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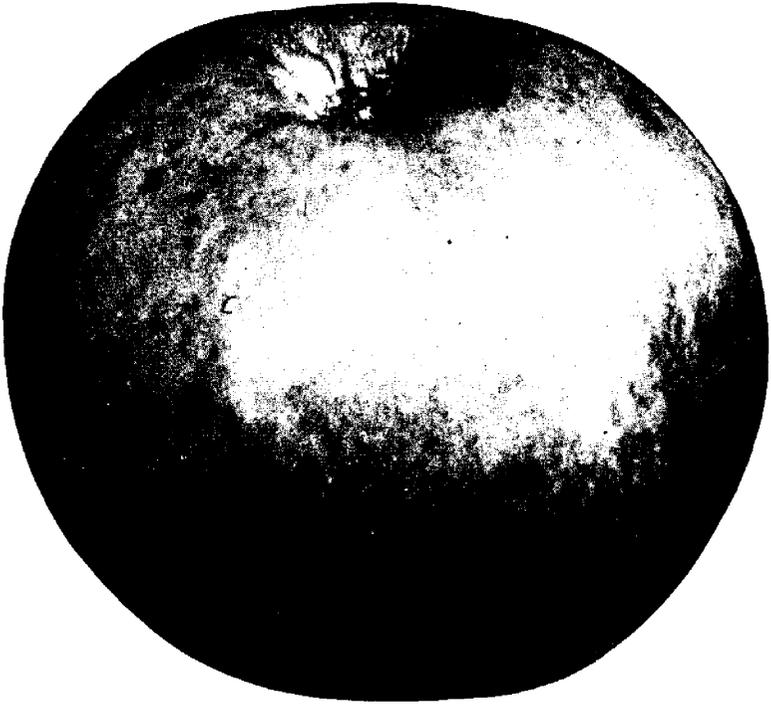
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KENTISH FILLBASKET.

# THE CANADIAN HORTICULTURIST.

VOL. XX

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No. 7.



## KENTISH FILLBASKET.

**O**NE of the most showy apples that was shown at the Industrial Fair, Toronto, last year, was the Kentish Fillbasket. It is an old English variety of great beauty of appearance, and enormous size; but of ordinary quality. In England it often measures  $3\frac{1}{2}$  inches in diameter, but reaches a larger size in Ontario; the sample from which this photograph was taken measuring four inches in diameter. We do not know of any other apple of its season to compare with it in appearance, unless it be the German Bietigheimer, some samples of which closely resemble the Fillbasket. Its name certainly is well applied, for very few would fill a basket.

With all its beauty, however, it does not seem to be very profitable, and is not widely grown in Ontario. This is probably due (1) to its season of ripening, (2) its unproductiveness, and (3) the tenderness of the tree. It succeeds best, according to our reports in the Counties of Huron, Bruce and Gray, where the vicinity of Lake Huron ameliorates the climate, but in Victoria and Simcoe

Counties it is not hardy. In the Niagara peninsula it is very little grown.

Mr. A McD. Allan, of Goderich, writes:—I don't see profit in growing it unless it be near a good large city market, where it could be used for cooking purposes. It might, and doubtless would sell well in Britain, if we had a decent sort of steamboat accommodation to carry. It is absolutely worthless in my opinion for dessert, it is only a cooker. A good strong growing tree and good bearer. The tree perfectly hardy here and in other places I have known it.

*Origin*, England; tree, vigorous, fairly productive, semi-hardy.

*Fruit*, very large,  $3\frac{3}{4}$  inches, globular, slightly ribbed; color, smooth, shiny, light-green to pale yellow, sometimes almost white, and on sunny side splashed and striped with bright red; stem, stout, short,  $\frac{1}{4}$  inch, set in a large cavity; calyx closed set in a large plaited basin.

*Flesh*, fine grained, tender and juicy; flavor, mild sub acid.

*Season*, October to December.

*Quality*, poor for dessert, good for cooking, good for home market, and poor for foreign market.

## OUR TENDER FRUITS FOR ENGLAND.



FIG. 1140.—HON. SIDNEY FISHER, M.P.  
Minister of Agriculture for the Dom. of Canada.

WE take pleasure in giving prominence in our pages to the Hon. Sidney Fisher, because he has made himself interested in the fruit export trade of Canada. Our report for 1896 gives a verbatim report of his addresses at our Kingston meeting last December, in which he promised to do all in his power to encourage an export trade in our tender fruits, by means of a chain of cold storage service right from the grower in Canada to the consumer in Britain.

This promise is being faithfully carried out, and already the refrigerator cars are beginning to give regular service on the great railway lines. At Grimsby a cold storage warehouse has been erected by the Department of Agriculture, to hold about a carload and a half, as shown in accompanying engraving. It is a small building, and nearly two-thirds of the

interior is filled with ice, but large enough to make a thorough test, and that is the object in view.

The ice room is on the ground floor in the rear, and is stored with about seventy five tons of ice, and there are openings in the bottom of the partition to let the currents of cold air into the store room, and flues at the ceiling for carrying the heated air back to the rear of the ice room.

It is the intention to send forward a car-load a week of such fruit as summer apples, tomatoes, pears, peaches and grapes, and the results will be made public as quickly as possible, in order that the whole country may share in the advantage.

Special packages will be used for this trade, and the committee at Grimsby has adopted a convenient form, designed by Mr. John H. Grout, which may be generally adopted. It consists of a case containing two cubic feet outside measure, in which trays are fitted to suit the various fruits. Fig. 1142 shows case and two trays differing in depth,

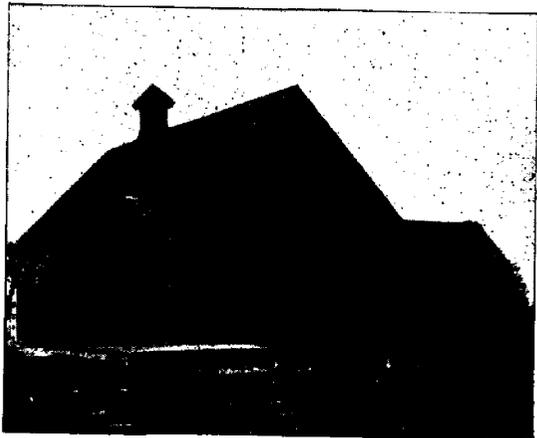


FIG. 1141.—EXPERIMENTAL COLD STORAGE FOR FRUIT,  
AT GRIMSBY, ONT.

*OUR TENDER FRUITS FOR ENGLAND.*

an assortment of which can be ordered as required. Fig. 1143 shows an assortment of trays and baskets different sizes which may be used according to the fruit being packed. The fruits are to be assorted in size, wrapped in paper, and will be rowed in single layers in each tray. Each case will be marked to show the grade of the con-

tents, thus a case containing eight trays with twelve peaches in each tray, will be marked 8 x 12, or 6 trays of 8 in each, 6 x 8. Nothing but the finest fruit will be allowed to go forward, and thus in time we hope to establish a reputation for Ontario fruits surpassing even that of California.

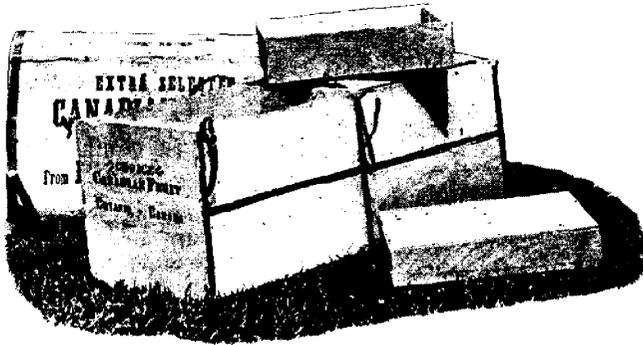


FIG. 1142.—CASES FOR COLD STORAGE PACKING.

Mr. Robertson, the Dairy Commissioner has this matter in hand, and is now in England making an opening for our goods; and Mr. W. T. Crandall has been appointed one of the permanent agents of the Department, to see after our consignments, and aid us in

placing them in the proper hands in Great Britain. The great point to be observed on the part of the shippers will be, to keep the grade up to a high standard, and then we will surely establish a lasting trade.

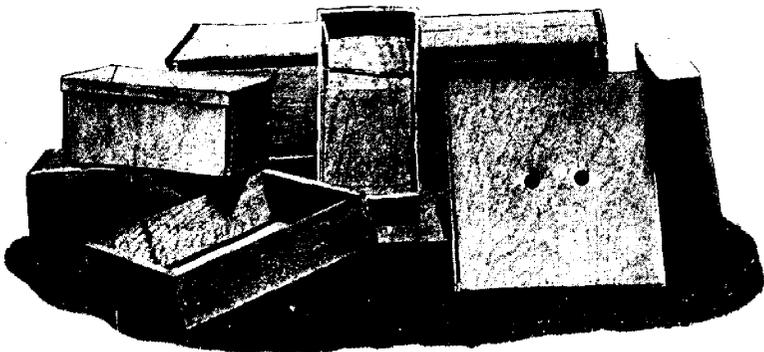


FIG. 1143.—TRAYS FOR COLD STORAGE PACKING.

## THE DREADED SAN JOSÉ SCALE.

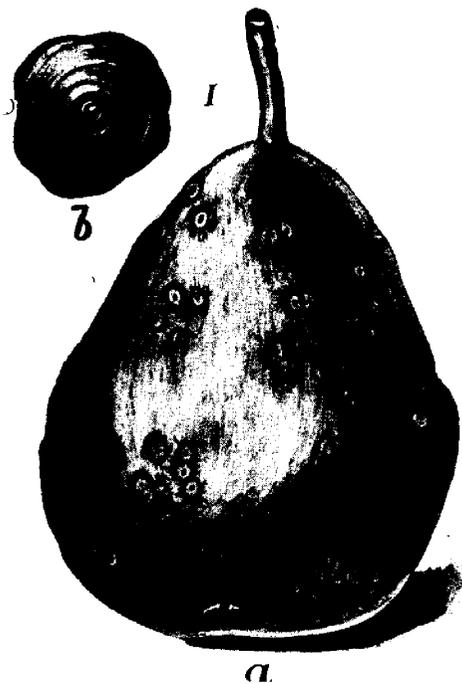


FIG. 1144.—PEAR INFESTED WITH SAN JOSÉ SCALE.

On page 99 we warned Canadian fruit growers against the San José Scale, the worst pest that has ever invaded the orchards of the fruit grower. We stated that it had been found in New York State, and unless vigorous action could be taken it would soon reach Canada.

Our fears were only too true, for this terrible scourge has been discovered in an orchard near Niagara. The owner says he believes that it spread from a single peach tree imported from the States, and now probably fifty pear and peach trees are affected.

As soon as we were informed of the facts, our Association took action, and through the Secretary apprized the Minister of Agriculture both for the Province and for the Dominion, who immediately responded by sending Messrs. Craig and Fletcher from Ottawa, J. H. Panton,

Professor of Biology, at Guelph, and W. M. Orr, Provincial Superintendent of Spraying, to learn the views of the growers. About thirty of us assembled in the orchard affected, and after studying the insect and becoming acquainted with the appearance of the infested trees, we met together under a fine old oak and discussed the situation.

Finally it was moved by the writer, seconded by W. H. Bunting, St. Catharines, and unanimously *Resolved*:

1. That this meeting, representing the Ontario Fruit Growers' Association and the fruit growers of the Niagara District, desire to thank the Hon. Sidney Fisher, Minister of Agriculture for the Dominion, and the Hon. John Dryden, Minister of Agriculture of Ontario, for their kind interest shown in our welfare by sending us Professors J. Fletcher and J. Craig from the Central Experimental Farm, Ottawa, and Prof. J. H. Panton of the Agricultural College, Guelph, and W. M. Orr, Superintendent of Spraying, to meet us for the purpose of obtaining our views regarding the best means to be employed for the prevention of an invasion by the San José Scale.

2. That this meeting earnestly request the Department of Agriculture both of the Dominion and the Province of Ontario to send out a competent inspector to inspect the orchards and nurseries in Southern Ontario at the earliest possible date and that, in case the area affected should be found to be small in extent, that the trees and plants affected be utterly destroyed and the owners compensated for the same, but, if the pest is found to be widely scattered, we request that very effective measures be adopted for the destruction of the insect.

3. That we ask the Dominion Government to pass vigorous legislation prohibiting the importation of nursery stock from the United States except under the most rigorous inspection, and that the ports of entry through which nursery stock may be admitted be confined to one or two points.

4. That the importation of fruit from states where orchards are known to be infested with San José Scale be also entirely prohibited.

With reference to methods of destroying the insect Prof. Howard of Washing-

## THE PLUM CURCULIO.

ton, writes: "The only perfect results that have been reached have come from the application of two pounds or more of commercial fish oil, or whale oil soap to a gallon of water, soon after the leaves fall in the autumn."

The following is a list of food plants of the scale, viz: Apple, pear, peach, plum, cherry, apricot, quince, spiræa, raspberry, rose, hawthorn, cotoneaster, gooseberry, currant, elm, linden, osage, orange, enonymus, acacia, alder, Weeping willow. It is evident, therefore, that

if once this insect becomes distributed throughout our country it will be impossible to extirpate it.

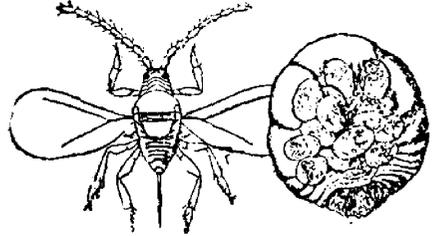


FIG. 1145.—MALE AND FEMALE SCALE  
MAGNIFIED.

## THE PLUM CURCULIO.



FIG. 1146.—THE GENEVA TYPE OF CURCULIO-CATCHER.

**T**HE mature curculio lays the eggs in the fruits when they are very small, usually beginning its work as soon as the flowers fall. These eggs soon hatch and the little maggot bores into the fruit. Those fruits which are attacked whilst very young ordinarily fall from the tree, but those which are attacked when they

are half or more grown may adhere to the tree but are wormy and gummy at the picking time. The mature beetles are sluggish in the mornings and are easily jarred from the trees. Taking advantage of this fact, the fruit grower may jar them into sheets or a large canvas hopper which is wheeled from tree to tree upon a wheel barrow-like frame

## THE PLUM CURCULIO.

and under the apex of which is a tin can into which the insects roll. One of these hopper machines is seen in Fig. 1146. There is a slit or opening in one side of the hopper which allows the tree to stand nearly in the middle of the canvas. The operator then gives the tree two or three sharp jars with a padded pole or mallet. The edges of the hopper are quickly shaken with the hands and the insects roll down into the tin receptacle. In this receptacle there is kerosene oil, or it may be emptied from time to time. Just how long this machine is to be run in the orchard will depend entirely upon circumstances. It is advisable to use the catcher soon after the blossoms fall for the purpose of finding out how abundant the insects are. If a few insects are caught upon each tree, there is indication that there are enough of the pests to make serious trouble. If after a few days the insects seem to have disappeared, it will not be necessary to continue the hunt. In some years, especially in those succeed-

ing a very heavy crop, it may be necessary to run the curculio-catcher every morning for four or five weeks; but, as a rule, it will not be necessary to use it oftener than two or three times a week during that season; and sometimes the season may be shortened one-half. The insects fall most readily when the weather is cool and it is therefore, best to get through the whole orchard, if possible, before noon. Upon cloudy days, however, the insects may be caught all day. Although this may seem to be a laborious and expensive operation, it really is not so. A smart man can attend to 300 or 400 full bearing trees in six hours, if the ground has been well rolled or firmed as it should be before the bugging operation begins. But whether the operation is troublesome or not, it is the price of plums and the grower must not expect to long succeed without it. The same treatment is essential to the saving of peaches and rarely, of sour cherries.—*Cornell Bulletin* 131.

## BRITISH LOCAL WEIGHTS AND MEASURES.

**I**N Wolverhampton apples appear to be sold by the pot, and a pot weighs 75 pounds, but in Warwickshire, which is not very far away, a pot only weighs 40 pounds, though in the latter case it would appear that only peas and beans are measured by this standard. The curious may wonder if a pot of apples weighs 75 pounds in Wolverhampton, what might be the measure of a pot of pears in Gloucestershire. In Cornwall, a bushel of corn equals 240 pounds, whereas in Sunderland, a bushel only weighs 46 pounds, and in Hereford, 63 pounds. Why, again is a stone of live meat equal to 14 pounds and a stone of dead meat to 8 pounds? Strawberries are sold by the "punnet" in Greenock, while fruit in Forfar is sold by the Scotch pint. The

Scotch pint, by the way, generally equals three of the Imperial pints, but in Dumfriesshire a Scotch pint equals four Imperial pints. Vegetables in Northamptonshire are sold by the "mollies," which vary from 12 to 40 pounds. In Cambridgeborough it is by the yard that butter is sold. One would think that the same measure should be used in measuring wheat, barley and oats, but in Buteshire a boll of wheat equals 240 pounds, and a boll of barley equals 320 pounds, while a boll of oats in Argyleshire equals six bushels. In Flintshire a "hobbet" of old potatoes weighs 200 pounds, and a "hobbet" of new potatoes 210. A peck of potatoes in Gloucester equals 14 pounds, a peck of potatoes heaped in Gloucester equals 16 pounds.—*Manufacturer*.

## PEACH CURL (*EXOASCUS DEFORMANS*.)

**A**T this writing (June 3) the promise of an abundant yield of peaches in the Niagara district is becoming dark, because of the peach curl which is so bad in some orchards that the trees will no doubt be entirely defoliated: and probably stripped of their fruit also. We regret we

of the interior of the leaf, and is thus shielded from reach, except as it breaks out to mature its fruiting spores. The twigs and leaves are both affected by the fungus, which has the effect of increasing the cell's growth in the parts affected, and in consequence the leaf is made to curl out of shape as shown in Fig. 1147

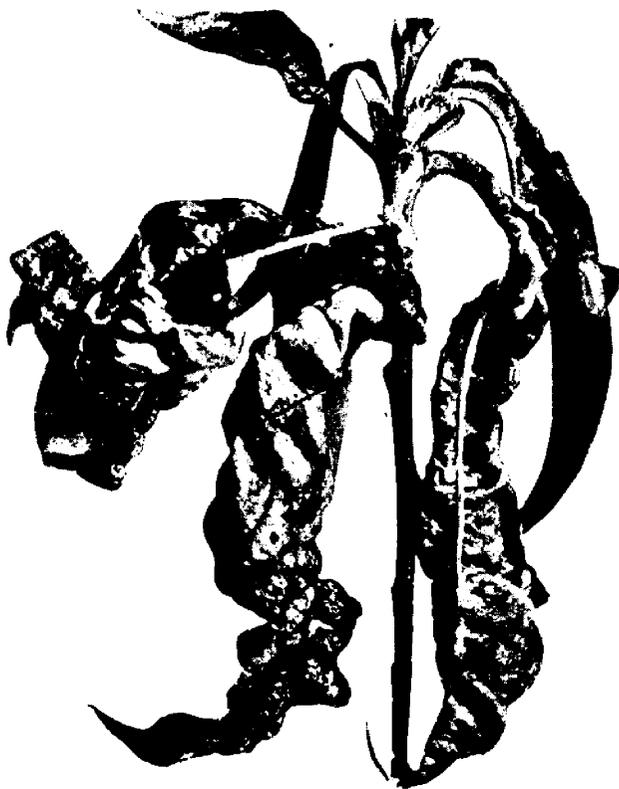


FIG. 1147.—*Prunus persica* (L.), *Perch.* (*Exoascus* (B.) *Fuekel.*)

have no sure remedy to give our readers for this fungus; some have seemed to reap benefit from an early spraying with Bordeaux mixture, and we hope this may prove effective.

The difficulty in the way of an effective remedy is easily understood when we explain that the fungus is intercellular, that is it grows between the cells

an illustration from Cornell Bulletin page 73. The evil is perennial in the leaf buds, in which it passes the winter, and quickly develops with the growing leaf in early spring. When ripe the asci (or spore cases) pierce through the outside skin of the leaf, and are freely discharged to continue the spreading of the evil.

## VALLEY OF THE DON.



FIG. 1148.—PLUM POCKETS. *E. longipes*.

There are several forms of exoascus, affecting the cherry and plum, but the effects differ; that in the plum for causing what is commonly called "plum pockets" (Fig. 1148).

Since the fungus is perennial and lives over winter in the leaf buds, it is evident that trees once affected is likely to show the disease the succeeding season, providing climatic conditions are favorable.

THE removal of old canes, leaves no hiding place for worm or bug, or eggs for same. It also allows the free circulation of air and the sun penetrates the centre of the bush, making canes strong and vigorous with a good development of fruit buds for the following season.

## VALLEY OF THE DON, TORONTO.

THE surroundings of our Queen City are most picturesque, and the inhabitants can blame no one but themselves if Toronto is not bounded in several directions by the finest parks in Ontario. The accompanying scene in the Valley of the Don, is an example of the beauty which Dame Nature has bestowed upon the east end, a ravine which might afford the most delightful drives imaginable, and numerous views of equal beauty may be taken any day by the camera of the artist.

Considerable change has taken place since a hundred years ago, when the wolf and deer were almost in undisturbed possession. In October 1801, for ex-

ample, Joseph Willcox writes in his Journal, 8th, "I saw a deer in the bog, I fired at him and missed him." 12th, Set off for the mill, and on our way killed a deer in the bog; I fell out of the canoe, and had to swim ashore, but carried the deer to the mill, and dressed a quarter of him for our dinner."

This Mr. Wilcox came to Toronto from Ireland in February 1800, and held an office under Mr. Russell, then Receiver-General for Upper Canada. His MS. Journal is quite a curiosity, but not always reliable, as when he speaks of the "*Humber as navigable nearly two miles for large ships?*"

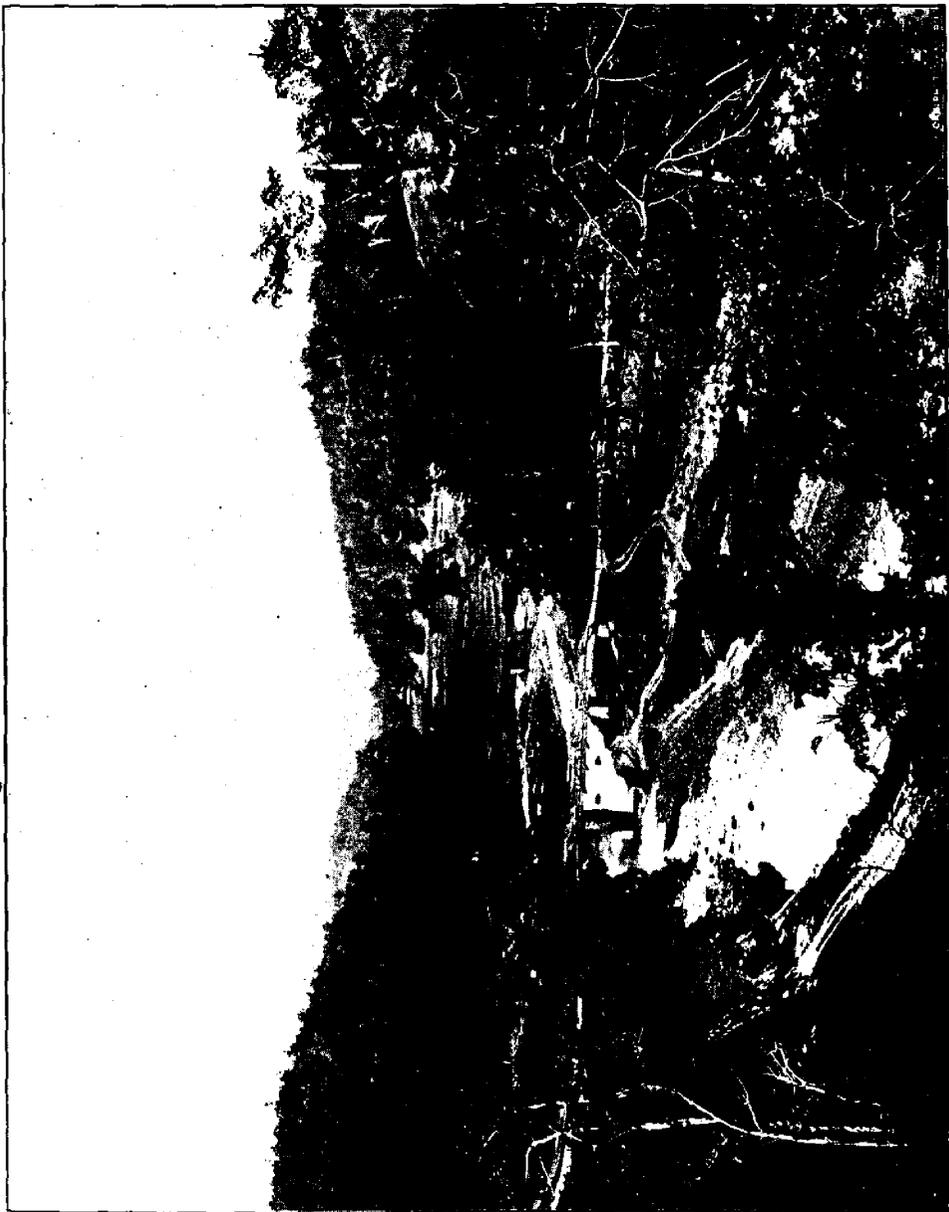


FIG. 1149.—VALLEY OF THE DON, TORONTO.

## THE CANKER WORM.

THE Canker Worm is reported as being very destructive to apple orchards in some parts of the Niagara peninsula. A box of apple twigs already half denuded of foliage, was brought to this office on the 31st of May, accompanied by the anxious inquiry for some remedy. Of course we suggested spraying with Paris green, but the person claimed that he had already tried this without effect, and that in the summer of 1896, his orchard looked as if a fire had been through it, owing to the devastation of this worm.

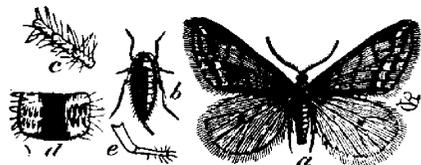


FIG. 1150.—MOTHS OF CANKER WORM

Probably the Paris green was not put on in a sufficiently fine spray, and consequently ran off without covering the foliage, or perhaps it was not applied underneath the foliage, and the worm could find plenty of food free from poison, or perhaps not continued faithfully enough.

We also suggested the trial of a circle of sticky substance about the trunk, applied in early fall on a paper bandage, or a circle of cotton batting. The object is to trap the female moth before she lays her eggs. She is wingless (see Fig. 1150 b) and after coming out of her chrysalis, her first aim is to ascend the trunk of an apple tree, and meet the male moth (Fig. 1150 c) This plan is effective if persevered in, but must be kept up for a long time, for the females successively emerge from their cocoons during the mild days both



of the fall and the early spring ; it is consequently much more troublesome than spraying with Paris green, and is rather a prevention than a remedy. But it has been thoroughly demonstrated that Paris green will effect the destruction of the Canker Worm if persevered in. Of course when the worm has been neglected until it has become very numerous, it will require a large quantity of poisoned foliage to effect their complete route, and considerable expense. Prof. Bailey used 1500 gallons of Paris green water in seven days, on 240 trees, from May 10th to 17th in the work of destroying these worms in a badly infested orchard, but he was successful in utterly routing it at last

Professor Fletcher, Dominion Entomologist, writes :—Notwithstanding the occasional complaints that Paris green is not a very satisfactory remedy for the Canker Worm, this is still the best remedy and the one that we have to rely on for the controlling of this insect. The chief thing to be remembered is

FIG. 1151.  
See Cornell  
Bulletin.

MAULE'S JAPANESE QUINCE—PYRUS JAPONICA MAULEI.

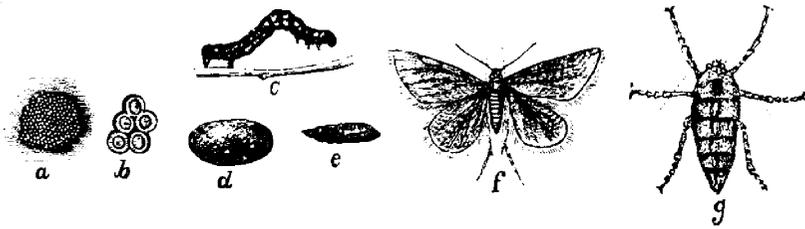


FIG. 1152.

that the application should be made early, as soon as the young Canker Worms appear. I know of nothing better to do than to repeat the spraying, being sure to add to the Paris green an equal amount of fresh lime, so that the trees may not be injured.

There are two species. *Anisopteryx Vernata* is the spring Canker Worm, which usually does not escape from its cocoon until spring, see Fig. 1152 (*f*) male, (*g*) female; (*c*) the worm which is olive green or brown; and (*b*) eggs, dark with a small cluster of eggs natural size near at (*a*), and (*d*) a chrysalis.

The other is *Auisopteryx pometaria*,

the fall Canker Worm, which is easily distinguishable from the former, by observing the differences in any stage of development, as *e. g.*, the shape of the egg, or the markings of either the male or female moths. The latter appears to be the one more commonly met with in the Niagara peninsula.

Hitherto our Superintendent of Spraying for Ontario, has directed his efforts almost wholly against codling moth and apple scab, two of our ills; but we believe it would be well to make one or two special experiments on the destruction of the Canker Worm.

MAULE'S JAPANESE QUINCE—PYRUS JAPONICA MAULEI.

THE Japanese quince, *Cyrus japonica* or, as it is often called, *Cydonia japonica*, is a very beautiful and desirable shrub where the climate is not too severe; but at Ottawa, where the winters are very cold, it is quite unsatisfactory; the wood killing back more than one half and the flower buds only surviving when well protected, and rarely more than a foot above the ground. A more recently introduced variety, *P. japonica Maulei* is quite hardy at Ottawa,

the leaves starting from the tips of the branches and the flowers being much more abundant than in the common species. A hedge of this pretty shrub at the Experimental Farm has been almost covered with bright red blossoms since May 10th. It fruits freely and in the autumn the yellow quinces make it very attractive. These have a strong, pleasant, aromatic odor, but are usually considered as unfit for food.

W. T. MACOUN.  
Central Expt'l Farm, Ottawa

## CULTURE OF GOOSEBERRIES.

THE gooseberry, under favorable conditions, is enormously productive. It is a fruit that does not like too much hot sunshine, or a hot, dry soil. The best gooseberries I ever grew was on a rich, cool, moist, heavy soil, well underdrained. It does better on a clay loam than on a sandy loam, and in a young orchard, where it will be partially shaded, than in the open sunshine. I have seen many very productive bushes, or shrubs, of gooseberries growing in rows of bearing apples, pears, peaches and plums. When planted in such positions they should be heavily fertilized that neither trees or shrubs should suffer for want of food.

The great obstacle to the production of the finer varieties of gooseberries in this country, has been that powdery mildew, caused by a parasitic fungus, called *Sphaerotheca mors-uvae*, which attacks both leaves and fruit. Our attempts to grow the large, delicious English varieties have been baffled by that fungus until most horticulturists have abandoned the attempt and restricted their efforts to growing such American sorts as are but little subject to mildew, such as Houghton Seedling, Downing and Smith's Improved. Of late years, many have succeeded in producing large crops of Industry, an English sort, less subject to the fungus growth than the others. Recently there have been some promising American varieties introduced, notably the Columbus.

In October, 1892, while on a visit to Cambridge, Mass., I called upon Benjamin Green Smith, Treasurer of

the American Pomological Society who, for health and pleasure, cultivates a good-sized garden, in which he grows most of the species of fruits that will mature in that climate. I saw there twenty varieties of the English gooseberries, which he assured me he had grown for nearly twenty years, free from mildew. They were planted on the north side of currant bushes, by which they are partially shaded. They are highly fertilized and well pruned. Last summer I saw growing on the home grounds of Mr. Green, editor of Green's Fruit Grower, Lancashire Lad, a large English variety, exceedingly productive and free from mildew. These successful attempts encourage the hope that the finer varieties of the gooseberry may be successfully grown in this country with suitable effort. The gooseberry succeeds in the cool, cloudy, moist climate of England. If we as nearly as possible approximate the conditions under which it flourishes there, by planting on cool, moist soil, partially shaded, mulch heavily during summer and spray a few times with a simple solution of copper sulphate, or potassium sulphide (liver of sulphur) there is no reason why we may not succeed.

Gooseberries are propagated to some extent by cuttings, but generally by layers. The earth is heaped in a mound around the bushes and the young sprouts will strike roots. They should be planted in rows 4 by 4, on a rich, heavy soil, well cultivated and heavily pruned. The fruit grows on buds formed on two-year-old wood and on spurs and buds of

## FRUIT IN COLD STORAGE.

older growth. Pruning should be directed to cutting back the new growth and occasionally cutting out superfluous shoots. Some cultivate in low tree form, but I prefer the

shrub form as the more natural way of growing. It will richly repay for very thorough culture. --Green's Fruit Grower.

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## FRUIT IN COLD STORAGE.

*The following details are from the evidence of Mr. Jas. W. Robertson, Dairy Commissioner before the Committee of Agriculture.*

**S**PECIAL provision has been made for trial shipments of fruits, particularly those that have not hitherto been exported with any degree of success, such as grapes, pears, peaches, and tomatoes, which may be called either fruit or vegetable. In 1895 a trial shipment was practically entirely ruined on the railway car between the place it was sent from and Montreal. A cold storage chamber on the steamship had no regenerative magic to bring back what was spoiled, to its primitive condition of excellence.

BY MR. MCGREGOR.

Q. Have you inspectors at Montreal now? A. One is engaged for this season. One of the essential conditions, for the safe carriage of the tender and easily injured fruits, is that they should be thoroughly cooled before they are put into the railway car. If cooled to a temperature of 35° or 36° Fahr., practically all fermentation will be stopped, and the boxes of fruit will not generate heat by their own ripening. When fruits are put into cases warm, and these are put directly into a car, the ripen-

ing of the fruit generates heat. In that way the fruit will become self-destructive. A cold storage building has been erected at Grimsby, Ont., at the expense of the Department, for these trial shipments. Several of the growers there have agreed to furnish at least one carload per week. The fruit will be thoroughly cooled before it is put aboard the refrigerator cars; refrigerator cars will carry it to Montreal; a special cold storage chamber will receive it on the steamship; and there will be some one in England to look after the reception and distribution of the fruit there. In this way two things will be determined: Firstly, the practicability of shipping this class fruit to Great Britain. It may not be practicable. Pears may decay from the heart. Grapes may lose the bloom on their skins from some cause we do not understand. It may not be practicable. I think it wholly practicable; this will furnish proof. Secondly, we shall learn whether the trade can be made profitable. It might be practicable and not be profitable. These two propositions will be demonstrated; and the fruit-growers can carry on the business afterwards in the light of the know-

## FRUIT IN COLD STORAGE.

ledge obtained by these experiments. Grimsby was selected because that is the only place where the fruit-growers would guarantee to furnish a carload of such fruit per week. The information gained will be equally available and useful to all the fruit-growing districts in Canada.

BY MR. MACLAREN :

Q. How many kinds of fruit do you propose to ship? A. Grapes, pears, peaches and tomatoes.

Q. Not strawberries? A. No, not this year. After the first year no doubt all kinds of trial shipments will be made. The fruit-growers of the Niagara district have agreed to purchase the cold storage building after three years, if the trial shipments are a success. The Department in the meantime accepts the responsibility of meeting the initial cost of the building, guaranteeing the shippers against loss, and seeing after the shipments.

Refrigerator cars fully iced will be run regularly on the main lines leading into the shipping ports of Montreal, Quebec, St. John, Halifax and Charlottetown. Shippers making use of refrigerator cars will be charged the regular "less than car load rate" from shipping point to destination. No extra charge will be made to them for the cold storage service or for the icing.

The railway companies have agreed to provide refrigerator cars properly insulated for the protection of the perishable freight they are intended to carry. In some instances in past years the refrigerator cars have been such in name only. The insulation has not been thorough; the doors

have not been quite close; cars have not been properly cleaned; and the pipe through which the water drained from the melted ice opened direct into and out of the car without any trap. That permitted the cold air to flow out, and the cooling influence of the ice was left along 200 miles or less of railway track without benefiting the contents of the car. Drawings have been prepared to show how an ordinary box car can be insulated to give satisfactory service for the carriage of butter and other perishable products on short runs.

It is recommended that the refrigerator cars for the special service arranged for by the Department of Agriculture be painted white, (1) for the sake of increased coolness, as cars painted white radiate the heat of direct sunshine much more than those painted any other color; and (2) for the purpose of making them distinctive and calling the attention of shippers, farmers and others who may observe them as they pass along the line with the conspicuous inscription "Government Cold Storage Line."

### COLD STORAGE INSPECTORS.

The Department has engaged a cold storage inspector. His main duty is to see that the cold storage buildings and cars are in good condition and giving satisfaction to those who use them. We will have another inspector stationed in Montreal to look after through shipments; and in the case of a through shipment missing the steamer, as may happen through unavoidable delay on the road, he will see that the goods are stored in a proper cold storage building till the next steamer with cold

## GATHERING AND SELLING THE STRAWBERRY CROP.

storage chambers goes out. Heretofore, that has not been any one's business, and sometimes cars of butter and cheese have been left on the wharf or in the yards; and the contents have been damaged. If notice is given to the inspector by the shipper at the starting point, he will

see that it is taken care of; and only the actual outlay for cold storage will be charged forward on the Bill of Lading. It is not thought right that the Government should do more than this free; no charge will be made for the services of the inspector.

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## GATHERING AND SELLING THE STRAWBERRY CROP.



THE subject assigned to me I consider a very important one, although the past four years we have been bothered very little in gathering and selling the strawberry crop. The manner of picking, packing and marketing is an important factor in growing berries, and it often determines the success or failure of the business. In picking we employ mostly women and girls, and have no small children at any price. Each picker is supplied with a six-quart picking stand, and two pick on a row, one on each side of the row. The boxes are well rounded up, and no over-ripe or soft berries are allowed in the box. When the stand is full, it is taken to the packing shed and each picker receives a six-quart ticket, provided the fruit has been properly picked. Pick all beds four times a week, picking everything clean on Saturday.

A person who will not pick fruit clean from the vines and place in the box without bruising and stain or dirt, in or out of the box, should be discharged at once. If fruit growers, in the start, will insist on thorough systematic work, our pickers will soon learn to do their work well, and many dollars thus be saved. Uniform prices, so far as possible, should be paid to pickers, and one thing bear

in mind, large fruit can be picked at one cent per box easier than inferior fruit at one and one-half or two cents. Therefore, good varieties in good soil, well cultivated, will save you money in picking.

The fruit grower must be prepared to handle his berries promptly, and know just what to do with them as soon as ripe. All boxes and cases should be provided beforehand and pickers engaged. Your boxes and cases should be well made, clean and neat, without stain or dirt. Never use old or second hand boxes and cases, as the looks of a package has a good deal to do with selling the fruit. Let your boxes be well filled, and don't put poor fruit in the bottom. Sort out all imperfect, soft or green fruit and throw it away. You cannot be too strict in the picking and handling of the strawberry crop. Get your berries on the market early in the morning; if sent by express, they should go on the first train in the morning or late the afternoon before and be ready for the early morning trade. If a large shipper, I would not send the whole shipment to one house, but divide them up between two or three good firms. In that way they are all sold early in the morning and bring the top price. Berries for long shipment should be picked before fully ripe, and not when wet with

## CONSERVATION OF SOIL MOISTURE FOR STRAWBERRIES.

dew or rain. If the weather is hot, leave them in a cool place for some time before packing in cases and shipping. Cases should be neatly directed on *both ends*, and your own stencil on the sides or top. If you have long shipments to make, grow only such varieties as will reach their destination in good order. Ship to small towns only on regular orders and at agreed prices

Always bear in mind that *choice fruit* is always in demand at *good* prices, and the market *never* overstocked; and that poor fruit never sells well, brings low prices, and the market is easily overstocked; that it costs as much to raise poor fruit, costs more to pick poor fruit; that it costs as much to box and case poor fruit; that express charges are just as high on poor fruit, and when sold it

is after good fruit is gone, and then at half price. Another thing in marketing berries is to pick them before they are over-ripe, especially if you want to ship them a long way to market. I require my pickers to throw away all berries over-ripe or soft.

Some fruit growers lose a great deal of their profits by undertaking to top their berries out with a better variety of berries. Now, whatever else you do, let the quality be as good at the bottom as at the top. Whether your customers be high or low, rich or poor, give them good measure and good fruit. You had better take the poor berries and throw them away than to undertake to get them to market, because it ruins your reputation and ruins the balance of the fruit.—Minnesota Horticulturist.

## THE CONSERVATION OF SOIL MOISTURE FOR STRAWBERRIES.

**A**LTHOUGH strawberry plants will not thrive where the soil is permanently wet, they do require an abundant supply of moisture, both during the growing and fruiting seasons. The non-observance of this requirement is the occasion of heavy losses. In the first place, the ground for strawberries is often left until planting time before plowing, and breaks up in clods, occasioning much labor in preparation with harrow and roller. Although it may be possible to put such a soil into fairly good condition for planting, the water which has been lost cannot be restored, and weeks may elapse before sufficient rain falls to keep the plants alive. It has been shown that more than 1,500 barrels of water, per acre, may escape from unplowed ground in one week, in excess of the quantity which will pass off from an equal area which has been plowed and harrowed at frequent intervals. Moreover, the ground which has been plowed late will continue to dry

out during the season at a rate in excess of the early plowed. This shows plainly that early plowing and frequent harrowing are essential, in order to retain the soil moisture, even though planting may be delayed. The difference between fall and late spring plowing, is still greater than between early and late plowing, especially as affecting the capacity of the soil to retain moisture during the season. The best preparation for a strawberry bed is fall plowing, where the soil will admit, and if not then as early in the spring as the ground is fit to work.

The prevention of escape of moisture from the soil during the growing season is also important, and this can be accomplished, very largely, by frequent cultivation, especially after every rain. It is quite as important to stir the soil after light showers as after heavy rains. Retaining of moisture after mulching during the fruiting season is no doubt a more practicable method than cultivation.—O. Ex. Station.



FIG. 1153—C. SPECTABILE, from photo. by Mr. R. B. Whyte, Ottawa (reduced one half).

## OUR NATIVE CYPRIPEDIUMS.

### LADIES' SLIPPERS OR MOCCASSIN FLOWERS.

IN every collection of orchids a prominent place is given, and justly so, to the genus *Cypripedium*. The number of species and hybrids is now very great, and yearly increasing, but none of the high priced foreign sorts surpass in beauty our native kinds. Few floriculturists are aware that in our bogs, scattered all over the country, there grow no less than five species of

## OUR NATIVE CYPRIPEDIUMS.

this most beautiful genus of flowers. One of them, *C. Arietinum* is only of botanical interest, as it is rather small to be an effective garden flower, but the other four are among the most beautiful and desirable of all hardy plants, and can easily be transplanted from their native haunts to our garden borders. Of these, the most beautiful, most abundant, and singularly enough, considering the great contrast between its habitat and the most favorable spot in a garden, the most easily cultivated is *C. spectabile* or showy Ladies' Slipper, a large pink and white flower. The moccasin or, as it is botanically called, the lip, two inches long by one and a half wide, borne in pairs or sometimes singly on the top of rather coarse leafy stalks 18 to 24 inches high. It is found only in sphagnum bogs, sometimes in small clumps of a few plants, but often in great abundance. The most wonderful floral display I ever saw was in an open glade in a bog thirty miles north of Ottawa, where two to three acres were literally covered with this magnificent flower, many thousands of them being in bloom at the time, the last week in June. The best time to transplant it is, of course, when the roots are dormant, but as they are difficult to find then, the next best time is after flowering, when the leaves begin to wither, or as they show themselves above the moss in the spring. I have known them to be successfully transplanted in the blooming season by taking up a liberal portion of the surrounding bog, so as to disturb the roots as little as possible; but the nearer you can get to the dormant period the greater will be your measure

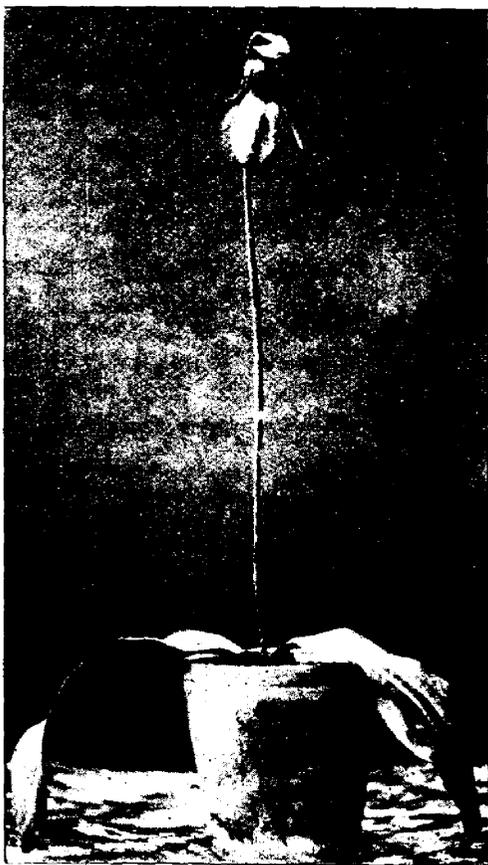


FIG. 1154.—*C. ACAULE*, from photo. by R. B. Whyte, (reduced one half).

of success. The best location in the garden is under the partial shade of trees, or on the north side of a close fence. The soil must be moist and rich, and should never be allowed to become dry in the growing season. They will not thrive in a dry soil or if exposed to the full glare of the sun.

*C. acaule*.—The stemless Ladies' Slipper is a good deal like *spectabile* in appearance, the lip is a little longer and narrower, over two inches by one inch across, with a deep fold inwards along the top; the color is a good deal darker, more of a purple than a pink, and the white is not so clear. Its habit is quite different; instead of the strong leafy stalk of *spectabile*, two large leaves lie on the

## WET CORNERS—CLIVIA, CYCLAMEN.

surface of the ground from which rises a bare scape 12 to 15 in. high, bearing on the top a single flower; by some thought to be even more beautiful than spectabile. It is somewhat rare in this part of the country. I have never found it except in small clumps, though I believe it is abundant in some sections. Its habitat is dark, wet, rocky woods, often on hillsides. It is much more difficult of cultivation than any of the other species.

*C. pubescens*.—Large yellow Ladies' Slipper, a much smaller flower than *acaule* or *spectabile*, the lip being about 1½ inches long, bright yellow, with purple lines or spots, slightly flattened on the sides, more like a moccasin in shape than either of the others. Found in most woods and meadows, generally several stems growing from the one root,

each terminating in a single flower. It is one of the easiest of wild flowers to naturalize in the garden, and is perfectly hardy. Some that I transplanted eight years ago are still blooming beautifully.

*C. Parviflorum*.—Small yellow Ladies' Slipper about two-thirds the size of *pubescens*, is thought by some botanists to be only a variety of it, but it is certainly a distinct form, differing from *pubescens* not only in size, but in being more freely spotted and in being compressed on the top and bottom instead of the sides. It also prefers moister quarters than *pubescens* being often found in wet bogs in the company of *spectabile*, it is, therefore, somewhat more difficult to transplant.

R. B. WHYTE.

Ottawa.

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## WET CORNERS—CLIVIA, CYCLAMEN.

A PORTION of my grounds being wet and boggy has been made one of the most interesting spots for a spare half hour. I have prepared a winding path through the cedars, willows, cranberries and other growth, and filled convenient spots and glade like openings with some of the valuable plants listed in your June No., adding many clumps of our native pink and yellow Cypripediums, the most beautiful of North-American orchids; also the white and pink hardy Hibiscus, the latter color grows wild in our lake marshes.

The *Clivia* resembles the *Agapanthus* in habit. The root growth is thick and fleshy, not bulbous; and as their sea-

son of growth is during our summer, they are of easy culture. Blooming plants winter best in a fine temperature of fifty degrees, which is as low as most amateurs keep their conservatories, but five or ten less at intervals will do no harm.

When skilled growers find difficulty in drying off the *Cyclamen* without injury or loss, the amateur is almost certain to fail. Plunge the pot in a cool shady frame or border without watering until growth starts afresh, then re-pot and give full exposure to the light, shading from the direct rays of the mid day sun.

H. H. GROFF.

Simcoe, Ont.



FIG. 1155.—

Rothamagensis alba,  
Pyramidalis.

Madame Jules' Finger.

Michael Buchner,  
Alphonse Lavalee.

## THE LILACS (SYRINGAS).



FIG. 1156.—JEAN BART.

magnificent collection of lilac flowers from the nurseries at Fonthill, received on the 1st of June, representing thirty-eight named garden varieties. Such a grand display was well deserving of

WE in Canada are but novices in Horticulture, and know as yet little about the many varieties of beautiful shrubs with which to decorate our lawns and gardens. — Much less do we know concerning the numberless varieties of each which our friends, the professional nurserymen, are originating and propagating for our (and their own) benefit.

One of the best known of ornamental shrubs is the lilac. Almost every one knows there is a white and a purple lilac, but how many know there are dozens of cultivated varieties of great beauty! These numerous garden varieties are artificially improved from several species, such as *S. Chinensis* from China, *Emodi* from the Himalayas, *S. Japonica* from Japan, *Persica* from Persia, *S. Vulgaris* from Persia and Hungary, and others. The writer is indebted to Messrs. Morris, Stone & Wellington, for a

notice, and was the means of gathering together several members of the Board of the Grimsby Horticultural Society to study their characteristics.

THE LILACS.



13 Mauve  
 14 Dr. Lindley  
 15 Rothamagensis rubra  
 16 Renoncule.

7 Rothamagensis alba  
 8 Pyramidalis  
 9 Madame Jules Finger  
 10 Alphonse Lavallee  
 11 Lemoinei Flore Pleno  
 12 Philemon

1 Jean Bart  
 2 Marie Leorange  
 3 Madame Lemoine  
 4 President Carnot  
 5 Giant de Battailles  
 6 Michael Buchner

FIG. 1157.—LILAC BLOOMS.

THE LILACS (SYRINGA.)

Among the double white varieties before us, we note *Madam Lemoine*, beautiful thyrses of double flowers, *Marie Legrange*, magnificent panicles of single white, and *Frau Damman*, tress Fig. 1195

rosy red, fading to pink, very double, panicles closed and compact: *Michael Buchner* pale lilac, rose margined, flowers very double; panicle erect very large pyramidal, one of the most striking: *Presi-*



FIG. 1158.—

Jean Bart.  
Gaint de Battailes.

Madame Lemoine.

Marie Legrange.  
President Carnot.

immense, flowers medium, single, one of the best.

Of other new double varieties we note *Jean Bart*, Fig. 1156 long tress, 12 in. flowers rosy carmine: *Senator Volland*,

*dent Carnot*, spikes compact, large, flowers erect, doubled in a peculiar manner, by having one floret stand out from the inside of another, and sometimes a third; color delicate tint pale lilac, said to be

## THE LILAC (SYRINGA.)

the best bloomer of the double varieties : *Renoncule*, panicles under size, compact, but looser than Volland and petals of flowers longer and more pointed ; color azure mauve, very fragrant.

Of the single varieties we notice *Philemon*, a grand showy lilac of the darkest shade, almost purple : *Pyramidalis*, panicles very large and pyramidal in form,

inches in length, and bending to the ground with their weight of flowers.

The accompanying cuts from photos may further assist in giving some idea of the varieties mentioned.

Our Association has introduced to its members quite a number of these beautiful varieties in the plant distribution of this year, not sparing considerable ex-



FIG. 1159—FRAU DAMMAN.

flower large azure rose, carmine in bud. *Dr. Lindley*, large compact panicles, purplish lilac, one of the finest.

*Rothamgensis alba* and *R. rubra* are two interesting varieties of *Rothamgensis* a species produced by crossing *S. vulgaris* (common) and *S. Persica* (Persian), and excelling the latter in robustness of growth ; panicles sometimes 10 to 16

pense in so doing, and we hope this may be the means of creating a deeper interest in the cultivation of these beautiful shrubs.

A collection of varieties would interest any amateur, not planting separately, but in large clumps along the carriage drive, or near the border of the yard.

## DINNER TABLE DECORATIONS.

THE prettiest and most effective vase that I have ever seen is a plain dark green globe-shaped glass (Fig. 1160), which I have found in four sizes and wish very much I could find some of still larger size than these. The rich green harmonises perfectly with everything I have put in it. Flowers look well arranged in silver dishes and vases, if the vases are plain, of simple outline and artistic in design. Ordinarily vases are better if clear or of neutral tint.

All dinner table decorations should be either very low or very high — low enough to look over from one side of the table to another, or high enough to look *under*. Nothing is more annoying to one seated



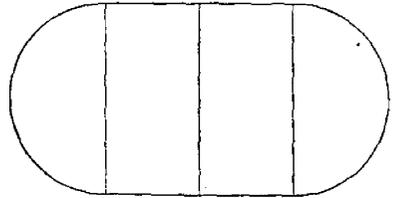
FIG. 1160.

at table that to dodge about a mound of flowers to catch a glimpse of one's opposite neighbor.

Where ribbons are used they must always match either the flowers or the foliage. They may be a lighter or a darker *shade*, but the *color* must be the same. Gilt and tinsel are in bad taste, and in fact I have never seen either tinsel, gilt or ribbon used on a dinner table with good effect. A common mistake is in crowding the table with flowers and ferns, leaving no place for the service.

The prettiest dinner table decoration

I have ever seen was this. The table was long enough to seat twenty-four guests; it was six feet wide and had oval ends. A margin of eighteen inches of pure white damask was left all around the table upon which to lay the service, and a set of pans an inch deep was made at the tinsmith's to entirely cover the



oval center left after reserving the eighteen inches of margin. These pans were made in sections so that they could be used again upon smaller tables. The pans were filled with little plants, ferns, palms, lycopodiums, etc., none of which were over nine inches high. The shallow pans being in sections were readily arranged first, and then placed upon the table. They also protected the table linen, for the little plants were growing in their own earth and were simply lifted from the pots and arranged in the pans with the higher ones in the center and the lycopodiums, etc., drooping over the edge. In among these were placed some delicate cut flowers, violets, lilies of the valley, small roses, etc.—*American Gardening*.

BARNYARD MANURE suffers much loss in leaching and drying. Prof. Roberts shows that horse manure when thrown out in a pile unsheltered from the weather, loses nearly half its value in six months; mixed barnyard manure when piled in a close pile so that fermentation is very slow but without protection from rainfall, loses about one-tenth of its

value; while the loss if thrown under eaves to be leached by rains and thaws of the winter, is much greater. At the N. Y. Experiment Station, fresh manure piled in conical heaps in January, shrank 65 per cent. in weight by April, and the loss of its fertilizing ingredients was equal to \$3 per cord of manure.—*Am. Agriculturist*.



**SUBSCRIPTION PRICE.** \$1.00 per year, entitling the subscriber to membership of the Fruit Growers' Association of Ontario and all its privileges, including a copy of its valuable Annual Report, and a share in its annual distribution of plants and trees.

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**LOCAL NEWS.**—Correspondents will greatly oblige by sending to the Editor early intelligence of local events or doings of Horticultural Societies likely to be of interest to our readers, or of any matters which it is desirable to bring under the notice of Horticulturists.

**ILLUSTRATIONS.**—The Editor will thankfully receive and select photographs or drawings, suitable for reproduction in these pages, of gardens, or of remarkable plants, flowers, trees, etc.; but he cannot be responsible for loss or injury.

**NEWSPAPERS.**—Correspondents sending newspapers should be careful to mark the paragraphs they wish the Editor to see.

**DISCONTINUANCES.**—Remember that the publisher must be notified by letter or post-card when a subscriber wishes his paper stopped. All arrearages must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given. Societies should send in their revised lists in January, if possible, otherwise we take it for granted that all will continue members.

## ↗ Notes and Comments. ↖

**SPRAYING PLUM TREES** for leaf spot appears to pay well judging by results given last year by Mr. S. A. Beach, of Geneva, N. Y. The total yield of marketable fruit, in pounds, was 45 per cent. greater where the trees were sprayed, than where they were not sprayed. The trees were sprayed twice with Bordeaux mixture, once about May 25th and once about three weeks later.

**THE NOVA SCOTIA F. G. A.** met at Wolfville, on the 20th of January, and passed a resolution inviting the Ontario Association to co operate with them in engaging the Federal Government to grant more liberal aid in establishing and conducting fruit experiment stations in the various provinces. If the Nova Scotian Department of Agriculture would establish fruit experiment stations, such as the Minister of Agriculture for On-

tario has done in this Province, perhaps the Federal Government would co-operate. The Dominion is utilizing these stations in Ontario, and spending some money in making them more effective.

**SPRAYING** a large orchard like the one at "Maplehurst," of nearly one hundred acres of all varieties of fruit, is no small undertaking. It requires about one hundred pounds of copper sulphate, twelve pounds of Paris green and one hundred pounds of lime for each application. It greens everything, men, horses, clothing, all come in from the field a sight to behold. Clothing used for this must be kept for the purpose, for it is never fit to be seen at other work. But it improves the vigor of the trees and lessens the attacks of both fungi and insects—so it pays. The only question is, how often? We do not think many can be

## NOTES AND COMMENTS.

induced to spray five times as is advised. Indeed very few will ever do it more than two or three times, unless the clearest proof is given that more applications will pay in dollars and cents; viz., once before the leaf buds open, once before bloom, and once after.

THE INDUSTRIAL FAIR at Toronto this year promises to surpass that of any previous year, as indeed it should. The poster is a credit to the management, and is quite artistic. It is headed "Canada's Great Victorian Era Exposition, and Industrial Fair," and shows fine pictures of Her Majesty in 1837 and in 1897; also of the Premier in 1837 (Sir John A. McDonald) and in 1897 (Sir Wilfred Laurier). Fortunately the President of our Association is on the Board of Management, and is doing everything in his power to give prominence to both fruits and flowers.

ABOUT THREE HUNDRED named varieties of apples were shown by the Fonthill Nurseries last year at the Industrial, the largest collection ever exhibited in Canada. The largest named collection of fruits of various kinds ever shown was made by our Experiment Stations, and their exhibit will increase in interest year after year.

THE HABITS, FOOD AND ECONOMIC VALUE OF THE TOAD, forms the subject of bulletin 46, Mass., A. C. It is shown that only eleven per cent. of the food of the toad is composed of spiders and insects in any way helpful, and eighty per cent. of those which are injurious, such, for example, as sow-bugs, myreapods, grass-hoppers, crickets, may-beetles, tent caterpillars, gypsy moths, cut worms, army worms, etc., etc. Gardeners, therefore, should encourage the presence of this animal; artificial shelters

may be made by digging out shallow holes in the ground, and partially covering them with a board.

DOUBLE APPLE BLOSSOMS.—Mr. W. J. Kerr, of Renfrew, writes of a freak in the way of a double apple blossom which he found on a Duchess apple tree in the County of Renfrew. Mr. Kerr says he will take note of this from year to year and report concerning its constancy. Possibly a double-flowering apple tree might be propagated from this branch, which would make a fine ornamental tree. Mr. Kerr compares the blossom to that of a double white rose.

COOK'S HARD SOAP EMULSION is convenient because it may be used with either hard or soft water. It is made by dissolving  $\frac{1}{4}$  pound of hard soap in two quarts of boiling water, and while still hot add one pint of kerosene, and stir rapidly. This will emulsify at once and when needed for use is diluted with twice its bulk of water. The *Riley-Hubbord* formula is  $\frac{1}{2}$  lb. hard soap dissolved in 1 gallon boiling water, to which is added two gallons of kerosene. When wanted for use, dilute with 9 times the quantity of soft water.

ONE OF THE FINEST PEACH ORCHARDS in the Niagara District is that of Mr. E. McCardle, near St. Catharines. We visited it on the 10th inst. and cannot speak too highly of its excellent condition. First the *cultivation* was almost perfect, not a weed or spear of grass to be seen, and constantly worked up;—Secondly the *fertilizing* was liberal, chiefly with wood ashes; Thirdly the *pruning* was an example for imitation, not only the dead wood well thinned out, but the growth well shortened back every spring. The only apparent evil is the Peach Curl, which affects the best orchards as well as the worst in wet

## NOTES AND COMMENTS.

seasons ; but otherwise the large orchard is a picture of health, and is loading well for a fine crop of peaches.

THE LECTURE by Prof. Pantou before the Paris Horticultural Society on the 19th May was a most instructive one, and the accompanying stereopticon illustration of prizes were greatly appreciated. There were twelve entries for the apple exhibit, one gentleman showing eighteen varieties, a large number considering the season, and all in excellent condition.

WE NOTE with great regret the announcement of the death of Mr. Jas. F. Webster, Hamilton, on the 5th of June. Mr. Webster has been a frequent contributor to our pages, and was ever ready to serve the best interests of our various Horticultural Societies.

FRUIT PRESERVING FLUIDS.—We desire to caution our readers against vendors of recipes for preserving fruits for culinary use, who go from door to door. Humbugs are the order, and some people seems to be more ready to spend their money on them than upon useful articles. Fifty cents for a recipe to dissolve 36 grs. salicylic acid in a quart of hot water! It does preserve the good appearance of the fruit ; it is one of the chemicals which the writer used for preserving fruits for exhibition at the World's Fair, but is not intended for taking into the human system. Indeed salicylic acid, if used constantly, is very injurious to health.

THE SAN JOSÉ SCALE is pretty widely distributed in the United States, by means of both nursery stock and fruit. The national nursery man is sure that one is about as important a factor as the other, and any Act that does not include the prohibition of the importation of fruit will be a failure. The most suc-

cessful winter wash for the destruction of the insect is said to be 2 lbs. of potash dissolved in 1 gallon of water.

THE DISTRIBUTION OF THE SCALE by infected fruit is declared by many entomologists also to be quite possible. In a bulletin published in 1896 Professor Howard of the Department of Agriculture, Washington, says :—“ Its importance from an economic standpoint is vastly increased by the ease with which it is distributed over wide districts through the agency of nursery stock *and the marketing of fruit*, and the extreme difficulty of exterminating it where once introduced, presenting as it does, in the last regard, difficulties not found with any other scale insect.” The National Nurseryman says :—“ A federal bill providing for the inspection of nursery stock and not for the inspection of fruit, will, according to the best authorities, leave the way open for the dissemination of the San José scale through an avenue known to the scientist and practical orchardist.”

THE GAS TREATMENT of stock has been tried by the Entomologist of the Sewers Experiment Station, with some degree of success. Fumigating boxes, costing about \$10 were used, in which packages were placed, and treated with hydrocyanide and gas. Possibly this treatment will be a success, generally.

MESSRS. REFORD & Co. write they have fitted up the steamers Iona, Hurona and Gerona for London, and Kastalia for Glasgow with cold storage for perishable freight under contract with the Government. Any one may have list of sailing dates from Montreal on application to them, 23 St. Sacramento St.

## NOVELTIES.

THE FRUIT GROWERS of Hamilton, Burlington and Winona met at the Royal Hotel, Hamilton, on the 19th, *re* San José scale. There was a large gathering, Mr. W. M. Orr, our Vice-President, occupied the chair. Prof. Pantou, of the O. A. C., Guelph; Mr. Craig, of the Experimental Farm, Ottawa, and others addressed the meeting. A committee, consisting of A. H. Pettit, E. D. Smith, A. W. Peart, George E. Fisher and N. M. Black, was appointed to bring in a resolution. The following is a copy of the resolution, which was unanimously carried.

*To the Dominion Government of Canada:*

*Resolved*,—(1) That the importation from the United States, or any other country where the San José scale is known to exist, of nursery stock and such fruits as are affected by the scale, be entirely prohibited.

(2) That a thorough inspection of all nurseries and of orchards in those districts in which the scale has been found to exist, be

at once entered upon, and that the trees so affected shall be uprooted and burned; and that the growers who may have trees affected with the scale, and thereby be subjected to serious monetary loss, be in a measure compensated for their destruction.

(3) And we beg most respectfully to request the Honorable Minister of Agriculture to at once take such action as will effectually destroy this enemy to the Horticultural interests of our country, and prevent the importation of trees and fruit in which may be concealed the germs for future development.

The Secretary was instructed to forward copies of this resolution to the members of Parliament representing fruit sections, asking them to urge upon the Government the most vigorous action possible.

REPLIES have since been received from the Hon. S. Fisher, Minister, and Mr. Thos. Bain, Chairman of Committee of Agriculture, to the effect that everything possible would be done to protect the interests of the fruit growers.

## \* Novelties. \*

During the past three or four years several new varieties of fruits have been placed upon the market, that are either hybrids or of species that have not before been cultivated in this country. Most of them have been tested here, and thus far none of them have shown promise of value for any purpose whatever. The following are the varieties tested:

*Mayberry (Japanese Golden)*. The plant resembles the red raspberry, and was raised by Luther Burbank, by crossing *Rubus palmatus* and the Cuthbert raspberry. It is claimed by the disseminators to form a bush six or seven feet high, and the fruit is said to ripen a month before the earliest raspberries. We have made two attempts to test this variety, but in both cases the plants failed to grow. Those obtained last spring were from Southern New Jersey, but the tops had been killed to the ground by the winter, and the roots were too weak to send up shoots. Judging from this experience, the plant will not stand our climate.

*Loganberry (Raspberry x Blackberry)*. This is supposed to be a hybrid between the Auginbaugh, a California blackberry and Red Antwerp raspberry. The plants are spreading and the leaves and canes greatly resemble the European raspberry, the latter being cov-

ered with prickles. The fruits resemble the blackberry in shape and structure, but are red when ripe. The plants seem about as hardy as our common varieties of blackberries, and they formed a few fruits last year on two-year old plants, but they have shown no valuable characteristics.

*Strawberry-Raspberry (Rubus sorbifolius)*. This is a recent novelty from Japan. It sends up stems to the height of twelve or fifteen inches, which are covered with short, stout spines, as are the ribs of the leaves. The old stems die down each year and new ones are sent up from the roots. As grown here it seems to have no value, and as it suckers profusely it may become difficult to eradicate when it has obtained a hold of the soil.

*Wineberry (Rubus Phanicolasius)*. Another Japanese species introduced and quite widely disseminated several years ago. It seems to be wanting in hardiness, as it has killed to the ground nearly every year. The canes are somewhat spreading, and are covered with numerous reddish-purple hairs. The calyx is quite large and thick, and forms a sort of burr about the berry. The fruit is of a dark amber color, and is soft and rather acid. Of no value except as a curiosity.—Agricultural College, Michigan.

## Question Drawer. ❧

### Insect on Norway Spruce.

**953.** SIR.—I send you sample of insect attacking Norway Spruce. They number thousands, though mostly in chrysalis state yet (May 28th). What will kill them, and not the hedge?

ADAM DUNN, *Galt.*

*Reply by Dr. Fletcher, Ottawa.*

The spruce twigs from Mr. A. Dunn, of Galt, came safely to hand. The insects are the same species as was very abundant on a spruce hedge belonging to Dr. Smale, of Wroxeter. It is a species of *Retinia*, and as the moths are just now issuing, the remedy which suggests itself is to spray the hedge at once with kerosene emulsion, which will destroy many of the moths and prevent them laying their eggs again on the same hedge. This moth is well known, but it is only occasionally that it is so troublesome as you describe.

### Hog Refuse for Fertilizer.

**954.** SIR.—Please give me recipe for preparing a mixture of hog refuse, blood, bones and hair, for a fertilizer.

D. BOLDEN, *Collingwood.*

*Reply by R. Harcourt, Assistant Chemist,  
O. A. C., Guelph.*

The best way to prepare a mixture of hog refuse, blood, bones and hair, for a fertilizer, is to thoroughly dry them and then grind to a fine powder. This will bring the whole mass into a convenient form for handling, and, at the same time, render more available the various fertilizing constituents which it contains, especially the phosphoric acid of bone.

This method may be impracticable for the farmer or fruit grower who wishes to

make use of these crude materials. Good results have been obtained by breaking up the bone as finely as possible, by use of mallet or otherwise, and mixing it with the hog refuse, blood, etc., and composting with stable manure. Where a large amount of bone is to be treated, this method may not give the best results, as phosphoric acid of bones would be but slowly rendered available. A good plan for dissolving bones is to mix them with wood ashes and place in a tight box, covering the whole mass with damp earth to prevent loss of nitrogen, which will be liberated from the bones by the action of the lime in the ashes.

### Gooseberries.

**955.** SIR.—What do you consider the best Red English Gooseberry? Also, the best White or Yellow? What is the average yield per tree, when not troubled by mildew? Mildew is unknown here. What is the general price obtained for ripe English Gooseberries? Can English Gooseberries be made a success on light sandy soil? Downing, Houghton, Smith's Improved and other American varieties yield well here, when manured, as does also the Industry; but the Industry is a very feeble grower, seeming to put all its vigor in fruit. Red Jacket is a rampant grower, but a shy bearer of late, poor-flavored berries.

D. J. STEWART,  
*Aitken's Ferry, P.E.I.*

We would like some of our gooseberry growers to reply. At Maplehurst we have thus far grown only the American varieties, such as Houghton, Downing, Smith and Pearl. Recently we have added about fifty English sorts, which are not yet in bearing, excepting Industry and Whitesmith, the latter of which mildews considerably. We have always looked upon Whitesmith as the best white, and Crown Bob as the best red for growing in Canada.

## QUESTION DRAWER.

### The Alexander Apple.

956. SIR.—Can you give me the date and place of origin of the Alexander apple?

D. J. S., A. F., P.E.I.

The Alexander apple originated at Moscow, Russia, toward the end of the 18th century. It was called Aporta, until in 1817 Mr. Lee, a nurseryman near London, introduced it into England under the title of Alexander the First, in honor of the Emperor of Russia.

### The Cabbage Maggot.

957. SIR.—I have been a subscriber for some years of the HORTICULTURIST and take a great pleasure and pride in its improvement, but I have not seen the Cabbage Maggot spoken of. Is there any way of getting at them? They appear to work at the root, are very destructive on cauliflowers, and last season they destroyed nearly my whole lot, up to the time they were the size of a man's fist. Any information you could give me will be appreciated.

GEO. W. BASCOM, *Galt, Ont.*

*Reply by Dr. Fletcher, Central Experimental Farm, Ottawa.*

I must apologize for not having answered your favor with regard to the Cabbage-root Maggot sooner, but I took it with me in my pocket when I was going to meet you at Mr. Thonger's orchards, and then forgot to speak to you about it.

The Cabbage Maggot is an extremely difficult insect to control, but I have always had sufficient success to pay for the application of the remedy, by treating the plants with White Hellebore. My method is to draw away the earth from around the roots and then syringe in, with some little force, a decoction of White Hellebore, made by steeping four ounces of White Hellebore in an ordinary pail-full of water. This not only throws out many of the maggots which lie in the earth close around the stems, but the hellebore also has the effect of killing the insects. The potash salt known as kainit is very highly spoken of by some of the large New Jersey onion growers for this same insect, and is worthy of a trial here. This salt both kills the maggot and acts as a strong fertilizer for the cabbages.

## DAPHNE CNEORUM—GARLAND FLOWER.

THIS charming little shrub, native of Eastern Europe, began blooming on the 13th of May, and was still in full flower at the end of the month. A cluster of the sweet scented, bright pink blossoms terminate nearly every branch of this shrub, and when these are

all opened it appears almost one mass of flowers. Although a low, slow growing shrub it is very desirable for the flower border and quite hardy at Ottawa.

W. T. MACOUN.

*Central Experimental Farm,  
Ottawa.*



## \* The Fruit Prop. \*

Present indications are by no means so favorable as the promise at blooming. Cherries have blighted and thinned out very much; plums are badly taken by curculio; peaches, apples and pears are a fair crop of certain varieties, in the Niagara District, but not over-abundant; while, in some parts, peaches are reported a failure. Indeed, in most of the peach growing States of the Union, except Missouri, the peach crop promises to be very light.

### Norfolk County.

SIR,—In the neighborhood of Simcoe Co. Norfolk, fruit prospects were never better. Apples, in spite of the great crop of last year, promise an average yield. Plum and cherry trees are heavily laden. Pears are a good crop. Small fruits of all kinds promise an abundant yield. Strawberries are coming on slowly and will be late. Peaches are not much grown; have heard of some fruit, but the trees are badly affected with leaf-curl.

Yours truly,

J. A. CAMPBELL.

### St. Thomas Notes.

SIR,—Everything here is about two weeks later than a year ago. The May frost injured the early strawberry blossoms, but the crop promises to be up to the average.

Raspberries, notwithstanding the mild winter, are considerably injured by the cold, especially Shaffer and Marlboro'; Cuthbert and Turner are all right.

Currants will not be half a crop; Victoria and White Grape are well loaded, but Fay, Cherry and Versailles have only here and there a bunch. I find Victoria my favorite, Prince Albert next, and, for early, the Versailles; Fay the greatest bearer of the lot. Red Dutch and North Star too small.

Gooseberries will be about half a crop, which will be enough with last year's conditions. I only picked about half my crop (Downing and Smith's Improved), I could not get enough to pay for picking. Your correspondents keep on telling how to grow; can't some of them tell us how and where to sell them at a profit. It appears to me we must quit growing small gooseberries and selling them green, and grow the large ones and sell them ripe. People won't can green, sour gooseberries, when they can get other fruit as cheap as they could last year.

Apples, contrary to expectations, will be a fair crop. No Red Astrachan, but plenty Yellow Transparent and Oldenburg, and many of the winter kinds are bearing well.

Cherries will be a fair crop. Early Richmond injured by May frost. Montmorency and English Morello very well loaded. Very few sweet cherries grown here.

Plums give great promise, especially Lombard. I have fifteen trees in chicken yard, and they are already bending with the fruit. I have not sprayed and I see no stung fruit yet. Varieties—Lombard, Bradshaw, Golden Prolific, Imperial Gage and Quackenboss. In another lot I have Pond's Seedling, Shipper's Pride, General Hand, the latter a very shy bearer. I have also Abundance, Willard and Burbank, but no fruit, though blossom. I begin to fear that the Japan plums will only do in the more favored sections of Canada, or where the peach will thrive.

Blackberries are in bloom now and promise an abundant crop.

Yours truly,

A. W. GRAHAM, *St. Thomas, Ont.*

### Huron County.

SIR,—I went through my orchard recently. The cherries are a heavy crop, plums very good and very free from curculio; pears well loaded, small fruits in abundance, grapes showing well; apples, although very thick with blossom, will be a very light crop, nearly all off; all the time they were in bloom it was very wet weather; I said then I was afraid the apples would not set well, the pollen was all washed off, besides the bees couldn't work on it; we had no frost to hurt. I have found the Spys and Cabasheas generally shy bearers, but this year they were covered with bloom, young Spys as well. I find the Baldwins to be standing the best of all, but they will be a light crop; all other varieties almost no crop.

WALTER HICK, *Goderich.*

### Ontario County.

SIR,—I have just got in after a drive of twenty miles through the fruit growing part of this district, and from notes taken, summarize the following:—Apples, 70 to 80 per cent. of a full crop; pears, 90 per cent.; plums, a full crop, and more, as many varieties are literally crowded; cherries, nearly a full crop, say, 90 per cent.; gooseberries and red currants, heavily loaded. Some complaints of mildew on gooseberries, where not properly sprayed; black currants, about 70 per cent.; strawberries, good; grapes are late, but plenty of clusters formed.

Taken all round, the fruit crop will exceed last year, except in apples, which will be about the same, according to present appearances.

## THE FRUIT CROP.

The warm weather, the past week, has made a marked difference in the size of the fruit; some neglected orchards are literally crawling with tent caterpillars and canker worm. When will farmers learn to protect their fruit trees, instead of having such unsightly monuments of brush and neglect as I witnessed to-day on a few, otherwise, beautiful farms?

R. L. HUGGARD, *Whitby.*

### Oxford County.

SIR,—In reply to your post-card of the 23rd inst., I think the following will be about the estimate of the fruit crop in this district, although the season is somewhat backward, we have had no frosts worth speaking of to check vegetation, but generally cool weather for the month of June.

The outlook for the apple crop is most favorable, but not a full crop. Pears will be an average crop, the fruit comparatively clean and free from spot. The plum crop will be a good average, some places much affected with curculio. Cherries will be a medium crop. Gooseberries, raspberries and currants yielding abundantly. Peaches and grapes, very little grown in this section for market. Strawberries are a heavy crop, and if dry weather does not set in, will be fine in quality; so that the prospects throughout this district are on the whole very promising.

JAS. S. SCARFF.

### Prince Edward Co.

SIR,—Your post-card of the 23rd received, regarding the fruit prospects in our section. Apples will be a fair crop; the cold, wet May caused many of the blossoms to drop off, but what is left will be better; the winter varieties are the best, the Snows bearing so heavily, will be light; the Duchess, as usual, looks well. Pears bid fair, but I see many of the Flemish Beauty are turning dark, and possibly many will be useless; Bartlett's are good. Cherries, an abundant crop. Plums only fair. Strawberries wintered well and came through splendid, but for the last ten days hot, dry weather following on so much rain, has seriously hurt them; unless we get rain soon, crop will be light. Raspberries wintered well. Currants and gooseberries are also looking well. Above is a fair average report given by my growers.

WELLINGTON BOULTER, *Pictou.*

### Ottawa.

SIR,—From my own observation and all the information I could get since I received yours of the 23rd inst., the fruit prospects in this district are as follows:

Strawberries, very badly winter-killed, not over a quarter crop. Raspberries, an average crop. Currants, over an average. Gooseber-

ries, a very heavy crop, the largest for many years. Grapes, promise well. Cherries, light and not set well. Plums, domestic varieties, none; American varieties, a light yield; native red, much below the average. Apples, notwithstanding the enormous yield of last year, promise nearly an average crop.

R. B. WHYTE, *Ottawa.*

### Grenville.

SIR,—The apple crop in this section will not be more than 30 per cent. of a full crop in fall and early winter varieties, and Canada Red and Talman Sweet, about 40 per cent. The blossom was fairly large, considering the abundant crop of last year, but the cold weather of the first week in June and the frost of June 2nd, injured the young apples that were just forming, so that trees that were covered with bloom are carrying about half a crop of fruit, and orchards a few miles back from the river are carrying very little.

As predicted in my last report in the June issue, the fungus is unusually bad and tent caterpillars very numerous; some orchards are also suffering from the ravages of the case bearer and bud moth.

Strawberries are a fair average crop, but very late, only making their first appearance on the market, in small quantities, at this date, June 24th.

Plums are a failure, no fruit has set, even on fence corner varieties. Pears showed an abundant bloom, about half of the fruit set; very few grown here. Raspberries give promise of a large crop.

HAROLD JONES, *Maitland.*

### Huron Co.

SIR,—Along the lake, a large crop of currants and gooseberries, strawberries, pears, cherries and plums. The first four of these will be a crop that may be placed at full; cherries and plums a good large crop, all that the trees can bear and give good samples.

Apples are set and will give nearly a half crop in fall varieties, over a half crop in Spy, and under a half in several other winter kinds. Of course this is only an estimate, as a great many will fall yet. The actual present outlook is large in many apple orchards. Personally, I am thinning out the fruit in both apples and pears, as I consider the crop too large for the trees.

A. MCD. ALLAN, *Goderich.*

MR. W. E. SHERRINGTON, of Walkerton, writes that apple scab appeared in Bruce County about the middle of June. The fruit crop is otherwise very promising—particularly pears, plums and cherries. Japan plums are doing well so far, especially the Burbank and Abundance.

## \* Open Letters. \*

### Windsor Cherry.

SIR,—Young Windsor Cherry trees made a good growth last summer, but this spring there are very few leaves; the only buds that seem to be in good condition, that is, are sending out full-sized leaves, are those at the end of the growth of '95, and the second terminal bud on the growth of '96. The buds seem to open out at the proper time, but contained nothing. Some of them are now sending out very small leaves, but no fruit-buds. Lutovka and Minnesota Osthelm are in the same condition. I enclose you a sample bud. What is the matter? Thermometer fell to 20° below last winter, and was reported 24° below—the coldest known for 30 years. The wood of young trees of Spaulding, Burbank, Bradshaw, Genii and many other plums, is uninjured, except perhaps a loss of an inch.

D. J. STEWART,  
*Aiken's Ferry, P.E.I.*

### New Fruits.

SIR,—Seeing in the June number of THE HORTICULTURIST, in "New Fruit," by E. Morden, a rather severe discrimination against Russian Apricots, I wish the writer of said article could visit my orchard this season before Apricots are ripe. I think we could convince him that they are come to stay. There are several trees of different varieties as heavy loaded as the trees can carry, and I cannot find a carculio mark on any of them. The trees are more hardy than Peach, having borne some fruit even in the past two years, when Plums failed here. One

of the trees measures 2 feet 6 inches across the trunk.

Japan Plums, too, come in for a share; one thing, they have an advantage over *Prunus domestica*, in being entirely free from black-knot.

S. HUNTER,  
*Hawthorn Place, Scotland, Ont.*

### A Long Keeping Apple.

SIR,—I have a young seedling apple tree that bore heavily last year. I put a peck of the fruit in a barrel of Russets, and when I sold the Russets, I found the others were still sound. So I put them away again and they are nearly sound at the present date, June 19th. The quality is not very high, but the apple is a wonderful keeper, and the tree is very productive.

W. G. WATSON, *Dixie, Ont.*

### Price of Grapes.

SIR,—Grapes here look fine and promise a fairly good crop. All grape growers should combine, who have an acre or more of vineyard, and sell no grapes for less than 1½ cent per lb. All grapes unsold I am willing to take at that price, and make into wine. There is a large wine cellar here, with many empty tanks, so I can make it up with little expense.

I will send a sample of my last year's wine to any person interested.

D. GRUENBECK, *Tilsenburgh.*

### SWEET PEA WINDOW SCREEN.

THE sweet pea is suggested by a writer in the Ladies' Home Journal, for a screen against the ugliness visible from many back windows.

Given a long, narrow box for this purpose, with a simple trellis work of ordinary wire or twine, well pulverized and enriched earth, with a small addition of sand and a moderate amount of sunshine—sweet pea vines being easily scorched—and a pretty window, a fragrant room, and plenty of blossoms for cutting may be confidently counted on, says the authority quoted, and an accompanying illustration verifies the statement. Following are additional notes gleaned from the same source:

A peculiarity of sweet peas is that the higher they are trained the more profusely they will bloom, and if all fading blossoms are removed before they can

go to seed, a constant succession of bloom is secured.

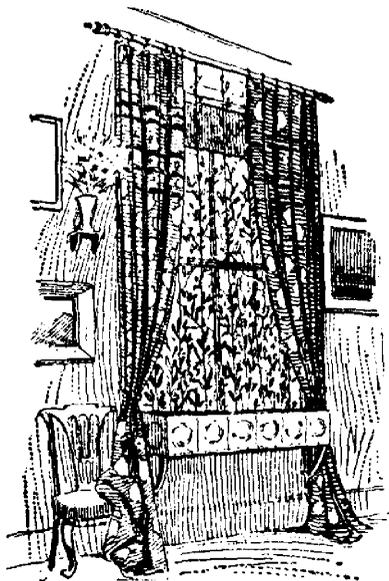


FIG. 1161.—SWEET PEA WINDOW SCREEN.