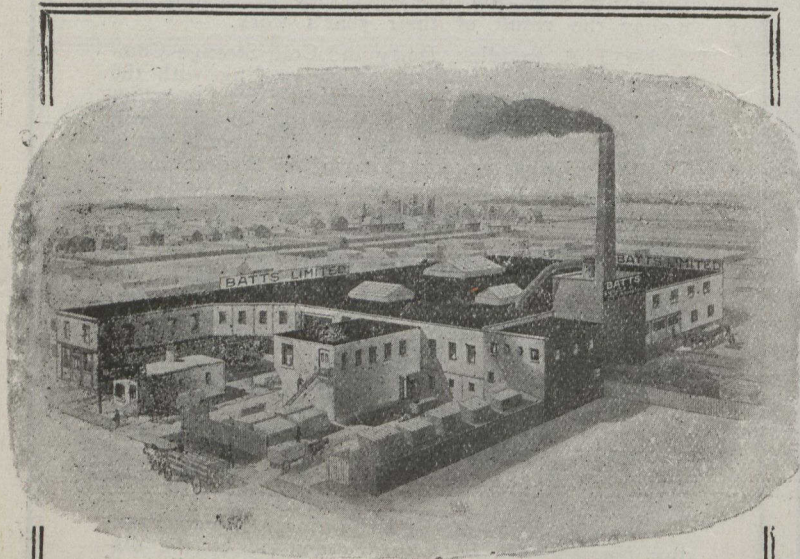
Our September number offers a splendid opportunity for advertisers to reach a well-to-do class of people who as a rule are not interested in other agricultural publications. We would like to give you further information about this special number if you will write us.

We do not admit Advertisers to our Columns except such as we believe are thoroughly reliable.

“Landscape Gardening”

In planting a new lawn or remodelling an old garden it is advisable to secure the services of an expert—one acquainted with the peculiarities of trees, shrubs and plants—to help in grouping and arranging them in the most effective way. The grouping of trees and shrubs should be arranged so that they will produce a harmonious setting that makes the lawn and garden abound in interest and beauty. Let us, who have had over thirty years' experience in handling nursery stock, assist you in your work. We have recently engaged the services of an expert landscape architect (Mr. Max Stolpe), who has had twenty years experience in Germany, Austria, Switzerland and Canada. Mr. Stolpe is qualified to lay out large parks or private estates, new gardens, cemeteries and small garden lots. Consult us about planting plans that will help you to obtain immediate results. We solicit correspondence with all who contemplate any landscape work.

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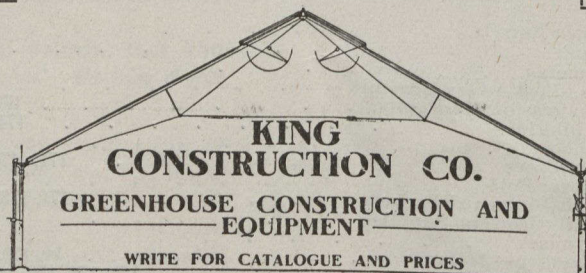
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The Canadian Horticulturist

Vol. XXXIV

JULY, 1911

No. 7

Suggestions for the Ontario Horticultural Exhibition

T. G. Bunting, B. S. A., C. E. F., Ottawa, Ont.

THE Ontario Horticultural Exhibition, which is held in Toronto every fall, is probably without exception the finest of its kind in America. The Spokane Apple Show may rival it in extent and magnitude of the display of apples, because it devotes itself to the display of the apple alone; but for quality and variety of exhibits the Toronto Show stands alone. The Horticultural Exhibition has grown and increased in attractiveness from year to year until last year there was a finer and better display than ever. Still there is room for the innovation of special features which would add greatly to the interest taken in the exhibition.

In October, 1909 at the First New England Apple Show, held at Boston, there were two features that were attractive and educational. There was in operation a small yet complete cider mill, and the product of the apple in this form was sold to the visitors. This not only provided an attractive exhibit but also a source of revenue. Next to the Horticultural Hall there was a first class restaurant, which most of the fruit growers in attendance chose to make their dining headquarters. The management of the restaurant made a specialty of the apple as an article of diet during the week of the exhibition. Their pies were not the kind usually served in the hotels and restaurants, and, I believe, in too many of the homes of the apple growers themselves. Instead, they were the kind "mother used to make"—the big, deep, juicy and luscious kind that always meant a second helping if father wasn't there. To lend variety to the apple you could secure a most beautifully baked apple, probably one of the most delicious forms in which an apple can be served, yet how seldom do our appetites make the acquaintance of any kind of a baked apple to say nothing of a properly baked one.

Even these two forms did not nearly begin to exhaust the cook's modes of preparing the apple, for we had served to us apple sauce, prepared and served in different ways, apple butter, and jellies. The very best of high colored apples, such as McIntosh, Wealthy and Spy, were always on the table. Pure, fresh apple cider was usually served instead of milk, tea or coffee, because as

a beverage it offered a very desirable change. Twelve or fifteen forms of the apple were always on the menu card.

To me it seems that this should become a very strong feature of the Toronto Exhibition, because the apple holds a pre-eminent place among the fruits, flowers and vegetables. A large booth properly decorated and with appropriate placards displayed, and in the hands of competent persons, whose business it would be to prepare and serve in all its different forms and uses the "King of Fruits," would add a great interest and enthusiasm to the exhibition, and in itself would be an education to the thousands of people who pass through the arena and admire the beautiful yet "for-

IT IS THE BEST

The Canadian Horticulturist is the best publication for the money I ever saw, and I have subscribed for and read all the prominent agricultural and horticultural publications in Canada and the United States for the past forty years. It is certainly an ideal horticultural paper.—K. J. Mackenzie, Picton, N. S.

bidden fruit." It is always impossible to obtain for eating purposes, even with money, anything that looks like an apple within the arena or within several blocks of it.

"RAISIN DAY"

Some months ago I received through the mail an invitation to attend "Raisin Day" at Fresno, California. Accompanying the invitation was a little pamphlet, neatly gotten up, giving facts concerning the raisin, its growth, marketing, food value and also nearly a hundred different recipes for preparing the raisin for the table. These little pamphlets, which were sent broadcast over the country, must have had an influence on some, at least, of their readers in causing them to take an added interest in the raisin as an article of diet, and it is needless to presume that the pamphlet fulfilled its mission by tending to increase the consumption of raisins.

Why should not the Ontario Fruit Growers' Association, in connection with

the exhibition, prepare a pamphlet setting forth the advantages that the apple has as a breakfast food over the orange, grape fruit, and other fruits, and, in fact, its advantages as a food to be served on the table three times a day. The public in general do not know the difference between most of the standard varieties of apples. Information in regard to the eating, baking, cooking and keeping qualities could be given in such a manner that it would be appreciated by those into whose hands the pamphlet fell.

All the known recipes for making pies, apple sauce, baking apples, apple butter, and jellies should be given. In fact, such a pamphlet or booklet should give all the information that would help to stimulate and increase the consumption of the apple, and in particular the Canadian apples. It should be distributed freely from the exhibition hall and from the booth where, during the day and evening, visitors could obtain the apple in all its forms from the fresh fruit to cider and jellies.

After such a practical and appetizing demonstration of this nature the Toronto housewife or her daughter might be expected on going home to call up the fruit store and cancel her order for oranges and bananas and order instead a dozen each of McIntosh Reds and R. I. Greening apples, the former for eating fresh and the latter for baking. What would be the effect if a thousand homes in Toronto switched over from oranges and bananas, which are used so plentifully, to Canadian apples and pears?

Another feature that could properly be added is one that was taken up last fall at the First Canadian Apple Show for the finest and most attractive display of apples in the store windows during the week of the exhibition. In Toronto during the exhibition we see lots of attractive fruit store windows, with fine fruit displayed, but sad to say, nearly always it is foreign fruit. For every box of foreign fruits consumed in our markets there is that much less of our own consumed.

It is not higher duties on foreign fruit that we want; but our own fruit to meet competition fairly on our home markets. In order that it may meet it successfully we must put it up just as attractively or

a little more so, and then advertise it extensively. It is well known that the quality of our fruits, and the apple in particular, cannot be excelled anywhere. What need we fear then from competition if we meet that competition not by higher duties, but by the finest quality fruit, properly put up and displayed and advertised?

We should be more enthusiastic over our own fruits and take a greater pride in them than we do. If we did there would not be such a big demand throughout the entire year for California fruits. Canadian fruits of the same standard or grade are in every case, with the exception of the grape, superior to the California fruits of the same kind.

Black Rot Fungus

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

This disease appears on the leaves in the form of brownish spots, appearing somewhat like the burning from using too strong a mixture of paris green. The black rot fungus, *Sphaeropsis malorum*, attacks the fruit usually when nearly mature. Apples attacked decay quickly, becoming brown at first with blackish discolorations under the skin, and as the disease progresses, the whole fruit becomes blackened. The apple remains firm at first, but gradually dries out and becomes wrinkled and shrunken. Under the skin of such apples small black dots or pustules may be seen, which are the spore-producing bodies of the fungus, and from these the spores escape. The fungus may gain an entrance through cracks or wounds, and generally attacks the larger branches or trunk, producing canker spots in the bark. Spore-producing bodies may form also in these diseased areas.

All diseased fruit should be destroyed, and Bordeaux mixture as applied for apple scab fungus will do good in controlling the black rot. The diseased spots should be carefully cut around to good healthy bark and washed out with a copper sulphate solution, using one pound to five or ten gallons of water. After this has dried, cover the wound with a thick white lead paint. I do not think the corrosive sublimate is advisable. Copper sulphate solution as above can be applied to the bark at any time, but it will of course injure the foliage. Double strength Bordeaux will not injure the bark.—W. S. Blair.

Common Foes

Tent and forest caterpillars have been very numerous this year in parts of Ontario and have caused much damage. They are two different species of hairy caterpillars, and are found on fruit and shade trees. If a grower is spraying his fruit trees faithfully with arsenate of lead in any shape, this of itself will pre-

vent injury from tent caterpillars, since any internal poison is fatal to them.

The tents may be crushed with the gloved hand, when they can be reached at a time when the caterpillars are inside; or they can be burned by a torch on the end of a pole; or they can be twisted out of their reach by means of a wire brush made for the purpose attached to the end of a long pole. These remedies are effectual only when the caterpillars are in their tents, early in the morning, or in stormy, wet weather. Even on trees which are not ordinarily sprayed, a single spraying of arsenate of lead, when caterpillars are observed, would probably stop their depredations.

When full grown, these caterpillars spin cocoons, whitish or yellowish in color, from which emerge brownish moths that lay their eggs in a ring around the small twigs of fruit and shade trees. These eggs go through the winter, and frequently in pruning a farmer or orchardist will observe them, and can prune off the twig holding the eggs, and destroy the same.

OUTWORMS

Cutworms have been very injurious this year. Poisoned bait, made of bran mash, sweetened with cheap sugar, or molasses, and made decidedly green with a liberal application of Paris green, is a very good remedy in a garden. A tablespoonful of this should be put at frequent intervals among the plants subject to attack, not, however, nearer than twelve inches to the plant; for, in case of rain, the Paris green might be washed

against the roots, and would injure or kill the plant. Thorough cultivation is an aid.

Pieces of shingle or board, placed at intervals over the garden, serve as traps under which the cutworms hide toward morning, and where they can be found and killed. Frequently the depredator will be found within an inch or so of the plant cut, buried an inch under the soil.

THE GREEN CABBAGE-WORM

Give children a few cents to make nets of mosquito bar and catch the white butterflies flitting over your cabbage and cauliflower fields, since the female butterflies deposit the eggs from which the cabbage-worm comes. Children might well be paid, also, for picking off the green worms before they have done much injury.

Spraying with Paris green is quite commonly practised, and cabbage will stand a strong application. A spray as strong as five pounds of Paris green in a fifty-gallon barrel of water has been used with success. Cabbage may be sprayed up to within a week or so of being gathered, when necessary, without any damage whatever, or any danger.

To carry on co-operation successfully, it is absolutely necessary that you have good officers, men who are willing to devote themselves to the interests of the company. To my mind co-operation is the only solution of the fruit growing problem.—A. E. Dewar, Charlottetown, P. E. I.



A Peach Orchard in Lambton County, Ont., where it was thought Peaches could not be Grown.

The peach orchard here shown is that of Johnson Bros., Frest, Lambton Co., Ont. The trees shown are three years old. Year by year it is being discovered that the tender fruit districts of Ontario are much more extensive than was formerly supposed. Mr. D. Johnson may be seen in the foreground. An experiment will be tried this year of marketing the peaches from this orchard direct to the consumer.

The New Cherry—The Early Rivers

Linus Woolverton, Grimsby, Ont.

Among the many novelties furnished me for testing while I was doing experimental work in fruits for the Ontario Department of Agriculture, there was one new variety of cherry, recently originated by Thomas Rivers, the celebrated nurseryman of Sawbridgeworth, in Hertfordshire, England. I had almost forgotten the high value set upon this cherry by Mr. Rivers, until one day this month (June 15th) when walking through the cherry plot, I was attracted by three trees of remarkably fine looking fruit. On looking up my records I found that they were the Early Rivers, planted in 1904. As I sampled them I thought to myself, "No wonder Mr. Rivers gave the cherry his own name; he may well be proud of it."

Here is a cherry beginning to ripen about the middle of June out of doors in Canada, fit for use along with our Early Purple, and superior to it, and continuing in season for a month, according to Mr. Rivers. At first it is a rich dark red in color, but it becomes darker and darker the longer it hangs on the tree.

Of course, my remarks on the value of this cherry for Ontario must be taken "cum grano salis," until it has been longer under test; but from its showing this season, I should expect it to become a very valuable commercial sort for us. It appears to be resistant to monilia rot, it is plump and roundish, heart-shaped in form, the stems are long, an inch and a half, and hang in clusters, making them easy to gather, and the pits are very small.

The largest samples I have grown this year measure scarcely one inch across, but have not yet swelled to their fullest size. I may report further about it later, for the cherry may develop faults that do not yet appear. It should be tested on a larger scale than I have done before we can advise our growers to buy it, especially at the extravagant price asked for it. In 1904, I think the price was a guinea.

Summer Pruning

Among horticulturists the summer pruning of fruit trees has become a common practice. If it is done judiciously the plants are sure to be benefited.

The well managed fruit garden requires very little trimming at any season of the year, and the work can probably be more advantageously done now than during the early spring. Neglected trees often require the removal of very large limbs, and the thinning out of numerous interlocking branches. Such extensive pruning in summer would be a disadvantage to the trees. Peach and plum trees



Gathering Elberta Peaches in the Orchard of J. W. Smith & Sons Winona, Ont.

The trees in this orchard averaged ten baskets of peaches each. The ground is a deep, black earth. The trees have never failed to give a crop since they were planted four years ago. Mr. Smith likes the type of ladder here shown they being strong, light and durable. They are three legged and can be stood on any kind of a hill without toppling over.

have a habit of making a rank growth, and if this is not checked, the plants tend toward wood rather than fruit. Cutting back the leading shoots immediately has a tendency to throw young trees into earlier bearing.

The black knot appears on plum trees at this season, and should be cut out in its earlier stages. At first it appears as a swelling of the branch. Later it bursts through the bark, and shows a greenish color, which next turns to brown, and then black. Remove and burn all suspicious looking branches.

Apple and pear trees should have all interfering branches cut away, and all diseased or dead wood removed. Do not, however, cut off large limbs from these trees at this time. Dwarf fruit trees should have some of the more rapid growing shoots pinched back to make them acquire the desired form, and to keep them within bounds. Trained fruit trees need constant attention to prevent the side shoots and fruit spurs from developing wood. Allow the leading shoots to grow. The plants are sustained principally through these branches.

Grape vines growing in rich soil often run to vine and leaves, and if they are not summer pruned the fruit is of an inferior quality and quantity. Check the wood growth by cutting back the leading shoots and remove some of the rank foliage that prevents the sunlight from gaining admittance to the fruit. All summer pruning should be done now if it has not been accomplished before.

Peach Growing and Diseases of the Peach

A. G. Pettit, Grimsby, Ont.

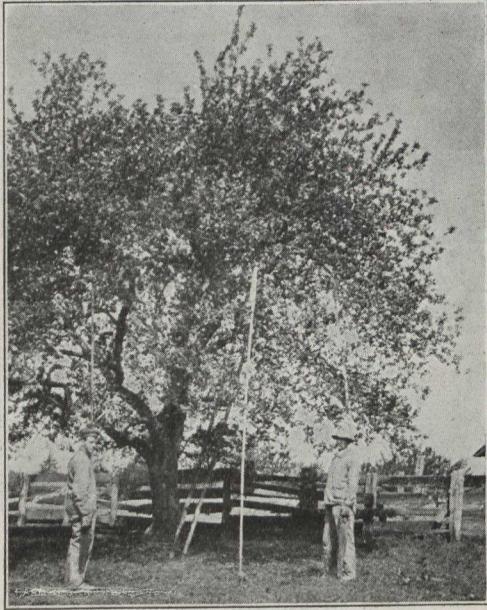
After procuring the best soil possible, the three most essential things for growing peach trees are manure, cultivation and pruning. The best soil is deep, sandy loam. I have never seen a success in growing peach trees on a shallow soil, or on land that has water close to the surface. You can underdrain such land, and grow good crops of grain, but to grow peach trees on the same land, about the fourth year, the fibres from the roots will completely fill up the tiles. Then look out for dead trees. I have had as many as ten or twelve trees killed adjoining an underdrain. I have taken out the trees, and used the land for other crops.

PREPARATION OF THE SOIL

In the preparation of the soil for planting, do as you would in preparing land for a crop of corn. After it is marked, my method is, use a board with a hole in each end and a notch twelve inches from the centre. This does away with sighting.

For preparing trees for planting, cut off broken roots, shorten long ones, and I prefer to trim trees after planting. I also, prefer to have the stocks of trees from two and a half to three feet long. Some make objection to this and say that one foot to one and one-half feet is the correct thing. We shall leave this for growers to decide. If the branches come out close together at the right

distance from the ground, cut them back. If not, trim to a whip. Avoid crotches when possible. In trimming the year after planting, cut out wood that is growing perpendicular from the centre of the tree and thin the tree thoroughly. Cut back one-third of the new growth on the side, and one-half on the top. As the trees grow older, cut less.



Tree Before Pruning, No. 1.

The tree here shown is in the orchard of Mr. H. W. Bumstead, Meaford, Ont., and shows how it looked before pruning for a demonstration meeting held in the orchard under the direction of J. F. Metcalf, the district representative of the Ontario Department of Agriculture, at Collingwood.

Be sure to keep the centre open and the tops shortened every year.

Cultivate as one would for a good crop of corn, well and often.

Fertilizing is very necessary. In the past, I have been using ashes and stable manure, light dressings and often, rather than heavy, which stimulates to rapid growth. I have used crimson clover and hairy vetch for cover crops. Crimson clover is rather uncertain, as it winter kills too frequently.

DISEASES

Yellows, no cure; dig out and burn as soon as possible.

Little Peaches, the same treatment.

Curled Leaf, sulphur and lime.

Our fruit inspectors have marked a great many trees for Yellows. I claim that not one in ten that they have marked has the Yellows. The fruit on the trees with Yellows will color from ten days to two weeks before they should if they are not diseased.

This other disease, if it is a disease, is ten days to two weeks later than the same variety on healthy trees. I have been called to some orchards to examine the trees and found them yellow. Peaches, small, well colored, sweet, and firm, without spots. Water sprouts have not the appearance of Yellows.

One of my neighbors has taken out trees that would have yielded 5,000 baskets of fruit. He tells me one-fourth of them had the Yellows, the remainder what I call the new disease.

How to Grow Grapes

Wm. Warnock, Goderich

I approve of the horizontal system of pruning vines, that is to plant ten feet apart in the row and cultivate until it produces two strong canes which ought to be made the second year from planting. These are to be cut off at pruning time five feet from stump, which should be low enough so that the canes will tie easily on wires ten inches from the ground. At this height it is very easy to let them down to the ground every fall for winter covering, and as the fruit is always near the ground it has the benefit of more heat than if it were higher, which is of great advantage in ripening grapes. I use four wires for trellis, fastened on posts put half way between plants, and the spaces between wires commencing at the bottom are twelve to fourteen and sixteen inches. The first year the vines are tied to wires a cane grows up from each joint. Each one of these canes will bear three or more bunches of grapes. I prune off all but two, leaving the best or two lowest and pinch off the top of cane three leaves above the upper bunch; also keep all laterals pinched off.

CULTIVATION

We must give particular attention to cultivation and the keeping up of the fertility of the soil. If the vines are making a satisfactory growth of wood they need only a light dressing of good wood ashes every fall. For instance, my land is very gravelly and porous and I give a good coat of stable manure every three years, and the other years I apply a light dressing of ashes—about four shovelful to the vine, evenly scattered over the whole surface between vines. I also use dissolved bone with my ashes every third year, and cultivate thoroughly up to the 15th of August, when I stop so as to allow the new wood to ripen better, and by these methods of pruning, fertilizing, and cultivating I grow as fine grapes as are produced anywhere in the Northern States or Canada.

A little girl was greatly interested watching the men in her grandfather's orchard putting bands around the fruit trees, and asked a great many questions. Some weeks later, when in the city with her mother, she noticed a gentleman with a mourning band around his left sleeve. "Mamma," she asked, "what's to keep them from crawling up his other arm?"

Oats are our preference as a cover crop, as they die down in the winter and are easily cut up with a disk harrow in the spring.—J. W. Smith & Sons, Winona.

Fertilizing Fruit Trees

Very little attention has been paid as yet in the majority of fruit districts to the fertilization of fruit trees. Too many growers are satisfied to take a crop year after year without returning to the land, except perhaps a small amount of stable manure every three or four years.

With the present system of plowing leguminous cover crops we are wasting valuable nitrogen when we apply manure to an orchard. Though, if no clover or vetch cover crop has been grown for years it is well to give a good application of stable manure at first.

What is known as a 10-8 fertilizer is largely used in New York State. This means a mixture containing ten per cent. of phosphoric acid and eight per cent. of potash, but this brand is rather lacking in potash. Many good growers are using equal parts of acid phosphate, bone meal and muriate of potash. In Nova Scotia their regular yearly application is three hundred pounds of bone meal and two hundred pounds of muriate of potash. Liberal feeding not only increases the vigor of the tree, but increases the yield and lessens the tendency for the orchard to have off years in bearing. In addition, the potash in the fertilizer improves the quality of the fruit and deepens the color. Spraying, cultivation, fertilization, is the secret of successful fruit growing.

The fruit that is grown in the interior of the tree is not so liable to blow off as if it were allowed to grow on long branches, and the tree is more easily sprayed and the fruit more easily picked.—J. O. Duke, Ruthven, Ont.



Tree After Pruning No. 2.

The same tree after it had been pruned. Demonstration work of this nature is of great value to the farmers in the districts in which the demonstrations are given.

House and Window Plants in Summer

Wm. Hunt, O. A. C., Guelph, Ont.

House plants should have a season of partial rest during the hot days of summer. This can be given them by standing them out of doors in a partially shaded position where they get very little sun. Two or three hours' sun in the early morning or late evening is beneficial to them, but there are very few pot plants that are benefited by being exposed to the hot sun of mid-day in summer.

The north side of a fence or building is a good place for house and window plants during hot weather. The plants should not be stood on ordinary soil or even on gravel. The best plan is to stand them on coal ashes spread an inch or two in depth so as to form a bed of ashes. This will prevent earth worms from getting into the pots, as worms will not work up through the covering of ashes. A sprinkling of air slaked lime on top of the soil where the plants are to stand will also keep away earth worms. Standing each pot on a piece of slate or flat stone will answer the purpose if coal ashes or lime cannot be had.

EARTH WORMS

Earth worms are very injurious to pot plants. They are often the cause of the drainage choking up, causing the soil to become sour and waterlogged, a condition that will soon kill the plants if not remedied by re-potting and giving the plants fresh drainage.

Earth worms are sure to congregate where the soil is kept moist, as it would be by watering the plants every day or two. A good remedy for earth worms in flower pots is to slake about half a pound of fresh lime with about a quart of warm water, then add cold water sufficient to make a gallon. Allow the solution to settle and clear. Enough of the solution can be given each plant to just moisten all the soil. This will drive out the worms, when they can be easily destroyed. The only plants, usually grown by amateurs, that are injured by the application of the lime solution are azaleas and rhododendrons. The lime solution should not be applied to these plants.

POT PLANTS

Plunging the pots in a bed of coal ashes several inches in depth is a good plan to adopt with pot plants in summer. The pots should be plunged or sunk into the ashes at least two-thirds of the depth of the pot, or even deep enough so that only about an inch of the top of the pot is above the surface of the ashes. By plunging them in this way they require far less attention in watering, as the water does not evaporate as quickly as when the plants are stood on the surface of the ashes. The latter is an important point, especially as the owners of the plants are sometimes away from

home for weeks during the summer months.

A collection of plants plunged in ashes or even in soil with some ashes placed at the bottom of each pot will require very little attention. They will almost take care of themselves in summer if

mentioned during the hot months of summer than kept in the house. An occasional spraying with clean water in addition to the rains will benefit the plants and keep down insects.

Another plan that can be adopted with a small collection of plants is to stand the pots in a window box and pack them around with moss, or even sawdust or excelsior packing material. If the two



A Profusion of Asters in the Garden of Mr. Wm. Robinson, Barrie, Ont.

placed in a partially shaded place. There are very few house or window plants that would not be benefited by this method of treatment during the hot months of summer. Such plants as palms, aspidistras, ficus elastica, begonias, calla lilies, hydrangeas, fuchsias, and pelargoniums, and summer plants are much better put outside in the way

last-named materials are used, a layer of moss should be placed on top so as to produce a more natural appearance. If a box of plants treated in this way is placed outside in a north window, or where it is shaded from the hot sun, it will not only be useful as a decoration, but the plants will be materially benefited by treating them in this way.

Summer Care of Last Winter's Plants

Mrs. Annie L. Jack, Chateaugay Basin, Que.

WHEN the windows must be shaded from the fierce sunlight, and the rooms darkened for comfort, the plants that have been such a source of pleasure through the winter months become rather a white elephant on our hands. It is quite likely, too, that in spite of care the mealy bug and aphid have found a home on some of them, and lack of sufficient water has affected their growth.

If we are so fortunate as to have a garden we go out with a pan of coal ashes, and make holes in which to plunge some of the pots to rest, putting the ashes at the bottom to prevent worms from crawling into the draining hole. Here can rest the Chinese primroses, the spent azalea, the poinsettia, and any other plant that has had its season of

blossoming, and requires to recuperate and grow fresh buds for another winter. But they must not be forsaken altogether. Sufficient water should be supplied to keep them in health.

A heliotrope that has been in flower should be cut back and given two months' rest in a shaded place. The same method will answer for the pelargonium. There is no window plant that has so many varieties of treatment as the calla in summer. One authority will advise to turn the pots on their side out of doors through the hot months, paying no attention to them, lifting up in September, and giving warm water. This plan has proved successful with some amateurs. Another authority lets the leaves die down by simply withholding water, and repots the next month. All

agree that the calla, being at home in marshes, requires plenty of water, but the fact is, the plant has wonderful powers of endurance to survive these various treatments. It should have rich soil and a midsummer rest.

BEGONIAS AND PALMS

The flowering begonias and palms always seem to me suitable plants to remain on the verandah where they can have some shade, and yet plenty of air. Palms are a special care unless one is willing to devote a little time every morning to giving the leaves a sponging off on both sides. If this is done there will not be a chance for the tiresome scale to find lodgment, but stems and ribs must be washed as well as leaves. The aspidistra requires the same treatment, and so does the ficus (rubber plant): nor do the above-mentioned require frequent repotting.

The abutilon will do well on the verandah if attended to in like manner, but if there is an aphid, scale or mealy bug anywhere, it will find its way to these charming bells. A spray, from a fine nozzle, of warm water over the foliage in the evening will keep the plants in good condition and discourage depredating insects.

What to do with the geraniums is often a query, for we cannot ignore them after their cheerful winter blooming; and they have the merit of not requiring extra care because of insects, and being very accommodating to the amateur. Let the old plants grow tall and blossom through the autumn to brighten the days beside the kitchen door, while cuttings can be taken off to make young plants for winter blooming.

The Holland bulbs that bloomed in pots can be turned out into the border, and get a summer's growth and winter rest ready for giving flowers in the garden another spring.

ORANGES AND LEMONS

There is a great deal of pleasure in growing the little orange and lemon trees that are willing to blossom in early spring in a sunny window, but it is rather provoking to have the lemons drop off half grown. This may perhaps be avoided by setting them out on the verandah after giving them a top dressing of fresh earth and regular watering. After fruiting it can be plunged beside the azalea until September.

A good plant for a permanent place on the verandah is *Cyperus alternifolius*, the very graceful and charming "umbrella plant." A pot of asparagus sprengeri, if lifted down every evening and set in a pail of water for a while, will continue to grow, and so will plumosus nanus, the feathery foliage keeping fresh a long time if given this immersion.

In fact, it is the life of plants when they are kept in this very unnatural posi-

tion through the hot months to give the foliage regular sprinklings, and to apply liquid manure occasionally to such as are growing. It is a pathetic sight to

see a batch of ill-cared for, thirsty, and dusty plants, and the attention that is necessary, if given, brings its own reward.

An Amateur's Famous Half Acre Garden

THE half acre garden of Mr. R. B. Whyte, of Ottawa, and the methods of its owner, afford interesting and valuable object lessons for those who have a desire to learn things horticultural. It is one of the most noted gardens on the continent. In a description he gave of it recently, from which most of the following is taken, Mr. Wilhelm Miller, the editor of *Country Life* in America, stated that during the fifteen years in which he had been hunting good gardens he had never seen one that had as many points of interest.

In his garden, Mr. Whyte grows six

hundred kinds of flowers, including one hundred and fifty varieties of peonies, ninety of late tulips, seventy-five of narcissus, sixty of sweet peas, fifty of pinks and forty of lilies. There are one thousand gladiolus plants in it, and one thousand Shirley poppies can be cut daily for two weeks.

Mr. Whyte does not maintain his garden primarily for cutting. Nevertheless, no visitor ever goes away empty-handed, and the family supply two churches every Sunday with flowers. But they take care not to spoil the garden effects by cutting too much in one place. On



An Effective Border of Bedding Plants in Mr. Whyte's Famous Garden.

In the front of this border are daisies, *Bellis perennis*, and *Mimulus tigrinus*, next geraniums and cannas in the centre. The border is in bloom from early June until frost.



A Profusion of Bloom, Another Lovely Effect in Mr. Whyte's Garden

German Iris are favorites with Mr. Whyte. Some of these as they grow in his garden are here shown with Crimson Paeonies in the foreground.

one occasion, however, some neighbors picked for a wedding 4,200 sweet peas in one day.

OTHER PRODUCTS

The garden has supplied a family of nine the year round with all the fruit desired, including thirty-five varieties of English gooseberries, twenty-five varieties of grapes, and two hundred and ninety-nine quarts of preserves. It produces a fair quantity of fresh vegetables in season. The garden is so productive that three wagon loads of plants are given away each year to start new gardens. The soil is so mellow that the gardener never touches his foot to the spading fork, but simply sets it in and turns the earth over.

FLORAL FEATURES

A good idea of the main floral features of the garden may be obtained from the following table:

MONTH	CHIEF FLOWERS AND NUMBER OF VARIETIES
April	Snowdrops, crocuses, scilla.
May	Tulips (100). Narcissus (70).
June	Peonies (150). Roses (20). German iris (20).
July	{ Sweet pea (60). Jap. iris (30). Oriental poppies (20). Other poppies (12). Spirea (15).
August and September	{ Gladioli (5,000 plants). Dahlias (40). Phlox (50 to 70). Asters (12). Cannas (15 to 20).

Mr. Whyte cares more for variety than for show, and values continuity of garden effect more than cut flowers. He wants plenty of flowers every day for five months, and, therefore, has given a great deal of thought to continuity of bloom. To fill the gaps in the foregoing plan he uses about forty kinds of lilies and one hundred perennials with scattering periods of bloom, including twenty kinds of yellow and orange day lilies. In other

words, he uses permanent material wherever possible.

The only annuals Mr. Whyte uses largely for garden effect are sweet peas and Shirley poppies. The only tender plants he uses largely are dahlias and cannas. For April effect he has to depend chiefly on small bulbs. To keep his bulb beds from looking shabby he grows California poppies, nasturtiums, and annual phlox, sowing the seed right on the permanent bulb beds. September is still not quite full enough, and so he grows some asters. The whole plan is simple, sensible, and economical.

THE FRUIT GROWN

Nine varieties of apples are grown that sometimes produce twenty barrels

of apples. The varieties ripen in about the following order: Yellow Transparent (August), Peach, Whitney, Duchess of Oldenburgh, Wealthy, Fameuse, Scarlet Pippin, Mackintosh Red, and Wolf River. The last two keep till January, but winter apples are not sufficiently hardy, e.g., Spy, Greening, and Spitzenburg. Six kinds of plums yield about three barrels a year.

Mr. Whyte grows twenty-five varieties of grapes—and prefers training them on arbors rather than trellises. He has three arbors, which are pleasant places in which to rest or read. On one of them are seven varieties of grapes. Mr. Whyte thinks that small gardens should have few trees and many vines. Grapes take up less room, give more convenient shade, and are highly ornamental.

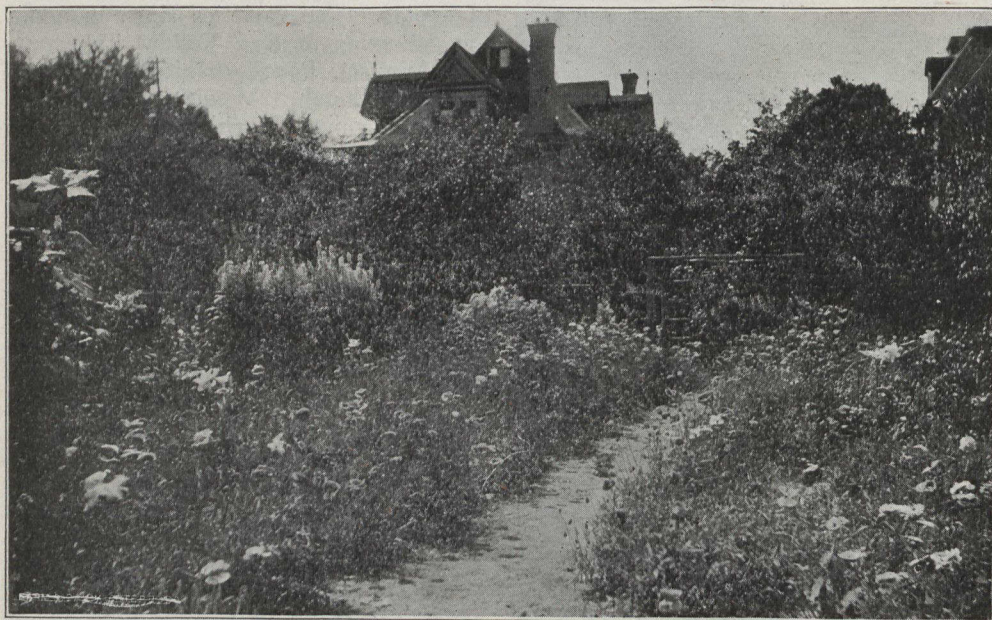
Gooseberries are Mr. Whyte's specialty. He grows the European varieties, which are about as large as plums and are eaten out of hand when ripe. He has never failed to get first prize for his collection of varieties, which is the largest in Canada—thirty-five varieties and twenty-five unnamed seedlings. They are grown on a heavy, clay soil. He gives them a little shade by putting them near the fence, and supplies plenty of moisture so that the roots are always cool and moist. Five to eight quarts is a fair crop, but sometimes a bush will yield eleven quarts. A bush lasts ten or twelve years. Mr. Whyte then layers it and starts anew. The fruits are one and a quarter to one and three-quarter inches in length. None are tart when ripe. The plants are bought in Europe.

The most wonderful fruit in Mr. Whyte's garden is the Herbert raspberry—the one he produced and for which he got five hundred dollars. This is believed to be the finest flavored, big-



One of the Rich Effects in Mr. Whyte's Garden

The flowers shown are White Poppy—Snowdrifts—in the foreground with sweet peas, grown on wire cylinders, behind.



Another View in Mr. Whyte's Famous Half Acre Garden

Shirley poppies may here be seen with Blue Larkspur and apple trees in the background.

gest yielding, and hardiest red raspberry in the world."

HIS OWN GARDENER

Mr. Whyte, who is the president of the Ontario Horticultural Association, is his own gardener. Each day he works in his garden from about six until half-past eight in the morning. The rest of the day, from nine until six, is spent by

Mr. Whyte in his wholesale office. He does not go home at noon. The evening is reserved mainly for rest and enjoyment of the garden. It is to be wondered at that a garden such as this has attracted such wide attention, or that it has been much admired from time to time by the representatives in Ottawa of our King and Queen

July Work With The Flowers

Wm. Hunt, O.A.C., Guelph, Ont.

KEEP the flowers of sweet peas picked at least every second day after they start flowering, to prevent them from seeding. If allowed to seed the flowering period will be of short duration. If the weather is very hot and dry, spray them with cold water at least once or twice a week on the under side of the foliage to keep down aphid and red spider. If they require watering at the roots, remember that a good soaking once a week is better than giving them a little water every day. Sweet peas are deep rooted plants; light surface watering is no good to them.

Spray the tops of dahlias every day in hot weather and keep them moist at the roots. Cut off the small weak shoots close to the ground and allow only two or three main stems at the most to each plant. One stem only is best if large blooms are required, unless the plants are very robust and strong. Be sure to put a strong stake to each plant and tie it up before the stem gets broken off by windstorms or some other cause. It is a good plan to drive a stake in by the plant when it is planted, as it is often left too late.

Watch out for the small tarnished plant bug that spoils the aster buds when they are quite small. The tarnished plant

bug is a small, brownish-grey insect about half an inch in length, very like a small fly. This bug can be easily recognized when examining the plants from the fact that it disappears quickly on the plant being touched, usually darting underneath the leaves out of sight, or dropping to the ground where it cannot be seen, or perhaps flying away. The best time to catch these pests is in the very early morning.

A good remedy is to sprinkle the plants a few times early in the morning with wood ashes, pyrethrum powder, hellebore, or tobacco dust. This is the same bug that destroys the terminal growth of chrysanthemums, causing blindshoots, from which no flowers develop. It was the main cause of the discontinuance of growing chrysanthemum plants out of doors in the summer time. They sometimes attack these plants in greenhouses. The best remedy for them in the greenhouses is to fumigate with potassium cyanide, using about one quarter of an ounce of cyanide per thousand cubic feet in the usual way. This remedy cannot be used in a dwelling-house on account of the deadly nature of the fumes.

CALLA LILIES

Do not allow the roots of calla lilies to become too dry. It is a mistake to

dry these plants too severely, especially for window culture. If the pots they are in are plunged in the ground in a partially shaded place, and the soil kept barely moist, they succeed much better than when they are dried out too severely. Complaints are often made of the calla lily not flowering. This is often caused from drying out the roots too severely during the resting period. I have taken them out of the pots early in July and planted them out in a light, rich soil in the open garden, and kept them well watered. When the growth was about twelve inches in height they were lifted carefully and potted. The results, both as to quality and quantity of flowers, well repaid the extra trouble taken with them.

Culture of the Sweet Pea

H. J. Edwards, Winnipeg, Man.

When sweet peas begin to bloom, it is best to cut all the fully developed flowers daily. See that no seed pods are allowed to form; if this is not done the plants will cease to bloom.

In dry weather give a liberal supply of water, and occasionally a little weak liquid manure. If the above directions are followed the plants should be in bloom from the first week in July until fall. The grandiflora type will withstand the wind far better than any of the Spencers. When named varieties are grown, all rogues should be carefully removed; and leaving one strong plant to every three or four sticks (about 12 inches) is a secret to success.

SUCCESS CERTAIN

I am confident that anyone who adopts the method of cultivation, I have here suggested, will be fully repaid by the result; not only will there be a considerable increase in the length of the stems, larger and finer flowers, but also a greater profusion of blooms compared with the average sweet peas we usually see in Manitoba.

When there are more flowers than are needed, I would like to mention that we have a number of institutions in this province where the sick and injured are being cared for. The majority of patients in these institutions are always pleased with the gift of a few flowers and no flowers are more highly appreciated than a well grown bunch of what is said to be the sweetest and most indispensable of all the annuals, *Lathyrus Odoratus*.

For aphid, take four ounces of quassia chips, boil ten minutes in a gallon of soft water; strain off the chips and add four ounces of soft soap, which should be dissolved in it as it cools, stirring it before using. This decoction of quassia chips and soft soap is the least offensive and the most efficacious of all aphid remedies.

Summer Care of the Lawn

Miss Florence A. Deeks, Toronto Ont.

When the ground for the lawn has been well prepared and thoroughly enriched—it can scarcely be too rich—and a desirable turf established by seeding or careful sodding, it is advisable to mow it regularly while the grass is short enough to be left lying after it is cut. This gives that soft, velvety appearance and supplies valuable mulch for the soil without taking anything out of it. But the cutting must be done while the grass is quite short, for it is an injury rather than a benefit to leave long grass lying on the turf. Moreover, a brown or sunburnt spot or a weedy patch calls for immediate attention.

Of all weeds that infest the lawn, the dandelion excels for persistent and luxuriant growth. Numbers of blooming dandelions might awaken admiration for the moment, were we unmindful of the millions of beautiful tender blades of grass starved and smothered by them, but the dandelion so greedily absorbs food from the soil and carbonic acid gas from the atmosphere, and spreads its thick mass of leaves over so large an area, depriving the soil of the heat, light, air and moisture, so greatly needed by the grass, that it ought to be eradicated. So, although

“The face of nature smiles serenely gay,
And even the motley race of weeds enhance

Her rural charms, yet, let them not be spared;

Still as they rise unconquered
crush them.

In wood and field there let them grow
By haunted streamlet”

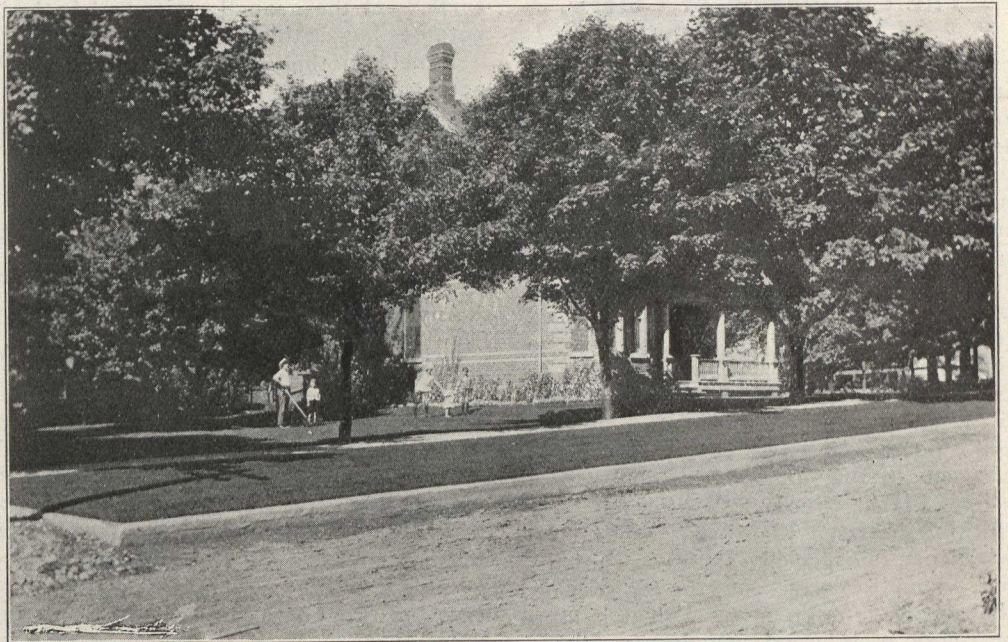
Nothing can be used on the dandelion to kill it, that will not kill the grass also. The only means of exterminating it is to cut it out about an inch or so below the point where the leaves sprout. It is better to do this before the flower matures and the seeds become scattered, for the dandelion multiplies wholly from the seed and blossoms more or less throughout the season.

The most effective little implement for the purpose is the “Ideal” Dandelion and Weed Extractor, which is much more easily handled than a knife, and can be procured at leading hardware establishments. By the repeated use of it, this most troublesome of all lawn weeds can be effectually overcome.

Ants on Roots of Asters

What can I do to get rid of red ants on the roots of my asters. The ants seem to attack the roots of the asters by means of a white aphid. The aphid sucks the life out of the plant and the ants live on the aphid?
—C. F.

This aphid or root louse gives forth a sweet secretion or excretion, called honey dew, upon which the ants feed. If the plant lice are killed, the ants will disap-



The First Prize Lawn and Boulevard, Barrie Horticultural Society's Competition, 1910
Residence A. Carson.

pear from that place; or the ants' nest can be destroyed, using tobacco dust in abundance around the roots of the plants to be protected; or make a hole in the soil near the roots of the plants and put in a little carbon bisulfide and close the hole. The carbon bisulfide fumes will kill the pests, while the tobacco dust will fertilize the plants and also repel the pests. Wood ashes will also repel them, as proven by us in personal experiments for aphids on roots of pear trees.—Prof. H. A. Surface.

The Dahlia and its Care

J. McPherson Ross, Toronto, Ont.

The dahlia is usually a free bloomer, but to have good flowers for exhibition purposes, it is well to thin out all immature buds by pinching them off. Only allow perfect flowers to develop.

For a long time the dahlia has been immune from insect attacks, but of recent years an insect preys on the small buds, causing them to wither and dry up and fall off. For one season I had hardly any dahlias, but a liberal sprinkling of Hellebore quite early in the plant's growth has warded off the pest. I also recommend Kerosene Emulsion—enough to saturate the soil around the stem. This is a good remedy. In very dry weather the red spider is apt to be a nuisance. Liberal syringing of water is the cure for that.

If your dahlias seem to be at a standstill, a liberal watering of liquid manure, which can hardly be made too strong, will produce surprising results.

The dahlia has lately come into new favor by the introduction of the cactus and quilled varieties. These are decidedly decorative types, useful for bouquets. The fantastic flowers in rich

colors make them especially desirable for home adornment. Every year adds some new variety, so that it is hardly necessary for me to specify any kinds when all are so good.

Watch Your Amaryllis

Thos. Jackson, M. A. C., Winnipeg

When the Amaryllis is developing the flower scapes a weak solution of manure water or any good fertilizer given occasionally will help to bring out the flowers to perfection. After flowering, the greatest care should be taken of the plants, as it is from that period till the end of the summer that the principal growth is made. I might mention here that the Amaryllis is not like the hyacinth or narcissus, which after the first year or two have their course and have to be thrown away. With good treatment the Amaryllis will keep for years and flower every year. In fact, you can increase the stock by taking off the young bulbs which grow on the side of the old bulb. The best time to do this is during the resting period, and to get the best results it is advisable not to take them off until they have made some roots, and then pot them off separately in small pots.

About the middle or end of September the plant will have finished growing, and from that time until about January give them very little water, keep them on the dry side, for this their resting period, and by doing this the bulbs will flower better the following year. There are a number of varieties to select from, but all of them are beautiful. The price is a little higher than for most other bulbs, but they are well worth it. With good treatment they will keep for years, giving great pleasure to the grower.

The Cultivation of Celery

A. McInnis, London, Ont.

Where celery is planted in single rows it will be necessary to maintain shallow cultivation between the rows. At no time should deep cultivation be practised, as the roots are to be found near the surface of the soil. If a mulch is used, no cultivation will be required, either along the side or between the plants in the row, except to pull any weeds that may spring up. Where a mulch is used it will be necessary to stir the surface lightly with a wheel hoe or iron rake, to prevent a crust forming after each rain or watering. Keep the surface of the soil smooth and in no case allow lumps of earth to remain near the plants.

The Planet Junior is desirable for working between the rows, while the wheel hoe is especially useful in cultivating a small area of celery or for stirring the soil close to plants. When a crop of celery is in good growing condition the roots will be near the surface. During a dry season the roots will go deep into the soil in order to secure moisture. This can be prevented by keeping the surface of the soil well stirred to a depth of not more than two inches forming a sort of dust mulch, beneath which the moisture will be drawn upward and prevented from passing into the air by the presence of the loose soil on top. Under these conditions the roots will work near the moisture line and consequently a larger growth and better quality will be obtained.

The effects of a drought may in most cases be met by frequent shallow cultivation, supplemented by the use of water, if available. When the water is sprinkled over the entire surface it should be done late in the day, so that the soil may, during the night, absorb the moisture and prevent a crust being formed, as would be the case were the water applied under the direct rays of the sun.

Potatoes in Saskatchewan

G. T. Barley, Prince Albert, Sask.

I had occasion to ask one of my farmer friends for the privilege of planting a few potatoes on his farm, and went to work to plant the way we used to in Ontario—that is to say, by throwing out the furrow in ridges and splitting the furrow to cover the potato. Had the season been wet enough this would have been all right, but dry weather came and I found I had no soil between the rows to bank up with, and as a consequence I had only a small crop of potatoes.

My farmer friend went at it rather differently. He planted his potatoes every fourth row and kept his sets well apart in the row. When the vines were large enough he threw up a good furrow on each side of the row at a time when the ground was damp. This mound of

earth kept the ground moist and he had potatoes larger than a man's hand.

I met another man who had a nice patch of potatoes. He claimed that potatoes should not be cut in this country, but I could see no difference on that account, as the principal thing is to have a good heavy mould for a dry season.

The Kitchen Garden

E. G. Cooper, Alberta

Any one wishing to get large results from a kitchen garden must invariably practice the following rules:

In the first place, good seed must be secured of the very best quality; second, the best kinds of the different vegetables and small fruits must be secured, and next to this good soil is needed; in fact, even if the soil is rich, one must make it more so in order that the strain on the soil can be sustained. You cannot have the ground too rich for close cultivation.

There should not be any waste ground. Every foot of soil should be made to produce something that will be of use to the family.

NAMES OF COMMON WEEDS

Then again no weeds of any description should be allowed to start. It may be useful just here to name some of the weeds in question. I will only give the common names. The red root or pig weed, lambs quarter, chickweed, shepherd grass, foxtail, blue grass, carpet weed, sour grass, cockle, Canadian thistle, Scotch thistle, milk thistle, milk weed, wild ferns, burdocks, tall dock, twitch grass—this is the most injurious of grasses. Then there is the pursley or flat weed. This is an uncommonly bad weed that cannot be subdued without the utmost vigilance. It does not appear until the warm weather comes, and the ground becomes warm. Not even one plant should be allowed to seed as that one would produce some thousands of seeds. The weeds should be carried off the ground to the compost heap. No weeds should be allowed to run to seed, and if it is possible that any one should be missed and allowed to go to seed it should be immediately burnt, as this is the only way of destroying weed seed. All weeds not ready to seed can be put in compost heap.

As soon as the onions are large enough to follow the rows, start cultivating, using the wings, and work as close to row as possible. Start hand weeding immediately after cultivating the second time. Use the cultivators or diggers as long as possible, for by so doing you retain moisture and keep weeds under control.

Fertilizers can only give their best returns when good cultivation is carried on at the same time—they cannot take its place.

Pollinating Cucumbers

S. Clark, St. Catharines, Ont.

I would like to correct a mistake contained in the extract from Mr. A. G. Wooley Dod's paper, published in the May issue of THE CANADIAN HORTICULTURIST. He advises growers of cucumbers to propagate the flower (I conclude he means pollinate.) My experience leads me to advise quite the opposite. In common with many successful growers, I have always done my utmost to prevent pollination, by pinching off the male flowers, before they have opened and also by keeping out bees in case any male flowers had been overlooked and allowed to open. It is a strictly enforced rule amongst the large growers for the English market, that pollination be avoided.

Mr. Dod mentions the Telegraph variety. I may say that I have grown that particular sort with success. Two years ago I cut 1,667 perfectly shaped cucumbers from thirty-eight plants of that kind.

I hope that readers of THE CANADIAN HORTICULTURIST, instead of pollinating the flowers on their cucumbers, will do all they can to avoid pollination, unless they wish to secure seed for another year.

In case seed is required, I advise pollinating a few flowers after securing fruit in the early part of the season. Plants do not possess the same vigor after a few flowers have been pollinated and the seeds are forming.

Intensive Gardening

H. R. Frankland, Toronto

I thought I would like to give an idea of what a man can do in vegetable and flower gardening if he makes up his mind to do it. Last year, as my wife and daughter were going to Europe I thought to keep myself employed, I ploughed up a strip one hundred feet wide by two hundred feet long, and planted two bags of potatoes, one pound corn (early), one pound Stowell's evergreen corn (late), two hundred cabbages, two hundred tomatoes seven thousand celery, one ounce carrot seed, one ounce beets, one ounce parsnips, two hundred cauliflowers, forty hills cucumbers, twenty hills muskmelons, besides packages of sage, thyme, etc. I also planted one pound beans, and kept all of this free from weeds, and hoed up the potatoes and celery myself.

Besides the vegetables, I had a quarter of an acre of flowers, two beds of perennials, two hundred dahlias, gladiolus, asters and other plants and bulbs that go to make a home look beautiful. I worked early and late from April until the middle of August with no help, and never had such a good crop of vegetables, and never did the flowers look so well, nor the grass so green.

It is wonderful what can be grown in a back yard if you have proper ground. I noticed one man with only a piece of ground eighteen by one hundred and ten feet, on which the house stood, and around it he was able to grow all the tomatoes, beets, lettuce, parsley, cabbage and flowers that he could use; this all goes to show what can be done if one

tries. I started all seeds in hot beds, as well as most of the bulbs, and raised about one hundred chickens.

Around the house I have many kinds of fruit trees, apple, cherry, pear, plum, also black currant and raspberry bushes and grape vines.

This, too, is one of the ways to keep from growing old.

Growing Tomatoes in the Greenhouse

A. H. MacLennan, B. S. A.

HOTHOUSE tomatoes take four months to first ripe fruit and five to produce a full crop in fair weather, but will take longer if weather is dull and unfavorable.

For the Christmas crop we sow our seed the first week in July. These plants



Transplanting Tomatoes into 2 1 2 in. Pots

should be ready to go into the bed the third or fourth week in August. The seed for our second set of plants for the spring crop in March and April is sown the first week in October and should be ready for the bed by the end of January. Many florists are using tomatoes to fill in the greenhouses in summer. These should be started the first week in March and will be ready to transplant into the house the middle of April, giving a crop in June and July.

RENEWING THE SOIL

We renew our soil each year from a compost heap made up each October as follows: Plow sod about three inches deep, then haul to a well drained spot near the house. Then place two layers of sod, grass sides together, then a layer of four inches of manure. Alternate these two up to the required height of pile. This gives the fertility in the manure a good chance to penetrate into the soil. Many, however, renew their old soil with manure. This, if well rotted, may be immediately dug in, but if fresh is placed on top and kept watered

for three or four weeks, in this way washing the fertility down into the soil. Then the rough manure is raked off and the bed dug over. Between each crop we dig in a fair quantity of well rotted manure. Some growers use wood ashes or muriate of potash and bone meal on alternate crops. The soil should be limed at least once a year to keep it sweet.

The seed is sown in flats in soil, one sand and one compost. When seedlings are showing the first true leaves we transplant them into two-inch pots in a soil made up of one of sand to three of compost. The plants should be carefully watered and shaded when necessary if the sun is shining. The plants should be set fairly deeply. When the plant has filled the two-inch pot with roots and your bed is not ready you should transfer to four or five inch pots, so as to give no check. This is especially necessary with the second crop since weather conditions may hold back the crop. Never wet plants too much, as it causes them to turn yellow and grow spindly. A little dryness will produce a larger root system and sturdier plant.

In setting plants for the Christmas crop, we set them two feet apart each way, diagonally. For the spring and summer crops, eighteen inches each way. Set the plants at least one inch lower than they were in the pots.

METHOD OF PRUNING

We prune the plants to one stem,

breaking off all side shoots as soon as they appear. One wire is run the length of the house above each row of plants on a level with the gutter. To this one upright wire is run from each plant, fastening to the top wire with a clip and placing in the soil next the plant. The plants are tied to the wire with raffia or soft cord, care being taken not to tie too tightly. When the first fruit begins to color all leaves below them should be cut from the stalks. When all fruit has set that you wish to ripen, nip off the tops.

Tomato plants like a dry atmosphere. Dampness breeds disease and hinders pollination. The temperature at night is best at 60 degrees, with 10 to 15 degrees higher during the day. Keep the ventilators open whenever possible when weather is suitable, around noon being the best time.

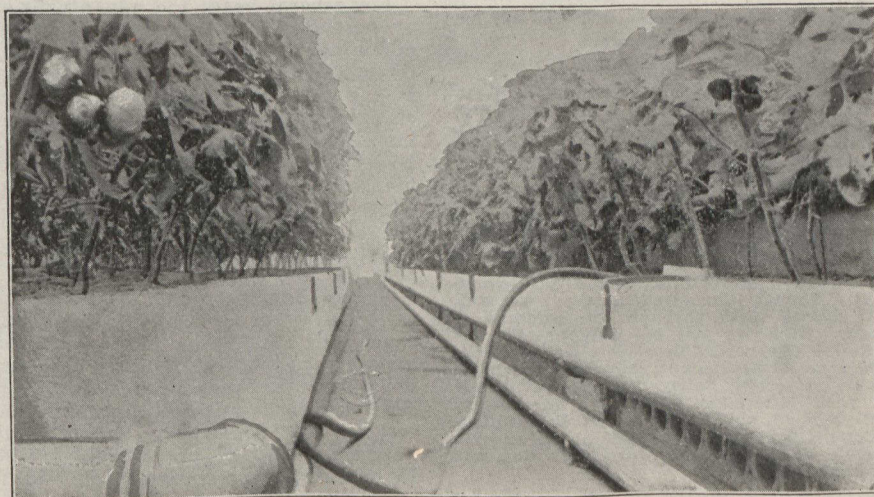
WATERING

Two methods of watering are in use in Ontario in tomato greenhouses—sub-irrigation and surface watering. Sub-irrigation is simply laying tile just below the surface of the bed two feet apart, with a filling pipe coming above the soil at one end. Surface watering is accomplished either with the watering-can or hose.

Sub-irrigation gives a larger yield, a stronger plant, prevents much tip rot, and keeps the soil open and porous like a sponge. Its only disadvantage is the cost of installing. Surface watering causes the soil to pack, prevents much of the water from getting to the bottom of the bed, excludes air, and has a tendency to cause fungous disease from dampness.

Mulching with strawy manure will give very similar results to sub-irrigation. Apply as soon as plants are set permanently. Its only defect is the chance of disease.

Comet, Industry, and Queux Clipper are good varieties for winter use. To these add Bonny Best and Earliana for a spring crop.



Hothouse Tomato Vines Pruned Below the First Fruit Stems

The Canadian Horticulturist

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PETERBORO, ONTARIO



The Only Horticultural Magazine
in the Dominion

OFFICIAL ORGAN OF THE ONTARIO, QUEBEC, NEW
BRUNSWICK AND PRINCE EDWARD ISLAND
FRUIT GROWERS' ASSOCIATIONS

H. BRONSON COWAN, Managing Director

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4. The Law is that subscribers to newspapers are held responsible until all arrearages are paid and their paper ordered to be discontinued.
5. Change of Address—When a change of address is ordered, both the old and the new addresses must be given.
6. Advertising Rates quoted on application. Copy received up to the 18th. Address all advertising correspondence and copy to our Advertising Manager, Peterboro, Ont.
7. Articles and Illustrations for publication will be thankfully received by the editor.

CIRCULATION STATEMENT

The following is a sworn statement of the net paid circulation of The Canadian Horticulturist for the year ending with December, 1910. The figures given are exclusive of samples and spoiled copies. Most months, including the sample copies, from 11,000 to 12,000 copies of The Canadian Horticulturist are mailed to people known to be interested in the growing of fruits, flowers or vegetables.

January, 1910	8,925
February, 1910	8,967
March, 1910	9,178
April, 1910	9,410
May, 1910	9,505
June, 1910	9,723
July, 1910	9,300
August, 1910	8,832
September, 1910	8,776
October, 1910	8,784
November, 1910	8,747
December, 1910	8,662
	108,809

Average each issue in 1907,	6,627
" " " " 1908,	8,695
" " " " 1909,	8,970
" " " " 1910,	9,067

Sworn detailed statements will be mailed upon application.

OUR PROTECTIVE POLICY

We want the readers of The Canadian Horticulturist to feel that they can deal with our advertisers with our assurance of the advertisers' reliability. We try to admit to our columns only the most reliable advertisers. Should any subscriber, therefore, have good cause to be dissatisfied with the treatment he receives from any of our advertisers, we will look into the matter and investigate the circumstances fully. Should we find reason, even in the slightest degree, we will discontinue immediately the publication of their advertisements in The Horticulturist. Should the circumstances warrant, we will expose them through the columns of the paper. Thus we will not only protect our readers, but our reputable advertisers as well. All that is necessary to entitle you to the benefit of this Protective Policy is that you include in all your letters to advertisers the words, "I saw your ad. in The Canadian Horticulturist." Complaints should be made to us as soon as possible after reason for dissatisfaction has been found.

Communications should be addressed.

THE CANADIAN HORTICULTURIST,
PETERBORO, ONTARIO.

EDITORIAL

THE SITUATION IS SERIOUS

We are in receipt of a letter from Dr. C. Gordon Hewitt, Dominion Entomologist, in which, after dealing with certain other matters, he congratulates us upon the timeliness of the editorial published in our June issue, dealing with the Brown-tail Moth situation in Nova Scotia. Dr. Hewitt visited Nova Scotia recently and found the situation more serious than ever this year. The infestation has spread into Maine, which means that that province too must now exert itself more than ever if conditions are to be controlled.

The winter nests or webs that have been found in Nova Scotia this year are of an unusually large size. In several cases over one thousand of the young caterpillars have been found in a single winter web. In one case a web contained over one thousand eight hundred. Not only should the local governments of Nova Scotia and New Brunswick put forth every possible effort to exterminate this pest while yet there is a possibility of doing so but the cooperation of the public should be enlisted and especially of the school children. Were the public properly informed in regard to the seriousness of the situation more might be accomplished than can be by the necessarily comparatively limited number of government inspectors that are available for the work.

OPPORTUNITIES LYING FALLOW

There are thousands of acres of the very best fruit land in Ontario and in Quebec, and in portions of the Maritime provinces, that are waiting to make fortunes for the first enterprising land companies that secure their control and make their possibilities known to the public. A few of these land companies are much needed here in the east. The success a British Columbia company met with last winter selling western fruit lands to people in Montreal and Ottawa proved that there is a good market, even in our eastern cities, for such lands. The ignorance prevalent in our cities concerning the possibilities of nearby fruit land is not a credit to the east. A campaign of education if conducted by the provincial governments, would meet with a hearty response by the metropolitan and local press, and immense benefit would result.

For several years the advantages enjoyed by portions of certain counties in Ontario, adjoining the Georgian Bay, and the great lakes, and the S. Lawrence River have been pretty generally known. Government officials have been investing privately in this land, and in some cases have resigned their positions in order that they might the better develop the orchards they have purchased. Private companies have been formed also to operate orchards in their districts on a business basis. One company that has had considerable experience in the Georgian Bay District is increasing its capital from twenty-five to one hundred thousand dollars. Another company, controlled mainly by English capital, has attracted much attention recently by leasing and purchasing a large number of orchards in these sections in the expectation of obtaining handsome returns upon their investment. In one section of Ontario the residents are going to extremes in the planting of new orchards. These facts make it all the more difficult to understand why, it is land com-

panies, such as operate everywhere in the west, have not made their appearance in these sections more quickly.

One of the first signs of improvement has come from New Brunswick. As noted elsewhere in this issue, a company has been formed which has secured control of 1,200 acres of fruit land in the St. John river valley which it is planting out to trees with the purpose of reselling the land in small blocks to English settlers and others. Properly managed, this company, especially if its efforts are encouraged by the provincial governments, as they well might be, should prove a success. Small companies might be formed in the fruit counties of Nova Scotia and Ontario to boom their local lands in the same manner.

One explanation of the lack of more enterprise in this direction is furnished by the comparative apathy of our provincial governments in encouraging immigration to these lands. Once business men see that the local government intends making a vigorous and sustained effort to encourage such immigration they will be more ready to seize the opportunities the situation will offer.

A CLEARING HOUSE FOR IDEAS

The unselfish devotion of the leading officers and many members of the horticultural societies of Ontario to all that is best and most beautiful in nature is the secret of the success of these organizations. As their membership has increased and new lines of work thereby been made possible there has been an awakening of interest in the work of the societies that augurs well for the future. The splendid work that is being accomplished through the Ontario Horticultural Association in the dissemination of ideas concerning methods of work that have proved successful in different localities has shown the benefit of a central organization to act as a clearing house as it were, for ideas of this kind.

There is a greater search to-day on the part of the officers and members of the societies for information that will help them in their work than ever before. THE CANADIAN HORTICULTURIST has felt this pressure. It has led us to establish a department devoted to the work of the horticultural societies. As the majority of the horticultural societies of Ontario subscribe for THE CANADIAN HORTICULTURIST, for all their members we feel that THE CANADIAN HORTICULTURIST can be made a means of greatly assisting them in their work.

As far as possible we desire to confine the information published in this department to items that will be likely to be of value to other societies by showing them what certain organizations have undertaken or have accomplished. We trust that the officers and even the members of the horticultural societies will assist us to make this department a great success by contributing freely suggestions pertaining to the work of the societies and items of interest.

DISCRETION REQUIRED

The Simcoe Ontario Reformer has rendered public service locally by drawing attention to the fact that many people are sure to be disappointed as a result of a craze that has set in to plant orchards in portions of Norfolk county. The remarkable success that has attended the operations of the Norfolk County Fruit Growers' Association, as well as those of several individual growers, has led to land being set out in orchards wholesale. The Reformer estimates that hundreds of thousands of trees have been planted in the county, and well

asks: "Can twigs stuck in sand and left to struggle, be expected to turn the economy of nature upside down and make fortunes for men without effort on their part?"

We are informed by one of our correspondents in this section that some people seem to have gone wild over the situation, and are buying almost anything that looks like soil. Excellent returns may be obtained from good fruit land properly managed. Those people, however, who forget that even in the best fruit districts there is much land entirely unsuited for fruit culture and that orchards when planted require constant, careful attention, will pay dear for the lessons their experiences will teach them. Intending inexperienced investors in fruit land, no matter where it may be located, will invariably do well to first consult experienced and responsible parties in the sections where they purpose investing. By taking this precaution many an investor has been saved from heavy loss in both time and money.

Canadian fruit growers should be protected this year from the competition of berries and fruit from the United States that are annually sold throughout Canada in baskets and packages that do not conform with the regulations of the Fruit Marks Act. These consignments of fruit are not marked, as they should be, with the name of the importer, the name of the variety, and a designation of the grade, nor are the consignments protected as they should be by the packages being marked "short" to show that they do not comply with the requirements of the law. The staff of fruit inspectors has been increased and this matter should be given immediate and thorough attention.

How pitiful is the extent of the efforts that have been put forth so far in Eastern Canada to give instruction in the proper packing of fruit is shown by a mere statement of what has been accomplished in this direction by the provincial government of British Columbia. In a letter to THE CANADIAN HORTICULTURIST, Mr. R. M. Winslow, the provincial horticulturist, states that last year his branch conducted thirty packing schools over the province from which were graduated nearly four hundred pupils. Diplomas are to be given to those who become successful packers. Mr. Winslow will deal quite fully with this subject in the September issue of THE CANADIAN HORTICULTURIST, which will be our special packing number.

Last fall the fruit growers of British Columbia invited—we might say dared—the fruit growers in Eastern Canada, particularly Ontario, to hold a National Apple Show and promised to make exhibits at such a show. The directors of the Ontario Fruit Growers Association decided not to attempt to hold such a show next fall but to consider the advisability of holding one during 1912. Could it be that that was only a nice way of shelving the matter? That decision was reached several months ago. Since then the whole question appears to have dropped out of sight. This is not the way to make a success of a National Apple Show in 1912.

It has been announced that the second Dominion Fruit Conference will be held in Ottawa next fall. What subjects are to be discussed? What arrangements are being made for the programme? How is it that we are not hearing more about it?

THE CANADIAN HORTICULTURIST is always deeply interesting and most valuable as a timely reminder of the many things to be attended to at the proper season.—W. H. Leacock, Toronto, Ont.

PUBLISHER'S DESK

Our front cover illustration this month shows some striking, carpet-bedding work in Mount Royal Park, Montreal, Que. It can readily be seen from the illustration that the gardener in charge has done his work well. The photograph was furnished us by Prof. W. S. Blair, Macdonald College, Que.

* * *

Our proposal to make the September issue of the Canadian Horticulturist a special Packing and Exhibition Number is meeting with a most gratifying response. Prominent authorities in horticultural matters have written congratulating us upon our decision and expressing the view that special numbers in which certain important subjects are treated fully, are of great value to the readers of a paper as the information they contain is generally complete and it is furnished at a time when it is of the most benefit to the reader. Fruit and Cold Storage Commissioner J. A. Ruddick, Ottawa, has furnished us already with an important well illustrated article dealing with the pre-cooling of fruit for shipment. This is a subject which already is assuming great importance in certain of our leading fruit districts. This article will be timely and instructive. Mr. Alex. McNeill, Chief of the Fruit Division, will contribute a special article. Dominion Fruit Inspector, P. J. Carey will describe the best methods of harvesting and handling the apple crop. An article on packing pears for the home markets will be furnished by Mr. W. E. Beaman, of Newcastle, Ont. Mr. R. M. Winslow, Provincial Horticulturist for British Columbia, will describe the great work that is being done to improve the fruit pack of that province while a somewhat similar article, but dealing with Nova Scotia's methods will be contributed by Mr. G. H. Vroom, Dominion Fruit Inspector, Middleton, N. S. Within the next few weeks we expect to go to press on the cover of the September issue which is to be printed in several colors and which will be unusually pleasing and attractive in its effect. In fact, it will be much the finest cover that has ever been published on The Canadian Horticulturist. Other special features of this number will be announced in our August issue. Those advertisers who desire to secure special positions and extra space in the September issue will do well to speak early as already many of the best positions have been taken.

* * *

"The Canadian Apple Growers' Guide," explains the best methods of planting, culture, harvesting and marketing apples. It also gives careful descriptions of varieties suitable for Canada written from a Canadian standpoint and from fifty years of personal experience. It is altogether the best authority for Canadian apple growers. The net price is \$2.00, but by special clubbing arrangements we are offering this valuable book postpaid and The Canadian Horticulturist for one year, both for \$2.00. Those of our readers who do not possess a copy of this book will do well to take advantage of this offer.

* * *

A considerable number of our readers have taken advantage of the offer we made through this department last month to give an exceptionally fine fountain pen to every person who would send us five new subscriptions at sixty cents each. We have

given fountain pens for less than five subscriptions—good ones too—but this pen is of extra quality. It is pearl mounted, has two handsome gold bands, filled with a solid 14kt. gold pen. Every pen is guaranteed by the manufacturers to give absolute satisfaction. This offer is still open for acceptance by our readers.

SOCIETY NOTES

We invite the officers of Horticultural Societies to send in short, pithy reports of work that would interest members of other Horticultural Societies.

PHOTOGRAPHS WANTED

A considerable number of the horticultural societies in Ontario, including Windsor, Guelph, Smiths Falls, Peterboro and several others, are doing excellent work improving public grounds and buildings by the planting of flower beds and vines and the placing of window boxes. As we desire to make this department of The Canadian Horticulturist of the utmost value to the various horticultural societies we will appreciate it if these societies will furnish us with illustrations of the improvements they have effected.

We purpose publishing in an early issue an illustration of one of the Public Parks in Peterboro that has been under the care of the Peterboro Horticultural Society for several years. An illustration gives a far better idea of what a society is doing than can be conveyed in any other way. We trust, therefore, that the societies will aid us in encouraging more of this work by forwarding as many photographs of this nature as possible.

ST. CATHARINES

Early in June, bags, each containing four gladiolus bulbs, were distributed among the school children of St. Catharines together with a circular giving the names of the bulbs and cultural and other directions. The bulbs that were given included one each of the following varieties: Attraction, a dark, rich crimson with a large white centre; Ceres, white, spotted rose; Isaac Buchanan, an extra fine yellow and Pactole, a creamy-yellow, blotched carmine.

The children were advised to plant the bulbs during the second week in June, in order that blooms might be ready for the exhibition which it is proposed to hold during the second week in September. The society will give, for every bloom exhibited by each scholar, four mixed single tulip bulbs which will be supplied in the fall in time for planting to bloom next spring.

OTTAWA

A magnificent display of roses and paeonies was made by the members of the Ottawa Horticultural Society in St. John's hall at an exhibition held about the middle of June. The paeonies carried all before them, although the roses also were remarkably fine. The weather before the exhibition had been most favorable with the result that the flowers were the finest that had been shown in Ottawa for several years. The principal display of paeonies was made by Mr. R. B. Whyte, a description of whose garden is published elsewhere in this issue. Mr. Whyte displayed a considerable number of varieties and succeeded in capturing most of the first prizes. Other close competitors were Messrs. W. H. Cooper and W. J. Kerr.

In roses, as for many years past Mr.

W. G. Black was the principal winner although D. C. Chamberlain, G. A. White, Ambrose Duffy, and several others captured numerous awards. An exhibit of Sweet Williams and garden flowers by Mrs. Fenn was an attractive feature.

TORONTO

The early June exhibition of the Toronto Horticultural Society was held in a large tent in the Allan Gardens. The display of flowering shrubs, azaleas, and rhododendrons was especially fine. It showed that these shrubs will stand the winters in Toronto when properly protected. Owing to the earliness of the season the lilacs were not quite equal to those shown last year but some fine specimens were on hand.

A feature of the exhibition was a display of palms and flowering plants by Mr. E. F. Collins, Superintendent of the Allan Gardens and of erezulus by Mr. D. O. Cameron. These were not for competition. After the exhibition the flowers were distributed among the hospitals.

The year book for 1911 has been distributed among the members. It is a remarkably attractive publication and the officers of other societies will do well to write to the Secretary, Mr. O. St. George Freer, 103 Bay St., Toronto, for any extra copies that may be available for distribution. Of course there will not be enough copies for distribution among the general public. The book is printed on high-grade paper and is handsomely illustrated. Among the articles it contains is one entitled "How to Grow Eighty-two Varieties of Vegetables with Success in a lot 27x86 ft. by Geo. Baldwin, that was published in The Canadian Horticulturist; an article by the President W. G. MacKendrick, entitled "Roses for To-

ronto;" one dealing with the cultivation and characteristics of the Dahlia, by Mr. J. MacPherson Ross, a planting table for vegetables by A. B. Cutting and one on Hardy Plants for Permanent Borders by Miss M. E. Blacklock.

SMITH'S FALLS

The Smiths Falls Horticultural Society, with a large increase of membership, has started the season in a vigorous manner. The spring premiums have been distributed, seeds for the school children's floral competition have been given out, the lawn and garden competition committee have completed their arrangements, and further work has been commenced on the park. With generous grants from the government and Municipal Council, together with private subscriptions, the society expects to have a record year.

The East Asleep

A. G. Turney, Provincial Horticulturist, St. John, N. B.

New Brunswick's premier apple lands are to be found in the Lower St. John Valley between St. John and Fredericton, and are only from twenty to eighty miles by river transportation from St. John, the national winter port. The valley is one of great scenic beauty and fertility and is a great natural apple belt. To the man who desires to grow apples commercially, I do not know in all Canada of a country where the prospects and markets are better or the environment more ideal.

Were it not a regrettable fact, I should have believed it impossible that British Columbia of late years should have attracted so much capital and so many people from the Old Country fruit lands. Yet, in the face of the great geographical, social and

natural advantages possessed by Nova Scotia, New Brunswick, and Ontario, she has accomplished it. In the east we have a less rugged, a more beautiful country; we are within a week's journey from the best market in the world, and the old home of our immigrants. We do not have to resort to artificial methods such as irrigation and frost fighting appliances, and our apples are better flavored.

There is only one explanation. British Columbia is awake and the east is asleep. The signs of the times are, however, not without hope—the east stirs uneasily in its sleep—presently it will rub its eyes—and then let us hope that it will open one and with just one eye open and its great natural advantages, British Columbia, wide awake as it is, will have to look on.

To my mind British Columbia with its lands already at fancy prices, with its higher cost of production and enormous transportation expense, can never seriously compete with the Maritime Provinces on the European market, if we exert ourselves at all. Now is the time for the Province of New Brunswick and Nova Scotia, each keeping to the production of the varieties for which they are best adapted, between them to take a large and commanding place in the supplying of the European apple market from September to May of every year.

It is a matter of great satisfaction to be able to say that companies to develop our fruit lands are already being organized and will soon be in active operation, and I am confidently expectant that the development of fruit growing in the St. John Valley will be the most remarkable feature in the next ten years of Canadian horticulture.

Visitors Welcome

Call at our Nurseries while plants are in bloom and make selection for fall planting.

Magnificent display of

Paeonies and Roses

200 Varieties of Hardy Perennials,
100 Varieties of Flowering Shrubs.

SOMETHING ALWAYS IN FLOWER

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Nurseries at Pointe Claire, P. Q.

A FEW RELIABLE SALESMEN WANTED

BOXED APPLES

COMMAND BETTER MONEY

We make the Proper Box at the Right Price.

Send your order large or small, early, and assure prompt delivery.

Be first in the market with the most saleable fruit.

Write us To-day.

THE FIRSTBROOK BOX CO.

LIMITED

TORONTO

The Better Care of Orchards

A marked feature of the apple industry particularly in Ontario this year will be the number of orchards that are being worked on rent 1. A large amount of English capital has been invested through two or three companies in this enterprise. In addition to this, many local apple dealers have changed their methods, and instead of buying the fruit in the orchard as in former years, they have proceeded to rent the orchards. This has been done on so large a scale that it cannot fail to materially affect the quantity and quality of apples produced in Ontario orchards. Nearly all these rented orchards will be thoroughly sprayed and many of them have been pruned. In most cases there is a stipulation for cultivation of the ground as well.

It is safe to say, therefore, that there will be several thousand trees this year receiving cultivation, pruning and spraying that did not receive treatment in former years. The immediate effect of this good treatment will be to increase the crop materially the first year. In estimating the apple crop of Ontario for this season, therefore, liberal allowance will have to be made, over and above the usual estimates, for the increased quantity and quality of the apple crop as the result of this feature.

CO-OPERATIVE ASSOCIATIONS

Another important feature is the formation of a large number of new co-operative associations; in all probability the number will be double that of last year. Many of these of course, are small and may not do effective work the first year. The tendency, however, is towards a better quality of fruit, and a larger quantity of it from the same number of trees.

It would be an easy matter, by only ordinary good care, to double the merchantable quantity of Ontario apples. This co-operative movement is not confined to Ontario. The development in Nova Scotia is even more noticeable, and it is not at all improbable that the larger portion of the crop will be handled co-operatively there, if not this year, in the very near future. A

large increase in the number of associations is also noted from British Columbia.—Bulletin of The Dominion Fruit Division.

The Cold Storage of Apples*

J. A. Ruddick, Cold Storage Commissioner, Ottawa

Cold storage may be applied to the apple industry in two or three ways: In the first place it is useful for the cooling of the early varieties for immediate shipment. Then it is also useful for the preservation of the later or winter varieties which may be kept for several months; and it has a further use in extending the season for certain special varieties. The earliest varieties are not wanted for long keeping; it is not advisable to try to keep them.

It is inadvisable to try to keep the earliest varieties into the season for other later and superior varieties. Then it is important to get the apples out promptly to secure the early market. These early apples ripen rapidly; that is the reason they are early apples, because their life processes are short and proceed much more rapidly than in the later varieties. That means that the early variety ripens as much in a day as some of the later varieties will in a week or even in a fortnight, and perhaps even more than that. A day or even a few hours at high temperature makes a great difference.

It is of the very greatest advantage to be able to chill these early apples before shipment. They will carry very much better, because being firmer and harder when chilled they do not bruise so readily, and they will reach the consumer in much better condition and with less waste. That is the one way in which we need cold storage for apples of this class.

BOXES VS. BARRELS IN COLD STORAGE

The box or the package is of some importance in this connection, because apples packed in boxes may be cooled more quickly than if they are put in barrels. If you pack apples in barrels during warm weather when the ripening process is proceeding

* Extract from evidence given before the House of Commons Committee on Agriculture.

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Dupuy & Ferguson, 38 Jacques Cartier Sq.,
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Wm. Rennie & Co., Adelaide and Jarvis Sts.,
Toronto, Ont.

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Kenneth McDonald, Ottawa, Ont.

A. E. Cameron, Brockville, Ont.

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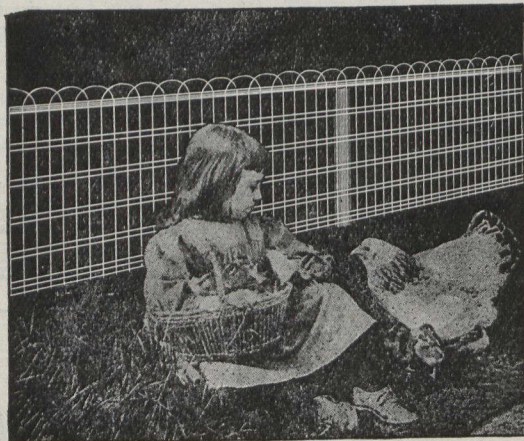
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SAVED HIS FILLY

ST. JOVITE, QUE, March 3rd, 1911.

INTERNATIONAL STOCK FOOD CO., Limited.

GENTLEMEN,—I am glad to say I used International Colic Remedy on what seemed to be a hopeless case and saved a beautiful filly—she was cured in a few minutes. (Signed) CHARLES ST. AUBIN.

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rapidly there is a great deal of heat generated in the apple itself, and in a tight package like a barrel the heat is confined. The high temperature continues the ripening process and the ripening process generates more heat and the apples deteriorate rapidly under those conditions. In a box which is more or less open, the heat escapes; the cooling is effected more rapidly, and there is not the same amount of deterioration in a given time. I have seen experiments reported with early varieties of apples that had been placed in a constant temperature for several days and then when a thermometer was pushed into one of those apples the temperature was found to be as much as two degrees higher than the constant temperature in which they are stored. That is the heat generated by the ripening processes. Chemists tell us that they can by analysis determine exactly how many heat units have been generated in the ripening process.

Generally speaking the more matured apple has the better flavor, and there is this to be said: that the fairly well matured apple, which of course is not over-ripe, will keep longer and better in cold storage than a green one will. That is contrary to the opinion that is held by a great many people. An apple ripens more rapidly after it is picked than it does on the tree.

Fruit Reports

Tent Caterpillars have been reported in several districts. This is nothing unusual, nor are there any indications that there is anything like an extraordinary infestation at any point. Nevertheless, indications are not wanting that in the neighborhood of Ottawa there will be many trees defoliated this year unless active measures are taken to repress the Tent Caterpillars. Their food plants are distributed so widely in fence rows and neglected bush lots, that the mild infestation of last year may possibly result in a serious invasion this year. Orchards that are well sprayed with the poisoned Bordeaux mixture will in all probability escape any serious injury.

SPRAYING

Perhaps the most noticeable feature in the reports of correspondents for this month is their universal testimony to the prevalence of spraying. Everywhere orchardists appear to be impressed with the necessity of spraying; and spray pumps, Bordeaux mixture, and lime-sulphur mixture have been used this year where they never were before. It would be less remarkable if these reports came from one or two sections but from Prince Edward Island to British Columbia, there is a universal revival in connection with combating insects and fungous diseases.—Bulletin Dominion Fruit Division.

The Norfolk Ontario Fruit Growers' Association sold last year some 36,000 barrels of apples. In addition it boxed a few pears. It paid to its fruit grower members over \$100,000 on the barrel stock alone as well as \$25,000 on their cull stock. Who will say that apple growing in the Norfolk district does not bring handsome returns?

At the meeting of the Western Association of Nurserymen at Kansas City, Mo., A. J. Brown gave the following definition of a nurseryman, which the Association approved: "A bona-fide nurseryman is one who propagates and grows trees, plants and shrubs from seeds and cuttings, or by budding and grafting, or by transplanting small stock for growing into large shrubs, regardless of the number of acres so grown."

PROVINCIAL NOTES

Eastern Annapolis Valley

Eunice Buchanan

The apple crop promises to be one of the biggest ever seen in Nova Scotia. The young fruits have set well and there were no frosts to destroy or injure the blossoms. The month of May was very dry, but a heavy shower fell on June 1st and then came a dry period until June 13th when there was another heavy rain; till then things were beginning to look serious.

Small seeds have been very slow in germinating, and those put in early have suffered from the attacks of cutworms, which are very plentiful. A nest of the brown tail moth containing caterpillars was found in Waterville and sent to Truro College for identification.

Strawberries looked in fine condition until the drought, even now there may be more than expected. Frost is reported to have damaged them in Yarmouth County.

Plums do not seem as plentiful as other fruits. Cherries, pears, blackberries, raspberries and currants are loaded with fruit.

In spite of the late spring, the warm weather hurried the apple blossoms out about a week earlier than usual, so that by June 1st there was hardly a blossom to be seen. The lawns have a dried up, August appearance, and the hay crop is almost a failure. The power sprayers have proved to be rapid and more economical than the hand pumps, and probably will soon put the old-fashioned spray rigs out of business. Canker worms are in some orchards in Waterville.

New Brunswick

Apples promise a good crop. The trees came through the winter well, bloomed heavily, set a good proportion of the bloom and have escaped any injurious frost. Many new orchards were started this spring.

As an instance of the development in apple growing that is coming, may be cited the formation last winter of the St. John Valley Fruit and Farm Land Company. This company holds some twelve thousand acres of first-class apple land with a beautiful frontage on the St. John River, at Burton, seventeen miles below Fredericton. The company is developing a large orchard on the unit system and planted two thousand trees this spring and proposes planting between five thousand and ten thousand trees next year. The balance of the property will probably be developed in ten, fifteen and twenty-five acre lots, planted to orchard and with suitable buildings erected. Great progress has already been made and the work of clearing land, making roads, etc., is going forward rapidly. The newly set orchards are composed mainly of Fameuse, McIntosh Red, Wealthy, Alexander or Wolfe River, Duchess and Bethel.

More illustration orchards have been planted in the counties of Queens, Westmoreland, Kent and Northumberland.

Demonstration orchard work on trees of bearing age, after the manner conducted in Ontario, has been taken up in York, Sunbury and Albert counties. Tent caterpillars in many sections have completely stripped unsprayed orchards, but in the demonstration plots they were completely wiped out by the lime sulphur 1-40 and lead arsenate two pounds solution. In one plot of one hundred trees sprayed only once with lime

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If you investigate thoroughly and decide carefully, you will select a spreader that thousands of other progressive farmers are having great success with—one of the

I H C Manure Spreaders

The simple design and unusual strength of all working parts of I H C Spreaders account for their long life and light draft.

The method of transmitting power from the wheels to the beater is simple and direct. There are no unnecessary parts to wear. The beater is large in diameter and the teeth are long, square, and chisel pointed. By using this style of tooth, the manure is thoroughly pulverized and is thrown out before it wedges against the bars. By using a square tooth, rimming of the bars is overcome.

The apron is supported by steel rollers and the slats are placed close together, so that manure does not sift down and interfere with the movement of the rollers. The steel wheels have ample strength to carry many times the weight they will ever be called upon to bear. The rims are flanged inwardly to prevent cutting and rutting of meadows and accumulation of trash. Z-shaped lugs give the wheel a practically continuous ground-bearing surface and do not jar the machine to pieces. There is no reach to prevent short turning.

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All are simple, strong, and durable—all are easily and instantly adjustable to spread light or heavy, as the soil requires, and all three are made in sizes suitable to any size farm. See the I H C local agent—and get catalogues from him, or, write nearest branch house.

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Make the most of every outing by taking pictures of the people and places that you are interested in. It will add to the joy of all the party at the time and give the added pleasure of pictures that you and your friends will always cherish.

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You can do every part of the work yourself or, if you prefer, may simply "press the button" and let some one else "do the rest."

And picture-making is not expensive now-a-days. Kodaks from five dollars up and Brownie Cameras (they work like Kodaks), at one to twelve dollars, offer a wide variety from which to choose. The Kodak catalogue, free at the dealers or by mail, tells all about them.

If it isn't an Eastman, it isn't a Kodak

CANADIAN KODAK CO., LIMITED : TORONTO, CAN.

sulphur one-ninth in April, practically no eggs hatched though the egg clusters were abundant on this block and it was badly infested the previous year. The Bud Moth and Leaf Roller are very common and doing a lot of harm.

Mr. R. P. Gorham, a graduate in Horticulture from MacDonald College, Quebec, and a native of Kings Co., will conduct orchard survey work in selected portions of the province during the summer months. It is planned to hold the Provincial Apple Show again in St. John from November 1st to 3rd. While last year's show was the first of the kind held in the province and proved a great success, it is expected to be much improved on this year. The prize money in the box and barrel classes is being more than trebled and the prospects for a good apple crop, together with the experience gained last year, should greatly improve the quality of the exhibits.

A Bulletin on "The Establishment of Apple Orchards and Their Care up to the Tenth Year" by A. G. Turney, the horticulturist, has recently been issued by the Department of Agriculture.

Niagara District Notes

The advance in land values in this district still continues. A few years ago, when Major Roberts paid \$10,000 for twelve acres of peach land near Grimsby, every one said "What a high price!" But now such sales are everyday occurrences, and some young peach orchards are valued at \$1,200 per acre. Nor does a cherry orchard command less money, if planted with such varieties as Tartarians or Windsors. The prices these fruits bring seem to justify these values, quite aside from the shipping conveniences and the beauty of location to which some give the credit. My first shipment of cherries, sold on June 13th at \$1.75 per eleven quart basket! They were Early Purples, and were allowed to hang until fully matured and well rounded; and last season Tartarians brought \$1.50 and one lot of Windsors \$1.90! These are, of course, the gross sales, from which expenses of express and sale charges must be deducted.

I do not remember such fine loads of all kinds of cherries for thirty years. Every tree carries all it can support, and Richmonds are already (June 19th) a mass of red. And what is best of all, there is no rot, especially on trees sprayed with lime-sulphur. Of course the dry May is death to fungus, and has been a great favor to cherry growers. Nobody need pick his fruit half green to save it, as sometimes, but can let it hang till fully ripe and then market it at its best.

Tomatoes are being grown very extensively in this district this year, in view of the slight advance in price by our factories, from 25 cents to 30 cents per eleven quart basket full, basket returned.—L.W.

Montreal

E. H. Wartman, Dominion Fruit Inspector

We received our first strawberries from Ontario on June 6. They were the Early Michael variety, a very small variety. Every fruit merchant seems to be looking for size and dark color in berries. Why is this the case? The merchant does not like to hear the remarks of passers-by, "What miserable little berries," but would rather hear them say, "What beautiful berries." Size often makes a difference of five cents a box.

Why people crating strawberries do not go over every box and see that it is properly filled before shipping I cannot understand. The berries in the boxes handed in by pickers to be crated are very loose, and

when expressed three or four hundred miles, with a continual jolting, they settle down to two-thirds or three-quarters of a box full, and dealers have to fill them before they can sell them. There is also this other feature that slack filled boxes have so much more room to play that when they are handled roughly or jolted in a car they are much more bruised than the well filled boxes. I will stick to my old text; The man who will pick a quantity of surplus leaves and put them in his ice house and when crating any kind of small fruits will put a layer of leaves between every layer of fruit, will find that it will retain freshness in the berries and help to prevent bruising.

What a wonderful trade and consumption of bananas in our city! Seventeen cars arrived May 23rd, and still there is a good chance to extend the trade. To place a small bunch in the hands of each family in Montreal would take two hundred cars, which would mean four large train loads.

The man who puts in the bottom of a crate of berries a layer of berries that are covered with sand and two or three layers of nice, clean berries is liable to a fine of ten dollars. Sandy berries closed up twenty-four hours in a crate in hot weather, even if washed to get the sand all off the berries, will never have the nice flavor found in clean mulching. It pays to take a little extra pains, even when you are hurried in trying, hot weather.

British Columbia

This year promises to establish new records all along the line as regards the fruit industry of this province. The Horticultural Department of the Provincial Government, under the guidance of R. M. Winslow, is very active in the assistance it is giving our growers. The province has been divided into four districts, in each of which Mr. Winslow has an assistant. It is the duty of these assistants to study their special districts and to report their needs and possibilities to the provincial department. The assistants are: Messrs. M. S. Middleton, C. C. Clarke, J. F. Carpenter, B.S.A., and Ben. Hoy.

The experimental orchards that have been established throughout the province have been placed under the control of one man, who will have charge of the planting and growing of the fruit. Speaking about the work of these orchards recently, Mr. Winslow said:

"After we get the demonstration orchards in good shape we propose to do some experimental work—in spraying, pruning, fertilizers, and in some districts in irrigation. We will also issue a complete set of bulletins on fruit growing and marketing."

It is the intention of the Government this year to confine its exhibition activities to the Dominion of Canada. It will not be officially represented at the Old Country shows during 1911, although numerous boards of trade and co-operative fruit growers' associations will make private and semi-official exhibits of British Columbia fruit. Government exhibits will be made in Canada at Winnipeg, Brandon, Regina, Edmonton, Toronto and London. Mr. W. J. Brandrith has been appointed Exhibition Commissioner. Daily shipments of the finest British Columbia fruit in their season will be forwarded to the exhibitions mentioned, so that the exhibits may be kept fresh.

The fruit crop report of the British Columbia Fruit Growers' Association for the month of June is very complete. It deals with the prospects of all the different varieties of fruit in each of the different fruit districts, and includes reports from Europe, Ontario, Nova Scotia, as well as from the



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and they are moderately priced and so easily laid. A splendid range of new and standard designs to select from.

"Metallic Ceilings and Walls are a great protection against fire—also do away with the dust and falling bits of plaster."
—The Philosopher of Metal Town.

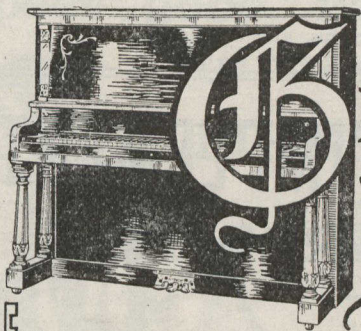
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like rare old violins possess a tone that improves with use.

Why does a Stradivarius occupy such an exalted place among violins, when others may be bought for so much less.

Because of its purity of tone.

So, also, it is the purity of tone in Gourlay Pianos that has won for them such an exalted place in the esteem of Canadian musicians and music-lovers.

Over 4000 Gourlay owners are ready to testify that the tone improves with use.

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Jas. McHardy

Hood River Valley. The report indicates that this will be a record year in the fruit production of the province, although a frost in January had a disastrous effect on a number of orchards as a result of which apples may be a somewhat short crop.

The provincial government is distributing bulletin No. 26. This is an elaborate publication printed on high grade paper and profusely illustrated. It gives an excellent idea of the fruit prospects of this province, as well as of openings in other lines of trade. It is a credit to the Department of Agriculture, and should assist greatly in attracting immigration and capital to this province.

The Board of Directors of the British Columbia Fruit Growers' Association held a meeting at Kamloops on June 3rd to consider the proposed reciprocity agreement. A resolution was unanimously carried stating that it was the opinion of the directors that the agreement, if carried, would have a detrimental effect on the fruit industry,

and, therefore, that it should be opposed.

A new industry is being established near Nelson where Mr. T. M. McFarland, a recent arrival from Mexico, proposes to go in extensively for raising tropical flowers, particularly orchids, of which he is importing some 3,000.

The nurseries of the province have been completely drained of good varieties this season through the great demand. One good result is that no old stock remains, with the minimum liability to pests. A disadvantage of this condition is that the nurserymen are tempted to dispose of undersized trees. The system of the ranchers of a locality pooling their orders and sending one man to select the stock is increasing in favor.

A remarkable proof of the interest which large and small investors at the coast are taking in Kootenay fruit lands is shown by over fifty recent sales to prospective ranchers in Vancouver, Victoria, Seattle, Tacoma, and Portland.

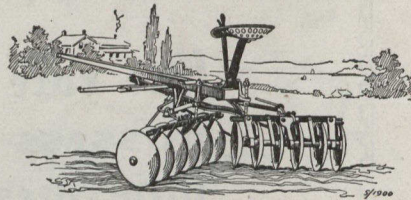
Herr Otto Becker of Hamburg has purchased a block of land near Wardner where he will start an ostrich farm.

Two years ago the British Columbia Fruit Growers' Association did not have any local associations affiliated with it. One year ago there were four affiliated associations. Today the following marketing bodies are affiliated: Creston Fruit and Produce exchange, Kootenay Fruit Growers' union, Okanagan Fruit Growers' union, Kelowna Farmers' exchange, Salmon Arm Farmers' exchange, Hatzic Fruit Growers' association, Hammond Fruit association, Victoria Fruit Growers' exchange. In addition to these marketing associations there are also affiliated the Armstrong Fruit Growers' association, Summerland Fruit Growers' association, and Queens Bay Fruit Growers' association, which are not yet shipping associations.

MASSEY-HARRIS IMPLEMENTS FOR FRUIT GROWERS

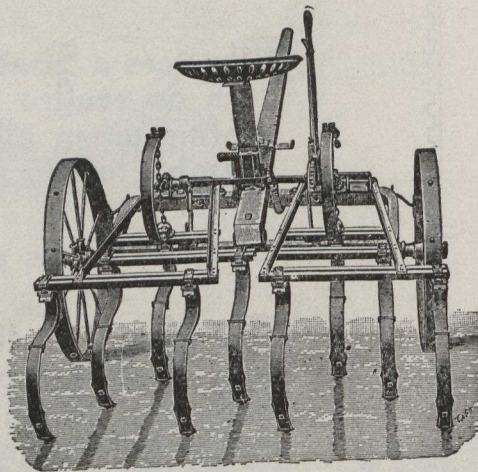
Reversible Disc HARROW

Especially adapted for orchard and garden use as it will throw the soil inward or outward as desired.



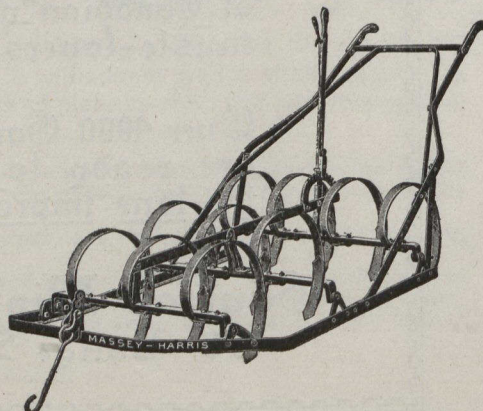
Nine Tooth CULTIVATOR

For vineyard or general farm use. Can be fitted with extensions for cultivating under overhanging branches.



Spring Tooth HARROW

The 10-Tooth size is furnished with or without handles. The 15 and 17-Tooth sizes are in two sections and are intended for general use on the farm.



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Those Who Will Get One

Everyone who secures **Five New Subscriptions to THE CANADIAN HORTICULTURIST** at 60 cents each, and sends them to us together with the \$3.00, will get one of these pens by return mail. There are at least five of your neighbours or acquaintances who would like to take a paper such as *THE CANADIAN HORTICULTURIST* if you were to suggest it to them, and tell them about the helpful information it contains. You will feel well repaid for the short time spent when you receive this handsome pen. Why not see some of your friends to-day?

The Boys and Girls would be tickled to earn one of these Pens. Tell them about this Offer.

THE CANADIAN HORTICULTURIST
PETERBORO - ONTARIO

POULTRY DEPT.

Summer Feeding

J. H. Callender, Peterboro, Ont.

Summer feeding of poultry is apt to be allowed to take care of itself, rather more than during the winter months, because it seems to have become a simple matter. The necessity for providing the fowls with every item of their diet when housed up closely, keeps the attendant watchful all the time, and often this is the season when the best results are obtained.

When spring opens up, however, the close attention is relaxed, until one naturally falls into a careless haphazard way of feeding the birds. Possibly, where free range is provided this method might be followed without noticeable evils resulting. But the penned up city flock is no better situated in relation to foraging ground than it was in the winter.

Many poultry yards in the city are just as small a corner as the owner feels like sparing from his little garden, and the chicks are kept confined closely to keep them within bounds also. These small spots have long since forgotten how to produce grass or other green feed. How necessary then to be just as careful with the summer feeding as we are in winter.

Make the feeding ration a varied one,

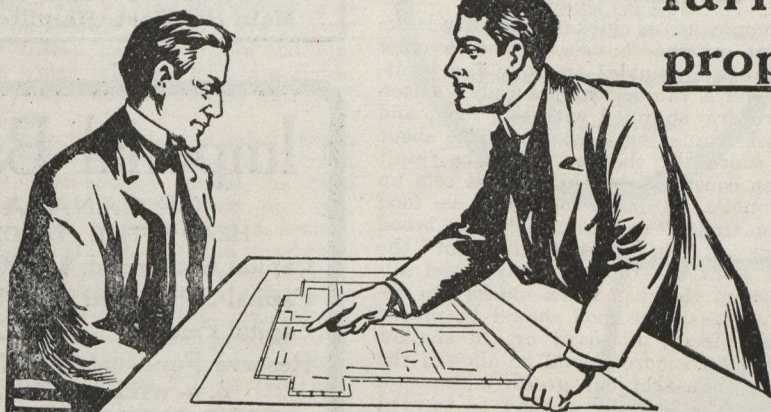
grain of some kind, meat of some kind, and green food of some kind, with lots of fresh clean water.

PREPARING GREEN FOOD

For the benefit of those who may not have learned the method of supplying green food by sprouting oats, not only doing this, but increasing the bulk of the food, the following directions might be useful:

Soak the oats for twenty-four hours and then turn them into a box or basket which will not hold water. Moisten the oats night and morning, turning them over with the hand until the sprouts appear. They will very soon throw out roots if set in a warm place near the stove. When this happens spread them out about an inch thick on trays of any kind that are easiest

You cannot expect good work from a furnace unless it is properly installed



You cannot buy a Furnace like you do a Stove—send it home and have the “Handy-Man” put it up—not if you expect to get all the heat out of your coal.

☐ Your heating system must be planned. The registers must be properly placed. The warm and cold air ducts must be a certain diameter. The furnace must be located in just the right spot—and it must be just the right size. We supply plans to you absolutely free and you do not need to buy a furnace to get them either.

☐ If you have a heating problem to solve—new building or old—send us a rough diagram of your building, showing the location of doors and windows. ☐ We will prepare for you complete plans and specifications for heating that building, give you an estimate of the cost of the heating system, and also the advice of our experts on every detail.

“Hecla” Furnace

The plan is essential, but it is also essential to have a furnace that will give you ample heat—one that will supply pure, fresh air without a taint of gas, **and, for the lady of the house**, heat that will be free from dust and smoke.

The “Hecla” is such a furnace.

☐ You cannot get gas in the house with a “Hecla” because every joint where experience has shown that gas could possibly escape is fused—that is, the parts are welded together at a white heat—by our

patent process. No other furnace has, or can have, this **Fused Joint**. Then, the “Hecla” gives you as much heat from six tons of coal as any other furnace ever got out of seven.

How do we do it?

By adding steel ribs to the fire-pot and thus giving three times the usual radiating surface. This increased surface heats the air more quickly and by actual test makes a saving of 13 $\frac{3}{4}$ % in the amount of fuel used.

Get this Booklet.

It will give you information about heating that everyone should have. It is yours for the asking.

At the same time, if you need expert advice on any heating question or a complete set of plans for heating a building—ask for them.



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PRESTON, Ont.

PLANS

Send a rough diagram of your house and we will send complete plans and estimates for heating it.

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The Insecticide that
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to make. After that do not disturb the oats, but keep them well moistened. In a short time there will be a sod about three inches thick, that will be relished by the hens in a way that will do your heart good to see. Feed only what they will eat up clean, and by starting a new lot every few days, the green food question is solved, and the cost reduced at the same time.

If meat foods are hard to get, try breeding maggots: Mix bran and water to a sloppy condition, and let it stand in the sun for a day or two. It does not take it long to turn into a pailful of lively white maggots that will start biddy singing the song we all enjoy to hear.

The whole matter resolves itself into the question of making nature's conditions as near as possible available for the hens and chicks that are shut up, and the attention to detail is almost invariably well rewarded.

Care for the Chickens

John Shakespeare, England

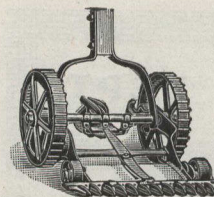
A common cause of chicken mortality is derangement of the bowels, and the chief causes of bowel troubles are sour and tainted food and a faulty water supply. Often chicks are over supplied with soft food, and that which is uneaten is allowed to lie about and get soured by the sun, with the result that when consumed by the birds it sets up lowel troubles. Tainted food, that is, food thrown on to unclean ground near the brood coops, or on the tainted litter of the brooders, is at the root of many bowel ailments among chicks. When chicks are being fed on mash the food should be placed either on pieces of board or in shallow troughs, and no more should be allowed the youngsters than they can greedily clear up.

Foul water is equally as bad as tainted food. If the water vessels are placed where dirt can be scratched into them, or where the sun's rays can reach them, their contents will account for bowel troubles, and the slow but sure poisoning of the chickens. I am a great believer in a plentiful supply of pure, cool drinking water for chicks, as such is nature's drink.

Chickens injudiciously fed suffer more with constipation than is generally imagined. The feeding of too much dry food and too little vegetable matter is often at the bottom of this ailment. The voidings in some cases become so hard as to cause much abdominal straining and the vent becomes entirely blocked up with the excreta that adheres to and around it, and unless speedy assistance is rendered the sufferers soon succumb.—Poultry Advocate.

Farmers along the St. Lawrence River, as far east as Cornwall, are waking up to the fact that there is more money in the growing of fruit than in the dairy business, to which most of them have devoted nearly all their attention. D. A. McIntosh of Harrison recently set out 525 fruit trees, 500 of which are McIntosh Red, Mann, Monroe, and Ben Davis apples, and 25 Montmorency large cherries. The demonstrations of fruit culture carried on by representatives of the department of agriculture in this district are having good results in causing farmers to pay more attention to fruit growing.

Horticultural Gentlemen:—I notice in this article of yours, that you have cultivated hothouse lilac bushes that have attained the height of over fifty feet." Literary Man: "Yes, why?" Horticultural Gentleman (musingly): "Nothing; only I wish I could lilac that."



The Clipper

There are three things that destroy your lawns. Dandelions, Buck Plantain and Crab Grass. In one season the Clipper will drive them all out.

CLIPPER LAWN MOWER Co.

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It is
**LIGHT, STRONG
EASILY OPERATED
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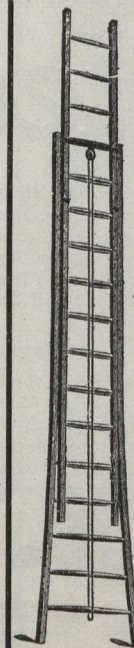
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We certainly won't pay fancy prices for an imported salt with a fancy name."

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

IT'S
WINDSOR

A British Importer's Suggestions

Andrew Chalmers, Glasgow, (Per W.R.G.)

Last season was an exceptional season in the apple trade. Owing to the scarcity of all kinds of fruit all over the world, prices were realized then that could not be taken as a guide in an ordinary year. Big prices were made throughout the season for good stuff, and even inferior apples did well. Some Canadian shippers took advantage of this, and shipped apples that would not pass as first quality in another year. The weather, of course, which prevailed in Canada last year was detrimental to the crop, and I hope this year it will be very different.

Large quantities of box apples arrived here from Oregon and the Yakima Valley districts, and made good prices. These would not have done so well, however, had it not been for the shortage of Canadian apples. I don't see why Canadian shippers do not pack some of their selected fruit in boxes, as some buyers prefer box fruit.

Now that there is an established demand for apples, they are wanted in October, and the most popular fall varieties are Snows, Fameuse, McIntosh Red, etc., and the winter varieties which sell best here are Spies, Kings, Baldwins, Russets, Starks, and good Greenings.

There is every prospect of a good season ahead for apple shippers and if a man packs sound, well-graded apples, he need have no fear that they will not do well. Once buyers come to know that a certain brand is good, they will wait on this brand coming in, and refuse all others. Then, of course, it is necessary for a shipper to maintain the good reputation gained for his apples by supervising the packing carefully. If the fruit lands here in good condition, satisfactory prices will be returned.

Bulletins and Reports

During the past month a number of extremely valuable bulletins have reached the Canadian Horticulturist as well as some books for review. The latter include a new book entitled "Weeds of The Farm and Garden," by L. H. Pammel, Professor of Botany of the Iowa State College. This book comprises some three hundred pages, is profusely illustrated and is one of the most complete treatises on weeds that has yet been issued. It is published by the Orange Judd Co. and may be purchased through The Canadian Horticulturist.

A second book, entitled "The Canadian Garden," is by Mrs. Annie L. Jack, who has been contributing recently to The Canadian Horticulturist including this issue. This is an attractively printed book and deals simply with the best methods of planning and caring for the garden and lawn, considerable attention being given also to the growing of fruit. It contains much valuable information, especially for amateurs.

The bulletins include one entitled "Hardy Apples for the Canadian Northwest," by Wm. Saunders, until recently the Director of the Experimental Farms. It is bulletin 38 and deals with the progress being made in breeding hardy apples for the West.

Most useful information for beginners in apple culture and even for experienced growers is contained in Bulletin No. 4 by A. G. Turney, Horticulturist of the Department of Agriculture for New Brunswick. It is entitled "The Establishment of Apple Orchards and Their Care up to the Tenth Year." The subject is dealt with at considerable length, numerous illustrations being used. This bulletin is printed on rather inferior paper and when compared with the other bulletins we receive from all

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VANCO sprays easier, sticks to the leaves better, does not burn the foliage, and always kills the insects. Contains guaranteed amount of Arsenic Oxide — of uniform strength and highest quality.

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 We also sell Nitrate of Soda, Muriate of Potash, Sulphate of Potash and Acid Phosphate.

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WHY ARE YOU IMPORTING PHOSPHATE AND AMMONIA WHICH IS A BY-PRODUCT OFF YOUR FARMS OF WHICH YOU ARE EXPORTING MANY THOUSAND TONS ANNUALLY, BONES AND WHICH CONTAIN LARGE QUANTITIES OF PHOSPHORIC ACID AND AMMONIA

KINDLY ANSWER THE ABOVE

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 THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK.
 SEND FOR PRICES, ETC.

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THIS IS THE U-BAR

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THE U-BARS are the vital part of the frame work of U-Bar Greenhouses. The steel bars give the supporting strength needed. Galvanizing protects them against rust. Aluminum coating gives them an enduring, brilliant finish. The chemically treated cypress core bar and galvanized steel U-Bar is no larger than the smallest wooden roof bar used in other constructions. The glass is two feet wide. Buy a U-Bar Greenhouse—own a U-Bar Sunshine Shop of your own.

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Barn Roofing

Fire, Lightning
Rust and Storm Proof

Durable and
Ornamental

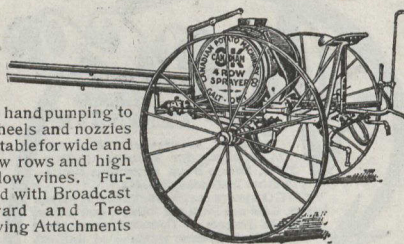
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you are thinking of covering and we
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No hand pumping to
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adjustable for wide and
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and low vines. Furnished with Broadcast
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BED-BUGS DIE

After their first meal of
**COMMON SENSE
EXTERMINATOR** 25
25c., 50c. and \$1.00 at dealers or from
COMMON SENSE MFG. CO.
381 Queen St. W., - Toronto.

FALL PACKING NUMBER

Remember the combined Fall Packing and
Exhibition Number with its colored front
cover and its special articles on the picking,
handling and marketing of fruits. It will be
worth dollars to every fruit grower, and will
be kept where it can be referred to often. A
splendid issue for ADVERTISERS. WILL
YOU BE IN?

parts of the continent is inferior looking,
a number of the illustrations being quite in-
distinct. The New Brunswick Government
should use better paper.

"Spraying Experiments with Peaches" is
the title of Bulletin No. 236, by Maurice A.
Blake and Arthur J. Farley of the New Jer-
sey Agricultural Experiment Station. It
sets out some valuable information dealing
with the control of peach scab and brown
rot.

"Orchard Spraying Demonstrations" are
described in Bulletin No. 189, by W. W.
Bonns, B. S., of the Maine Agricultural
Experiment Station. It contains a discus-
sion of spraying experiments in the past,
the problem of "spray injury" or "Bor-
deaux Injury" and the substitution of lime-
sulphur preparations for Bordeaux as fung-
icide. Directions are given for the prepa-
ration of stock solutions of lime-sulphur
and for their dilution for use. A discussion
of proper time and methods is included.
This bulletin costs 10c.

Advice on "The Purchase and Home Mix-
ing of Fertilizers" is given in circular No.
12, by F. W. Taylor, of the New Hamp-
shire Experiment Station. The subjects
dealt with include how to interpret a fer-
tilizer guarantee, high-grade versus low-
grade fertilizers, advantages of home mix-
ing fertilizers, directions for home mixing
and fertilizer formulas for different crops.

"Horticultural Information, How to Ob-
tain It" is the title of circular No. 11, by
D. S. Pickett, of the New Hampshire Sta-
tion. It gives a list of leading books and
bulletins dealing with fruit culture, vege-
table gardening, floriculture and green-
house management and landscape garden-
ing. The New Hampshire College of Agri-
culture is also issuing bulletin No. 151 being
its 21st and 22nd Annual Reports.

Harvesting Raspberries

Chas. F. Sprott, Burnaby Lake, B. C.

In harvesting the raspberry, too much
care cannot be given to make the package
attractive. The crates should have the
name of the grower and his address printed
on them, if possible.

If the crate be clean and the boxes well
filled with sound ripe fruit, the grower will
find that his fruit will always sell, probably
before the day's shipment arrives in town the
dealer will have orders booked ahead. In
all likelihood the fruit will command a
higher price than that of other people, who
do not take any particular care. As soon as
the fruit is finished, clean up the patch, cut-
ting out all useless wood, new and old, and
burning it at once.

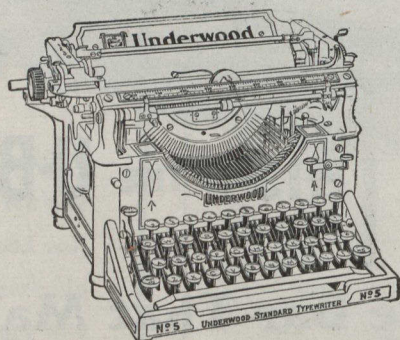
Nova Scotia Apple Imports

The total apple export from Halifax dur-
ing the season of 1910-1911 was 246, 513 bar-
rels, 885 half barrels, and 3,161 boxes, equal
in all to 248,009 barrels. In addition to
this there was an estimated local consump-
tion of 75,000 barrels making a total out-
put of 323,009 barrels for the past season.

Of the apples exported, 10,948 barrels
went to Newfoundland, 1,324 to the West
Indies; 2181 barrels, 396 half barrels and
562 boxes to South Africa. The rest found
a market in Great Britain. London took
209,472 barrels; Liverpool, 20,223, and Bris-
tol, 2365.

During the last three years the output
has been: — 1908-09, 710,733 barrels, 2547
half barrels, 3052 boxes; 1909-10, 832,207
barrels, 628 half barrels, 4,885 boxes; 1910-
11, 321,513 barrels, 885 half barrels, 3161
boxes.

Some History about Typewriters



Modern and Ancient

CHAPTER 2

THE UNDERWOOD was an original Type-
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THE NEW principle met with instant popularity.
For years other makers fought against the inno-
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BUT YOU cannot make a silk purse out of a sow's ear, and they
could not successfully incorporate the new principle into their
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IN THE attempt they sacrificed the mechanical excellence
resulting from 20 years' experience, and at the same time fell
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There have been a score of near-Underwoods placed on the
market during the past three or four years.

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FOR THE COMING SEASON'S TRADE

Every one of these trees is propagated from a select bearing tree loaded with ripe peaches when the buds were cut and they are budded on transplanted seedlings. ¶ Such stock must be true to name and the best obtainable. We believe that this block of trees is unique in the fact that not one bud was cut from the nursery row. We cannot sell this stock at low prices. It costs too much to produce, but consider the trees cheap at the reasonable prices at which we offer them. ¶ Every tree is guaranteed. Orders should be sent in at once as over 25,000 are already reserved.

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ARE OBTAINED BY USING

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ready for Packing. ¶ All our
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READ BEZZO'S Import Bulb Advertisement on Page 173.

HARDWOOD ASHES—Best Fertilizer in use.—George Stevens, Peterborough, Ont.

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

GARDENS AND PARKS. Charles Ernest Woolverton, expert landscape designer. Parks and pleasure grounds made by contract or day work. Gardeners furnished. Phone 22, ring 12. Grimsby, Ont.

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

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

H. W. DAWSON. Ninety Colborne Street, Toronto.

I HAVE some special bargains in Fruit Farms, from five to hundred acres. Some decided bargains.

IN MANITOBA. Alberta, Saskatchewan, or British Columbia lands your interests will be served by consulting me.

ABOUT ONE HUNDRED of the best stock, grain, and dairy farms are on my list. If wanting one, write.

I CAN BE FOUND nights or holidays at Two-seven-two Wright Avenue. Phones—M 1390, Park 527.—H. W. DAWSON.

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

IF YOU WOULD LIKE to purchase a site for a home and fruit farm on good, suitable soil situated in the most favorable and dependable climate in Canada, get Louth-Clinton Peach Area free information and ground floor prices for properties in the coming locality for most profitable fruit growing. Don't miss present bargains—forty thousand mansion and farm for only thirty thousand, a fifty acres for ten thousand; others large and small. Enquire about them. State what you want. W. H. Brand, Jordan Station, Ont.

A Successful Year

The annual meeting of the St. Catharines Cold Storage and Forwarding Company was held last month. The report of the directors showed total receipts of \$118,371.95, and total expenditures of the same amount, there being a balance on hand of \$2,656.48. The president reported that the car of strawberries shipped west to Winnipeg proved very successful, and advised the making of another shipment this year. Several cars of red and black currants, gooseberries and cherries that had been shipped resulted in extra good sales.

Three shipments of peaches were made to the British market, and the reports received concerning them were that the packing was perfect. The making of additional shipments during the coming season was advocated to prove whether the market will be safe to count on for larger consignments in future seasons when present plantings come

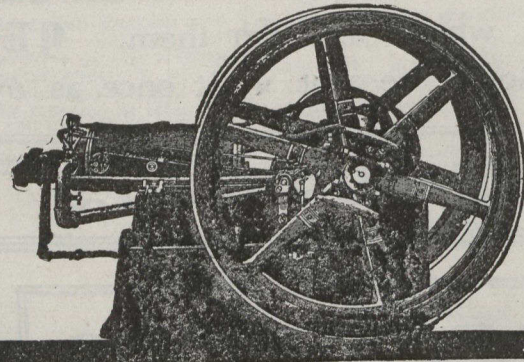
into bearing. A new feature, the packing and sale of boxed pears and peaches to Toronto firms was started last season, and resulted in a demand which the trade state will result ultimately in the displacement of the California trade.

The election of directors resulted as follows: Messrs. R. Thompson, J. E. Parnell, Jno. Broderick, and G. X. Walker. Mr. F. G. Stewart resigned after fourteen years' service. This vacancy was filled by the appointment of Mr. Blackie. An advisory board composed of Messrs. C. E. Secord, W. H. Secord, G. A. Robertson, A. Onslow, W. Burgess, W. C. McCalla, and F. G. Stewart was elected.

I know of no better horticultural publication than the Canadian Horticulturist. At its low subscription rate of 60c a year, no home should be without it.—A. Carson, Barrie, Ont.

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THE DAWSON-ELLIOTT CO., - Toronto, Ont.



STANDARD OF QUALITY FOR EVERY FARM POWER NEED

For running the cream separator, churn, feed cutter, wood-saw, fanning mill, thresher, pump, grindstone, electric lighting plant, washing machine—any farm machine to which power can be applied—an IHC gasoline engine is the best investment you can make. It will work steadily and economically, it will last for years, and require less attention and repairing than any other engine made.

The record of IHC engines on thousands of farms is proof positive of their superiority. Their advantages in simplicity, strength, economy, efficiency, and durability are well known.

IHC Gasoline Engines

are built right—of the best materials obtainable—by skilled workmen, in the finest equipped engine factories in America.

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In the IHC line there is an engine that meets your special needs. They are made in the following styles and sizes.

Vertical type—2, 3, 25, and 35-H. P.; horizontal—1 to 25-H. P.; semi-portable—1 to 8-H. P.; portable—1 to 25-H. P.; traction—12 to 45-H. P.; sawing, pumping, spraying, and grinding outfits, etc. Built to operate on gas, gasoline, kerosene, distillate, or alcohol—air-cooled or water-cooled. See the IHC local agent, or, write nearest branch house today for new catalogue.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

International Harvester Company of America
Chicago (Incorporated) USA



IHC Service Bureau

The bureau is a center where the best ways of doing things on the farm, and data relating to its development are collected and distributed free to everyone interested in agriculture. Every available source of information will be used in answering questions on all farm subjects. Questions sent to the IHC Service Bureau will receive prompt attention.



PHOTOGRAPHED IN AUGUST, 1910—BLOCK ONE-YEAR PEACH TREES

PEACH TREES

350,000 Peach Seedlings were budded last year by us. This immense block of seedlings are all grown from Tennessee Natural Pits, which are free from "Yellows" and "Little Peach."

Our buds are taken from strong, vigorous and healthy young trees, that are known to be "true to name." The

growth this year promises as strong as last year. The above view was taken last summer of a block growing in the next field to our present block of Peach Buds. Our prices are the lowest that carefully grown stock can be sold for. We will be pleased to have you visit our nurseries and inspect our stock.

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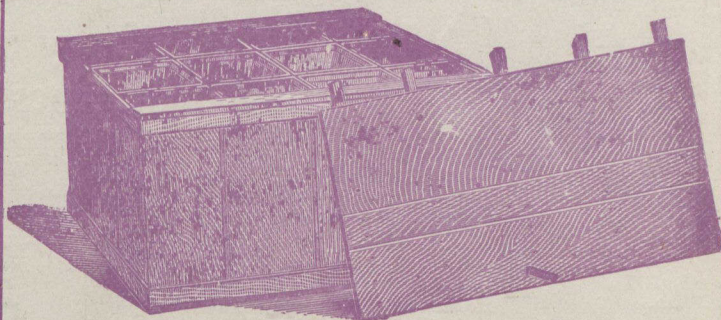
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HOW TO BUILD RURAL TELEPHONE LINES

ings, as branch wires can be run from the main line to the buildings and thus save wire and simplify the construction. Reference to Fig. 4, in which c, e, etc., represent the buildings to be connected, on the main line and a and t the branch wires, will make this point clear.

POLES.

Poles twenty-two or twenty-five feet long of any good stock, cut when green, should be used. Cedar and chestnut are particularly desirable on account of their lasting qualities. The poles should be reasonably straight and well proportioned. The diameter

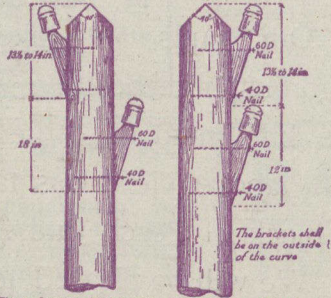


Fig. 5—Location of Brackets on Pole for Straight Lines. Fig. 6—Location of Brackets on Pole at Curve.

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of the top of the pole should be about 5 or 6 inches. In order to prolong the life of the poles and add to their attractiveness, all the bark should be removed, knots trimmed close and the butt cut off square. The top of the poles should be roofed as shown in Fig. 5.

POLE FITTINGS.

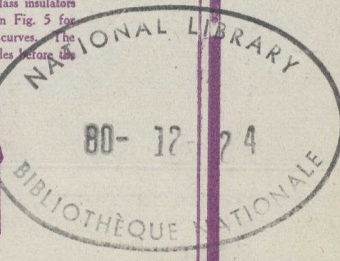
Where only one or two line wires are to be mounted on the poles, oak brackets fitted with glass insulators are fastened to the pole as indicated in Fig. 5 for straight lines, or as shown in Fig. 6 at curves. The brackets should be attached to the poles before the poles are raised.



BRACKETS.

Brackets Figs. 7 and 8 are usually made of oak and given two coats of metallic paint and have a thread on the upper end to which is fastened a glass insulator, a type, as used in telephone work, is shown in Fig. 32.

They should be about 18-inches apart. The upper bracket should be 8 inches from the top of the poles



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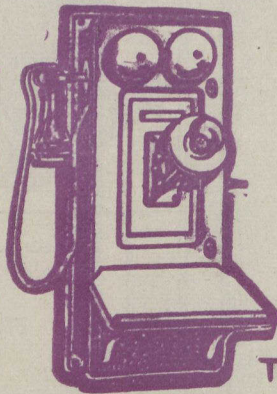
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