

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Coloured covers/
Couverture de couleur | <input type="checkbox"/> Coloured pages/
Pages de couleur |
| <input type="checkbox"/> Covers damaged/
Couverture endommagée | <input type="checkbox"/> Pages damaged/
Pages endommagées |
| <input type="checkbox"/> Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> Pages restored and/or laminated/
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> Cover title missing/
Le titre de couverture manque | <input checked="" type="checkbox"/> Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> Coloured maps/
Cartes géographiques en couleur | <input type="checkbox"/> Pages detached/
Pages détachées |
| <input type="checkbox"/> Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> Showthrough/
Transparence |
| <input checked="" type="checkbox"/> Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur | <input type="checkbox"/> Quality of print varies/
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> Bound with other material/
Relié avec d'autres documents | <input checked="" type="checkbox"/> Continuous pagination/
Pagination continue |
| <input checked="" type="checkbox"/> Tight binding may cause shadows or distortion
along interior margin/
La reliure serrée peut causer de l'ombre ou de la
distorsion le long de la marge intérieure | <input type="checkbox"/> Includes index(es)/
Comprend un (des) index |
| <input type="checkbox"/> Blank leaves added during restoration may appear
within the text. Whenever possible, these have
been omitted from filming/
Il se peut que certaines pages blanches ajoutées
lors d'une restauration apparaissent dans le texte,
mais, lorsque cela était possible, ces pages n'ont
pas été filmées. | Title on header taken from: /
Le titre de l'en-tête provient: |
| | <input type="checkbox"/> Title page of issue/
Page de titre de la livraison |
| | <input type="checkbox"/> Caption of issue/
Titre de départ de la livraison |
| <input type="checkbox"/> Additional comments: /
Commentaires supplémentaires: | <input type="checkbox"/> Masthead/
Générique (périodiques) de la livraison |

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
						✓					



GRIMES' GOLDEN.



The
Canadian
Horticulturist.

PUBLISHED AT TORONTO AND GRIMSEY, ONT.
OFFICE ADDRESS—GRIMSBY, ONT.

VOL. X.]

NOVEMBER, 1887.

[No. 11.]

NOVEMBER.

The year is waning! Solemn sounds are heard
Among the branches of each wind-toss'd tree;
Brown looks the grass; no floral gems we see;
Forsaken nests by winds alone are stirr'd,
And not by wing of bird.

The skies look cold—wind-driven clouds scud by,
While fitful gales whirl sere, dry leaves away;
Fair once, like friends who come to us one day,
Creep to the heart, bring love-light to the eye,
Then droop and fade and die.

Yet, while winds chill and summer joys depart,
A host of other pleasures now doth come:
Brothers and sisters scattered, all come home,
Thanksgiving cheer abounds, while fond smiles start.
As heart responds to heart.

Then curtains down, around the fire we press,
To sing and jest, to romp and laugh, and play;
But while the fun goes round, each heart can say,
"November brings Thanksgiving. Lord, we bless
Thee for our happiness!"
Brooklyn Magazine.

THE GRIMES GOLDEN.

OUR FRONTISPIECE this month represents that excellent winter apple sent out some years ago by the Fruit Grower's Association of Ontario, the Grimes Golden Pippin. Several samples of this variety were on exhibition at the Industrial Exhibition, but none of them as large as the one shown in our illustration; indeed we question if any of our readers have succeeded in growing it much above a medium size.

Grimes Golden is no novelty. It has been known for many years, having originated on the farm of THOMAS GRIMES, near Kempsville, Virginia. It is highly esteemed for its excellence of quality, in which respect it is compared in value with the Newtown Pippin, an apple that always commands the highest price in the English market on account of its delicious flavour. The tree is vigorous and productive, especially in alternate years, and the

rich golden yellow of the fruit, renders it peculiarly attractive.

Notwithstanding all its excellences, however, it is not considered a very profitable apple in Canada, neither can we recommend it for the more northerly sections, as its hardiness is in question, and it is classed by DR. HOSKINS among the varieties that will not endure the climate of Vermont.

Two years ago, MR. MCD. ALLAN said of it, at one of our meetings: "It is a magnificent apple for the dessert table, and there is nothing prettier

when arranged in a dish than they are; they are gold just now. Nevertheless they are not profitable to grow."

Profit however is not the only consideration in growing apples. Very many of our readers want a selection of kinds solely for home uses, and with them quality and general excellence is the test. Such persons will be much pleased with Grimes Golden. It will contrast beautifully in the dessert dish with other varieties, as for instance with the deep red of the Fameuse.

THE ANNUAL MEETING.

THE recent meeting at Grimsby was one of the most interesting ever held. The members of the Fruit Growers' Association at Grimsby turned out in full force to welcome their visitors, and did everything in their power to make the meeting successful.

They had arranged tables across the hall, in front of the platform, for the display of new and choice varieties of fruits; and these were loaded with the finest possible display of apples, pears, and grapes, a full report of which will appear in the next Annual Report of the Association.

The result of the

ELECTION OF OFFICERS

was as follows:—*President*: A. McD. Allan; *Vice-President*: A. M. Smith; *Directors*: Agricultural Division No. 1, John Croil; No. 2, A. A. Wright; No. 3, Rev. Geo. Bell, LL.D.; No. 4, P. C. Dempsey; No. 5, Thos. Beall; No. 6, W. E. Wellington; No. 7, M.

Pettit; No. 8, A. H. Pettit; No. 9, Fred. Mitchell; No. 10, J. A. Morton; No. 11, J. M. Denton; No. 12, Albert Hill; No. 13, G. Caston. *Auditors*: Jas. Goldie and Chas. Drury, M.P.P.

The Treasurer's Report was read, which showed a balance in the bank to the credit of the Association of nearly \$500; thus showing that notwithstanding some unavoidable losses, the finances are now in a prosperous and hopeful condition, making it possible to carry out in the near future many plans for the improvement of our monthly journal, and the increased usefulness of our Association.

THE EXCURSION AMONG THE FRUIT FARMS was highly enjoyed by all, notwithstanding the dust and the smoky atmosphere which circumscribed the many beautiful and picturesque views here obtainable. The first orchard and fruit farm visited was that of the Secretary, of which it becomes others, rather than the writer, to speak, except

to say that henceforth it will be used largely as a source of experience in practical horticulture, for the benefit of the readers of the *Canadian Horticulturist*.

The magnificent Pocklington grapes on Mr. E. J. Woolverton's fruit farm, were much admired. Grown on a rich sandy loam, well drained, they ripen here to perfection, about a week later than the Niagara. His beautiful orchard of dwarf pears, chiefly Duchess, with some trees bearing superb looking B. de Beaufort, was also much admired. As with the rest of us at Grimsby, his large peach orchard has been sadly thinned out by the yellows, the presence of which disease he still deploras.

At Mr. Murray Pettit's vineyard, near Winona, the whole party alighted, and were refreshed at his packing house with a taste of his pure home-made grape wine, which was not the less appreciated, after being half choked with clouds of dust upon the way. This vineyard is one of the largest in this section, and is situated close under the mountain, where it is sheltered from early frosts, and where the soil is a rich sandy loam, gathered during past centuries by the washings from the mountain side. Although the Delaware has always received special attention from Mr. Pettit, he has some sixty or seventy other varieties under cultivation, with a view of testing their merits. With many others, however, he has come to the conclusion that the number of varieties which are really worthy of a place in a vineyard which is planted for market, are very few,

as for instance (white) Niagara, (black) Concord, and Rogers' 4 and 44, (red) Lindley, Worden, Delaware and Agawam.

Returning along the mountain brow, Mr. A. G. Muir's vineyard of Niagara grapes was much admired. His success proves that not all the most favorable locations for vineyards are to be found below the mountain, as many would affirm.

The drive east of the village two miles to the Park, was also full of interest. Fine houses, and well kept gardens, line the road, and betray the good taste of their occupants. The Park, too, is growing in attractiveness; how could it be otherwise, situated as it is on the bank of such a beautiful lake, and in such a delightful section of country.

THE PUBLIC MEETING

of Wednesday evening was a grand success. The Town Hall was packed. The address of Mr. A. McD. Allan was full of special interest to fruit growers; while that of Prof. Brown, on "Trees and our Every-day Life," clearly showed the great importance of forests to the prosperity of any country.

The music, contributed by Miss Katie Nelles and others, of Grimsby, was excellent, and added very much to the enjoyment of the evening's programme.

The full text of the President's address will appear in our next Annual Report, together with a report of the important discussions of Thursday, taken down verbatim by an able stenographer. Suffice it therefore to say

that this meeting at Grimsby was acknowledged to be of interest and profit to all, and was the means of increasing

the fraternal feeling between the Ontario Association and a strong local organization of fruit growers.

SELECTIONS FROM THE PRESIDENT'S ADDRESS

Delivered at Grimsby, Wednesday Evening, 28th September.

HONEST PACKING.

Our apples have taken the British buyers by storm, and consumers there will not purchase any others so long as they can obtain a suitable article from us. Britain wants the best and the best only. There is no better market for a choice article, nor so poor a one for an inferior article. Canada has gained a good name for general honest culling and packing, and it is absolutely necessary that we do not allow a spot to tarnish our character. I would entreat every orchardist and shipper, not only for his own best interests but also for the sake of the fair fame of our country, to exercise the greatest care in the cultivation, selection and packing of our fruits. Let the grower leave nothing undone to excel in the production of the choicest fruits, and when he ships allow nothing to pass to the shipper but the best. Above all things teach your children to be scrupulously honest in picking and culling out the apples ready for packing. Never encourage a child to think it smart to get a spotted or wormy apple off on the buyer by hiding it in the middle of the basket or barrel. Let the shipper see to it also that he acts in strictest honesty with his customers. Let the brand always truly indicate the contents of the barrel. Let every specimen be sound and clean

for a good brand of fruit. Choice lots should be made of even size and good colour in the barrel. Under no circumstances let the brand indicate anything better than the fruit in the barrel fairly demands.

SHIPPING.

Generally speaking, it is a mistake to ship on consignment to any but the three great distributing centres, London, Liverpool and Glasgow. Experience has shown that fruit shipped to London direct by water has received much more damage in transit than when shipped *via* Liverpool and thence by rail to London. It is a very common thing to find in cargoes shipped direct to London by water, barrels with only a few pecks in them, and as these few left are clean, fine samples, it is natural to conclude that they have been tampered with either when passing up the Thames, or when in charge of the dock companies. I have often visited the docks to see cargoes discharged, and almost always remarked an amount of careless handling that was startling—barrels of apples standing in the storage sheds open, and passers-by having every chance to pilfer that could be desired. I would therefore advise shippers to ship to London always *via* Liverpool.

MARKET FOR FALL APPLES.

There is still another market nearer

home that will prove one the most important to Ontario growers, viz., our own great North-West. Even now, with population small and scattered, the trade has assumed wonderful proportions, with this very desirable feature, that it is a market for our early and fall apples, that would otherwise be of comparatively little value. Of course, there are some fall apples that we can ship to Britain profitably under some circumstances. Of fall varieties we have one that is sure of ready sale at high prices—the Gravenstein—even this season it has sold as high as \$6 per barrel. St. Lawrence has made \$4.20 and Colvert \$4.05 for good samples.

ORDER OF SHIPPING WINTER APPLES.

It is folly to send a mixed cargo at an early season, as there is then no proper demand for a long-keeping kind. Shipments should continue through winter until early spring. In such a season as the present the order in which special kinds should be shipped would be thus:—In September and first week in October, ship all 20-Ounce and Ribstons and Blenheims; follow this with Kings. Send some Baldwins and Greenings through November and December, finishing shipments of these kinds in January. The first Spies should be sent forward in December, and continued on through January into February. Ontario and Wagner will also cover the same season. Hold the Russets until March if possible, along with Mann, and send them forward then as the demand arises, taking care to examine every barrel before leaving

the storehouse to see that there is no decay or shrinkage.

SHIPPING GRAPES.

The large grape crops of the present season, and the exceedingly low prices causes the growers to ask what are the prospects of obtaining markets for an increasing supply? If proper cold storage can be secured on the steamships, Britain will soon prove to be a good market for our open-air grapes. But as the taste for them must be acquired, largely, such a trade must be approached with care. The only class of grape consumers in Britain are those who can afford to pay very high prices for hothouse varieties, and those who are satisfied with the poor quality of the ordinary Spanish white grape of commerce. I have no doubt at all but our grapes would find a ready class of consumers if once introduced in competition with the Spanish grape. Various ways of packing must be tested. Those packed in berry boxes, tightly enclosed in a case containing ten or twelve such boxes, carried better than in any other way to the Colonial at London last year.

CAUTION.

It is for the exporter to quickly decide the market to which he will consign. Caution should be used in accepting market reports mailed from broking firms, which are so worded as to induce shippers to consign to Liverpool when they should take London or Glasgow, or *vice versa*. The necessity of making arrangements well in advance with steamship agents, to avoid being shut out, must also be borne in mind.

Influence should also be brought to bear on agents in regard to storage. Apples should never be stowed under

or mixed with general or any other cargo, and they should always be stowed away from all heating influences.

KEEPING GRAPES.

At the Grimsby meeting this subject was briefly discussed. Mr. M. PETTIT, of Winona, said that last year, he had tried setting away *Niagaras* until December, but he found that by that time grapes seemed out of season on the market, and the demand was over.

Mr. J. B. OSBORNE, of Beamsville, had been successful in keeping grapes. He had filled cheeseboxes with them—buried the boxes in earth so as to totally exclude the air. In this way he had kept them till the month of February, and exhibited them at one of the winter meetings of the Association at Hamilton. The variety was the *Isabella*, and they were in a fine state of preservation.

Mr. A. M. SMITH said he had showed

some *Salem* grapes at Collingwood meeting last June, that had been kept by Mr. Kerman.

Mr. D. KERMAN, Grimsby, said his plan was to take grapes when perfectly dry, seal the stems with sealing wax, pack them in ten gallon casks, placing in layers of fine, dry hardwood sawdust, and then layers of grapes alternately. He would give the cask frequent gentle taps on the side to settle the sawdust closely among the grapes. When full, he glues stout paper over the top, and hangs up the casks in the cellar. In this way he had kept the *Salem* grape in fine condition until grapes came again the following year.

The *Salem*, *Vergennes* and *Pocklington* were spoken of as good varieties to put away for winter use.

THE CURL OF THE PEACH LEAVES.

Miss Etta L. Knowles writes in the *Botanical Gazette* for September the result of some investigations into the cause of this disease. It is the result of the growth of a fungus called by Botanists *Ecoascus deformans*. The observations were made upon samples of the leaves gathered about first week in June, and the drawings were by the aid of the camera.

In order better to understand the effect of the fungus upon the leaves a drawing of a cross section of a healthy leaf is first shown as in Fig. 1, in which *a* represents the upper and *b* the

under surface. Of course it is only by

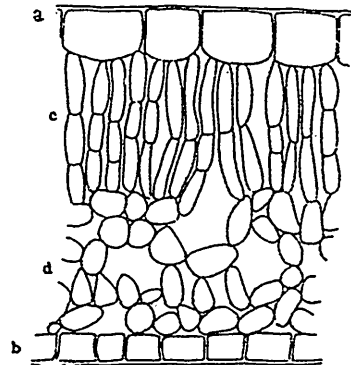


FIG. 1.

the aid of a powerful magnifying glass that any such distinction of cells can be

seen. The part marked *c* represents the thin walled elongated cells near the upper surface, and *d* the irregularly arranged cells near the lower surface, with large spaces between them.

The fungus begins as a small swelling on the tissue of the upper half of the leaf and spreads until it effects

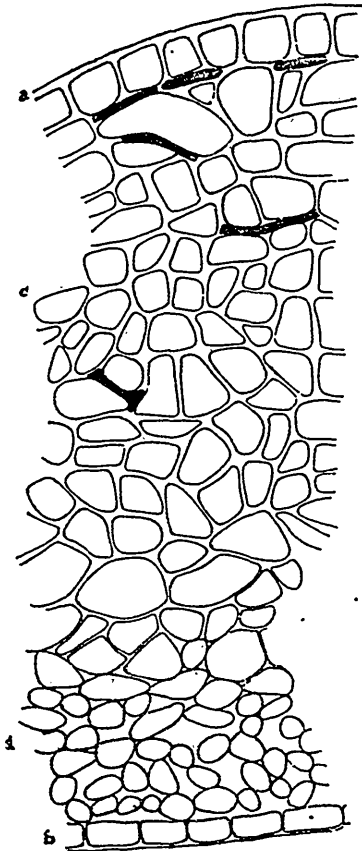


FIG. 2.

nearly the whole surface. The leaf becomes nearly doubled in width, and greatly increases in thickness, and soon after the fungus is matured the leaf shrivels and drops.

Fig. 2 shows a vertical section of a leaf thus affected and swollen out of its

normal thickness. In this *a* is the upper, *b* the under surface as in Fig. 1. The cellular structure in the under portion of the leaf is very little changed but that in the upper part has changed materially. The walls between the row of cells under the upper skin or epidermis, have become much thickened; the long narrow cells have become swollen and divided, and have become nearly empty, and hence the tendency in the leaf to curl underward.

The dark lines represent the vegetative portion of the fungus, corresponding to roots. This penetrates the surface of the leaf and there forms numerous branches, each of which en-

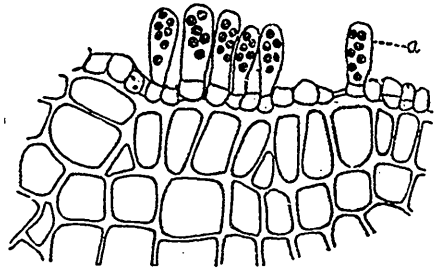


FIG. 9.

larges and forms the fruiting portion or ascus, shown at *a* in Fig. 9. In these asci the spores (or seeds) are produced, from six to seven in each, and these are the source of the constant spread of the disease.

As fruit growers we are pleased to know the cause of such a wide spread evil as the curl of the peach leaf, an evil which has been gaining ground upon us of late, and in wet seasons stripping our trees almost bare of leaves, and lessening the yield of fruit very materially. But if some one could find a remedy for us, we will be still more grateful.

NEW PACKAGES FOR PEACHES.

SIR,—The peach basket you represent, in the September issue of your interesting and instructive journal of horticulture, as being used in New Jersey and Delaware, we beg to advise you have been almost entirely superseded by modern, cheaper slat baskets and crates; for peaches it has been altogether abandoned and replaced by a similarly shaped slat basket, which costs 4c. to 5c. each.

For choice peaches, etc., the 4-quart basket crate has become very popular as a "gift package." But for uni-

formly large, fancy peaches the paper cell crate is growing into popular use.

The truck basket is too deep for shipping peaches in; the peaches below the third peach from the top are under too heavy pressure and become more or less bruised and mashed. The basket crate is better ventilated, and the peaches are only two to three deep, according to size of the fruit. The paper cell packages ventilates and holds separate each individual peach, which makes it most suitable for fancy delicate fruit.

Yours respectfully,

PANCOAST & GRIFFITHS.

Philadelphia, Sept. 21, 1887.

WINTER PROTECTION.

BY P. E. EUCKE, OTTAWA.

As the time is fast approaching when the rigors of winter will again be upon us it is well to look ahead and profit by past experience. The practice of protection even where the winters are much milder than in the Ottawa Valley is becoming more general every year. A prominent fruit grower in Michigan says that he considers the time he spent, covering his vines in the autumn, paid him at the rate of one hundred dollars per day whilst he was so employed, in his next year's crop; and there is no doubt in my own mind he was perfectly correct in his statement. If in Michigan the best cultivators protect grapes, raspberries and blackberries, and the labor thus expended yields the amount per day as stated above, it will surely pay the fruit growers of Ontario to follow suit. I am informed that an individual who has several acres of a plum orchard in Nova Scotia lays down his trees regu-

larly every winter. This he does by cutting the roots on one side, throwing the trees over and placing a few sods on the top branches to keep them in a recumbent position.

There is no doubt the high breeding of our edible fruits has a tendency to weaken the plant on which they are produced. That is to say, the further we depart in the excellence of the fruit from the native wild type, the less is the vine, tree or shrub able to withstand the cold of our climate. Why this should be so I am unable to define, except that highly cultivated plants produce larger sap-vessels, which, when freezing and thawing, expand and contract to a greater degree than those of smaller size which are produced by wild plants, the result of the swelling and shrinking being that the sap-vessels are impaired or destroyed. But it is practice not theory the ordinary fruit grower wants. I say, therefore, that

the protection of our raspberries, blackberries and grape-vines alone may cost hundreds of dollars, but it will yield thousands, and the man who says it pays him one hundred dollars a day is quite under the mark. For protection there is nothing better or handier than earth. A four-tined digging fork will hold almost any plant in position whilst soil is being placed upon it. Two men, or man and a boy, can perhaps work to better advantage than one. One will hold the plant down with a fork whilst the other puts on the earth. Many persons use boards, straw, manure, &c., &c., but there is nothing so good as earth for protection. This is exemplified every year by the potatoes which come up in the spring in a field which has produced a crop the previous year. This tuber is very tender, and if left on the ground exposed to the sun will not stand 4° of frost, but if protected with four inches of soil will grow in spring after a hard winter. Although it freezes as hard as a brick, the frost is drawn so gently from it that the sap-vessels assume their normal condition and the tuber springs into life. From three to four inches of soil is quite sufficient to protect any plant or vine. Care should be taken not to dig too close to the roots; the earth should be taken from three to four feet away from the stem of the grape or two feet from berry plants.

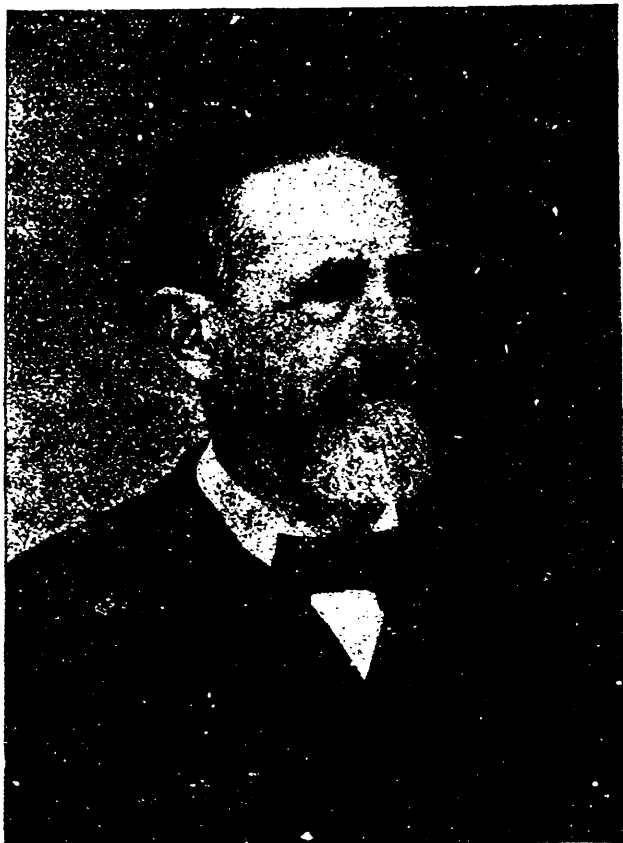
Pruning should always be done before the soil is applied, that is the old canes should be removed and the vines neatly trimmed. For raspberries I generally have a wheelbarrow-load of

sods, cut 4 x 6 inches square and two inches thick; press the canes down with the fork, placing the sod on the tips. A few shovel-fuls of earth may be added. Grape vines are often put down when there is two inches of frost in the ground, as the hard surface holds the fork whilst the soil is being applied. It is hardly worth stating that the grape should not be buried until the leaves have fallen and the wood is thoroughly brown and ripe. Two men could easily cover two acres of vines in a day, if they have been previously cut loose from the trellises. With regard to raspberries they may be laid down as described, with a sod and manure thrown on them. This keeps them from the sun, and acts as an excellent mulch for next season.

The plants protected may be lifted in the spring, when the frost is out of the ground, and danger of hard weather is over. For vines a cloudy day is preferred, as the sun cracks and dries them if it strikes too hot when they are first exposed. A three-tined hay-fork is the correct thing to raise the plants with in the spring. New plants of grapes, raspberries or blackberries should always be set in fall, and mounded over with earth which should be carefully removed in spring, a stake being set by each plant to show its position.

The Gold Strawberry.—Nearly every contemporary just now has an engraving of this berry. It is one of P. M. Augur's seedlings, and is named in honor of the Hon. T. S. Gold of Connecticut. Mr. Augur claims that this plant is hardy, vigorous, and quite productive, and preserves at the same time high quality.

Biographical.



T. H. HOSKINS, M.D.

THOSE who were present at our Summer Meeting at Collingwood will remember a paper on the subject of "Fertilizers for the Orchard," contributed by Dr. Hoskins, of Newport, Vt. As this gentleman is a personal friend and acquaintance of some of our Canadian fruit growers, and well known by others through his frequent communications to the public press, which are especially valuable to Canadians because so often treating of hardy varieties of fruits, we take pleasure in presenting his likeness to the numerous readers of the *Canadian*

Horticulturist. We are indebted to *Our Country Home*, Greenfield, Mass., for the cut, and for the following brief sketch of his life:—

Dr. Thomas H. Hoskins—son of Henry B. and Mary G. (Jewett) Hoskins—was born in Gardiner, Kennebec county, Maine, May 14, 1828. His father, of the firm of Richards & Hoskins, paper manufacturers, was, during a long life, one of the chief business men of that city; representing it in the legislature, and repeatedly city treasurer, alderman, and mayor. His maternal grandfather, Jesse Jew-

ett, was one of the leading and most progressive farmers of the Kennebec valley, and among the first to introduce foreign breeds of farm stock into that state. His father was all his life much interested in horticulture; and between the two the bent was given to the boy's mind which has been subsequently illustrated in his life. Educated in the local schools and academy, he in his 16th year entered his father's counting-room. In 1844 he took a situation as book-keeper for a wholesale drug house on India street, Boston. In 1849 he emigrated westward to the city of Louisville, Ky., where he became a partner in the jobbing drug establishment of B. R. Clark & Co. His fondness for "digging in the dirt," as some of his friends phrased it, led to his purchase of a farm near the city, in which he became daily more and more absorbed. His business in town brought him into acquaintance with many of its leading physicians; and his taste for scientific studies, which had characterized him since boyhood, caused, in 1854, his withdrawal from trade, and his entrance upon the study of medicine, in which science he graduated from the medical department of the University of Louisville, at the head of his class, in 1860. Shortly afterwards he returned to New England, and entered upon the practice of medicine in the city of Boston, making a specialty of the diseases of children. He contributed frequently to the press of that city, on sanitary and other scientific subjects, and received appointments as one of the physicians of the Boston Dispensary, and as a city Health Warden. In the spring of 1865 he suffered so severe an injury from a fall on the street that he found himself compelled to abandon his practice. His previous marriage with a Vermont lady determined his choice in seeking a home upon a farm in that state, near

the village of Newport, the present country-seat of Orleans county, situated near the head of Lake Memphremagog, where he has since resided. The extreme severity of the winter climate in this elevated locality led him into an ardent study of the "iron-clad" tree fruits, which he has now pursued for over 20 years. His orchard contains some 1,200 fruit trees, embracing every variety capable of enduring the climate, collected from our northern border, Canada, and Russia; and he has solved the problem of tree fruits—apples, pears, cherries, and plums—for all of northern New England and lower Canada. As an ardent gardener and hybridist, he has also produced a considerable number of valuable new varieties of garden vegetables, particularly in the class of early peas, sweet corn, and beans. His grounds have become a sort of horticultural Mecca for those seeking an example of success in these specialties, and he is sought as a contributor by leading agricultural and horticultural publications throughout the country.

The Vineyard.

KEEPING QUALITIES AND USE OF GRAPES DURING WINTER.

BY WM. MEAD PATTISON, CLARENCEVILLE, P. Q.

The cultivation of out-door grapes for domestic use has become so general of late years that the subject of keeping them for winter use, and the best method to attain that object may profitably claim attention. The varieties intended to be laid up for winter use should be those only which adhere well to the stem and are not inclined to shrivel. These should be allowed to remain on the vines as long as they are safe from frost. A clear dry day is necessary for picking, and careful handling and shallow baskets are important.

The room selected for the drying process should be well ventilated, and the fruit laid out in single layers on tables or in baskets where the air circulates freely, the windows being closed at night and in damp weather. In about ten days, the stems will be dried out sufficiently to prevent moulding when laid away. When danger from this is over, and the stems resemble those of raisins, the time for packing has arrived. In this, the point to be observed is to exclude air consistently with their tendency to mould. I have used baskets for permanent packing, but much prefer shallow trays or boxes of a uniform size to be packed on each other, so that each box forms a cover for the lower, the uppermost only needing one. Until very cold weather, the boxes can be piled so as to allow the remaining moisture to escape through a crevice about the width of a knife-blade. Before packing, each bundle should be examined, and all injured, cracked and rotten berries removed with suitable scissors. If two layers are packed in a box, a sheet of paper should intervene, the boxes must be kept in a dry, cool room, or passage, at an even temperature. If the thermometer goes much below freezing point, a blanket or newspapers can be thrown over them, to be removed in mild weather. Looking them over once in the winter and removing defective berries will suffice, the poorest keepers being placed accessible. Under this treatment the best keepers will be in good eatable order as late as February, after which they deteriorate. Before proceeding further I can say, from a basis of long observation, that no fruit is of greater benefit as an article of diet than the grape, and if it were more generally used, dyspepsia, and other disorders of the digestive organs, and consumption would be less known.

The following is a list of the grapes worth noticing that have been tested for keeping:—

DESCRIPTION.	LIST OF GRAPES TO BE RECOMMENDED.
Nov. 1st.	Lady, Antoinette, Carlotta, Belinda.
Dec. 1st.	Lady Washington, Peter Wiley, 'Mason's Seedling, Worden, Senasqua, Romell's Superior, Rickett's No. 516, Concord, Delaware.
Jan. 1st.	Duchess, Essex, Barry, Rockland Favorite, Aminia, Garber's New Seedling, Massasoit, Dempsey's No. 5, Burnett, Undine, Allen's Hybrid, Agawam, Gen. Pope, Francis Scott.
Jan. 15th.	Salem, Vergennes, El Dorado.
Feb. 1st.	Wilder, Herbert, Peabody, Rogers No. 30, Gaertner, Mary & Owasso.

The new varieties, Empire State and Norwood, have not been tested here.—
Report Montreal Hort. Society.

EVAPORATING FRUIT.—Prof. Arnold, in the New York *Tribune*, says evaporating fruit has been a God-send to horticulture and to the human race, by converting thousands upon thousands of bushels of fruit every year into wholesome and delicious food which would otherwise have been lost. Farmers all through western New York find that evaporators suited to their needs pay better than selling the green fruit, and far better than making it into cider to prove a curse to the consumer. An evaporator will cost about \$5 for each bushel of apples it will dry per day. The "running expense" in labor and fuel for evaporating apples at Rochester, N. Y., is 10 to 12 cents a bushel; raspberries, 4 to 5 mills per quart; peaches, 25 to 35 cents a bushel. In a large way it costs less than in a small one.

Flowers.



CULTIVATION OF THE AMARYLLIS.

BY HERMANN SIMMERS, TORONTO.

THIS variety of bulbous-rooted plants, is not as common as the merit of the flowers should cause it to be, mainly because the subject has not been given that prominence which it should have considering the rather easy culture with which they may be reared. Therefore with the hope that the result may be different, I will give a few practical suggestions for their successful culture.

Amaryllis formosissima is a variety which, though not the most beautiful in flower, has nevertheless the advantage of giving the successful amateur a taste for growing the more beautiful, as well as the more expensive varieties. *A. formosissima* is treated in precisely the same manner as that described under the heading of Hyacinth, with this difference, that a somewhat freer application of liquid manure is re-

quired, on account of the bulb being larger, and of the number of flower stems which are thrown up from a single bulb. Its flowers are of a beautiful red, exhibiting a play of golden gleams in the sunshine. They are scentless.

Amaryllis vallotta purpurea is the common dark red *Amaryllis* usually seen in the amateurs collection, and growing with a vigour from year to year, which, with the careful amateur, may be made to bloom with a larger amount of success than the professional is able to bring them to. Some specimens I have seen have as many as five to eight flower stems, and the bulb, having been grown from year to year, has been fully nine to twelve inches in circumference. They are easily propagated by the side shoots being broken off, and planted separately in a

pot, together, when in the course of three years' individual handling they attain sufficient size to bloom. The success of this variety has caused many to try the more difficult task of growing the hybrid seedlings. The cultivation is the same as described under the heading of *A. formosissima*.

Anaryllis Hybrid seedlings cover a larger number of varieties. Suffice it to say, if the amateur has made them a specialty he will attain the climax of perfection. There are European catalogues which list as many as a hundred varieties of this genus, varying in price from one to twelve dollars per bulb, but I have seen splendid results with parties who have purchased bulbs of hybrid seedlings at, say, one dollar to one dollar and fifty cents each. The flowers range in colour from dark red ground striped with white and yellow to pure white ground striped with dark red. The individual flower is from two to three times larger than the *A. vall. purpurea*, which is in itself an advantage that excites the curiosity of the ambitious amateur. The cultivation of *A. hybrid* seedlings is perhaps a trifle more difficult, because if planted now they sometimes take from four to five months to root properly, and they should not be brought to the light until the pot is well filled with roots, which is natural; for having to throw out a heavier stem, they must necessarily require more roots to support their handsome flowers, therefore let the amateur not despair, but wait patiently for the sufficient amount of roots required. A frequent application of liquid manure after being brought to the light is necessary. The bulbs when bought should be from five to nine inches in circumference, otherwise they will not be strong enough to flower.

Many other varieties I might class separately, but the foregoing are particularly worthy of special mention and

can be easily grown. The cultivation of the other varieties is the same as that of the Hyacinth, with the addition of the special instructions given above.



BY FRANCIS MASON, PETERBOROUGH, ONT.

GOSSIP.

How much we do feel like scolding and complaining! Just as our garden was beginning to look its best, that hoary-headed monster, Jack Frost, one night came near, jumped the fence, and breathed his icy breath all over our beds of flowers; and next morning, when the sun arose, blackness and destruction met us at every turn.

"Fled are the roses, dead are the roses,
The glow and the glory done,
And down the hollow the steel wing'd swallow
Flying the way of the sun.

In place of summer a dread new-comer
His solemn state renews;
His frosts so hoary touch with glory
Maple and oak and thorn;
And rising and falling his winds are calling,
Like a hunter through his horn."

The gorgeous apparel autumn appeared in a short time ago is laid aside, and, as Longfellow has put it,

Within the solemn woods of ash deep-crimsoned,
And silvery beech, and maple yellow-leaved,
There autumn, like a faint old man, sits down
By the wayside a-weary.

And we might say, from all appearances, the weariness has ended in death: for, although the ash, beech, and maple were a short time ago clothed in a coat of many colors, now the frosts and cold winds have removed this last vestige of autumn's reign. And now, though our work in the garden must for a while be laid aside, yet we may plan and arrange for another season's work, taking a back-

ward glance at our successes and failures, which will help us to make success more certain in all departments when again the icy bands are loosed, and mother earth is free once more. But, as we gather around our firesides, let us enjoy the consolation that all of our floral pets were not outside when that midnight assassin, Jack Frost, paid us a visit. These will now become more dear to us, and we will watch them with pleasure as the dreary days of winter pass by. Let us see that comfortable quarters are given them, that their insect enemies do not increase and prey upon them, that food is given and water is not withheld when required by them.

As a mother watches her child that cannot tell its wants, and supplies them, so must we watch our dumb pets; and as a child needs sleep, so must our plants have rest. A cooler atmosphere at night will give this, but sometimes the house is warmer at night than in the day; and, if they are kept up at fever heat day and night, sickness and death must follow. Many times I am asked, "What is the matter with my geraniums: I cannot get them to flower;" or, "I cannot succeed with fuschias; I wish you would tell me what is wrong." Well, as I do not know all the circumstances, I tell them there is something materially astray in the home treatment; it is nothing outside of nature—it can all be accounted for; and he who has plants, and really loves them, will have healthy plants. I want to say something about a few plants that nearly all can succeed with in the house during winter. I would place foremost on this list

PRIMULAS,

better known as Chinese Primroses. They need hardly ever to be out of bloom, except for a short time during the hot summer weather. They must be kept in a cool room or window;

they will do little or no good in a hot dry atmosphere.

CYCLAMEN.

Another pretty winter blooming plant, requiring a rest during the summer. By this I mean the bulb may be dried off altogether, or only partially so, and repotted early in September. Most varieties have not only a peculiar flower, but also a pretty marked leaf.

BEGONIA REX

makes a grand plant for the table, if nicely grown, as it does not require any sun. It is very suitable for a north window. Two things are requisite to bring this plant to perfection, viz: large pots with good soil, and plenty of water in the growing season, or during the summer. Not so much is required in the winter.

BEGONIAS FLOWERING,

such as *Rubra*, *Metallica*, *Nigricans*, *Schmidtii*, and many others, are beautiful for the window garden, but we would not leave out our old standby friends, the *Geraniums*, which can be had single and double, all shades, and may be had in bloom nearly all winter; there is the *Paris Daisy*, in shades of yellow and white, nearly a constant bloomer; then there are the *monthly roses*, *stocks*, *sweet allyssum*, and many others. But I want to tell you

HOW TO MAKE A FERNERY

in an hour, that will give more pleasure and require less care than will any plants that I know of. These home-made ferneries may be made square or octagonal, high or low, rustic or plain, small or large; but so as to be easily understood, let us describe a plain square one. Make or procure a small box, $12\frac{1}{2} \times 12\frac{1}{2}$ inches, and six or eight inches deep. This is the case to hold the earth and ferns. Now take four lights of glass, 12×16 in., and put strips of glazed cambric about

three-quarters of an inch wide, or cotton tape the same width will do, to connect the joints, or edges, of glass, using good glue to cause them to adhere. When dry, place a piece of tape around the bottom and top, using sealing wax at the four corners to make it adhere to the glass, which will bind all together. And now, three or four ferns may be procured from the florist, or from the woods, using leaf mould similar to that which they grow in when found in their natural home. When this is all complete, place the

glass framework on top of the box, putting a few tacks around the glass on the outside, to keep it in position. Give a good watering, which will be sufficient for three or four weeks, or more; then place a square of glass on top to retain the moisture. A fernery does not require any sun, but some warmth. Soon the beautiful green fronds will begin to unfold. Any time before the ground in the woods is frozen up, the ferns may be procured. Dig them up carefully, so that an abundance of roots may be retained.

Forestry.

FALLEN LEAVES.

A carpet is laid,—but not by hand,
 'Tis woven with skill,—but not by man;
 Its colors are crimson and brown and gold,
 More curiously wrought than the webs of old.*
 And who is its maker, I ask you to say?
 You answer, 'tis nature, and truly you may.
 But what is nature to work out her laws
 Without a controlling, presiding "First Cause?"
 That power is in nature, in all of her works,
 A secret power that subtly works,
 Infinitely great, though not seen at all,
 We know it in everything both great and small.

We call metaphysics and reason to aid,
 Which sometimes confound and often mislead
 From question to question, each still asking, why?
 Till all our conclusions unsatisfied lie.
 The Word of God's truth it is can reveal,
 Unravel our doubts, hypotheses clear;
 And this Book alone affords the true Light
 To guide our opinions and judgment aright.

Owen Sound.

M. W. MANLEY.

* The cloth of gold belonging to the great Mogul dynasty is valued at 900 rupees, or 450 dollars the square yard, and even beyond price.

SOME OF THE NEWER ORNAMENTAL TREES.

(Concluded.)

THE KATSURA

is another of the new importations, and comes from Northern Japan. It is supposed to belong to the magnolia family, and possesses a botanical name which will by no means increase its popularity, and therefore we prefer to call it by its Japanese name, the Katsura, instead of *Cercidiphyllum Japonicum*.

Our illustration shows one of these trees at the age of five years, and the fact of its having reached eight feet in height in that time is a proof of its

extremely rapid growth. The leaf is heart-shaped, as shown in the right-hand corner of the engraving, and in color is dark green above, and silvery green beneath. The leaf stocks and the veins of the leaves are dark red, and contrast prettily with the dark brown of the young bark, and make the tree quite attractive.

At Boston, this tree is reported to be perfectly hardy, and therefore it would no doubt succeed in southern Ontario, but more than this we cannot say at present.



THE KATSURA.

The *Rural New-Yorker* says this new tree has been tried on the Rural Grounds, and objects to it on the ground that it loses its leaves quite early in the autumn.

THE PIN OAK.

No lawn or park of any size is complete without one or more specimens of the oak—the king of forest trees. Nor need there be any lack of variety in

kind, when we find as many as forty varieties offered for sale for ornamental planting in the catalogue of a single nursery.

The Pin Oak, or *Quercus palustris*, is one of peculiar beauty for lawn or park planting. The foliage is a deep green, and finely divided. Its habit of growth is very striking, for as the tree advances in age, the branches



THE PIN OAK.

assume a drooping habit, and the lower ones sweep the ground.

Our illustration shows one of these trees at the age of ten years, with a height of twenty feet, and a girth of twenty inches.

VARIEGATED SHRUBS.

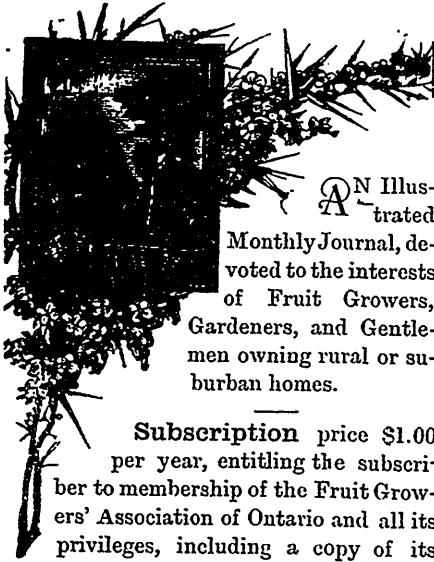
Many shrubs, with variegated and colored leaves, are very beautiful in their early spring foliage, but when the summer heat comes on, the varie-

gation is lost, and the shrubs present only green leaves, and in colored leaved kinds, of a dull, muddy green, less pleasing than in the normal form of the plant. There are two shrubs, however, that have proved thoroughly satisfactory in all seasons. One of these is the "Purple-leaved Barberry," a form of the common Barberry (*Berberis vulgaris*), the leaves of which are of a rich maroon-purple color, and remain so. The flowers of this variety are very pretty, being of a darker yellow than

in the ordinary kind, with the calyx purple, and the petals tipped here and there with the same color. Another of our favorites is the Variegated Rose of Sharon (*Hybiscus Syriacus*). There are several forms of this with variegated leaves, but the one referred to originated with, or at least was sent out by, the late Robert Buist. The leaves are broadly and distinctly margined with creamy white, which remains in perfection until the end of the season. This attempts to flower, but makes a complete failure of it.

The flowers are excessively double, open about half way, and dry up. It would improve the appearance of the shrub to remove the flower buds as soon as they appear. This shrub is readily propagated by cuttings, and is altogether the most satisfactory of any with variegated foliage, that we have tried. The variegated Box-Elder, or Ash-leaved Maple (*Negundo aceroides*), sometimes so beautiful, is an utter failure with us. Variegated shrubs, generally, succeed better in a rather poor soil than in a rich one.—*Am. Ag.*

The Canadian Horticulturist.



A^N Illustrated
Monthly Journal, devoted to the interests of Fruit Growers, Gardeners, and Gentlemen owning rural or suburban homes.

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.

This Journal is not published in the interests, or for the pecuniary advantage of any one, but its pages are devoted wholly to the progress of Horticultural Science and Art in Canada.

The writer, in accepting the appointment of Secretary-Treasurer of the F. G. A. of Ont., and Editor of the *Canadian Horticulturist* for another year,

desires to express his appreciation of the many kind words concerning his work, spoken during the past year; and of the hearty co-operation on the part of the officers and members, which has so materially aided him in his responsible position.

And now that the time is approaching for the enlargement of our journal, he would respectfully solicit the hearty assistance of all friends of horticulture, not merely in enlarging our sphere of usefulness by sending the names of new members, but in contributing items of personal experience which may serve to advance the interests of our favorite science.

Our proper sphere of work as an association is not the advancement of personal interests, nor financial gains, except so far as these results may grow out of the study of horticulture as a science and as an art. We aim at the improvement of our country as a whole, the adornment of its parks and pleasure grounds, and the wise direction of the efforts of the cultivator of the garden and orchard, in such a manner as shall most increase the happiness and the comfort of our people.

Enlargement of the Canadian Horticulturist.
—Our readers will be pleased to learn

that plans are in progress for the enlargement and improvement of this Journal. It is found that the present size is too small for the amount of valuable matter which comes to hand each month, and in consequence a great deal has to be held over from month to month. Besides this, it is the desire of the Directors, and of the Editor, that the *Horticulturist* should grow in value every year, until no fruit grower, gardener, farmer, or gentleman owning a suburban or country home can afford to be without it. We aim not at profit, but to confer benefit upon our readers, and every dollar of our income above the necessary expenses, will be spent in their interests. We ask our friends to speak a word in our favor on every opportunity, and aid us in doubling the membership of our Association for the coming year.

Owing to some irregularity in the mailing department, at Toronto, we find a good many complaints of not receiving the copies of this Journal. We shall be glad to receive a list of missing numbers, from any one who has this complaint to make, and will at once forward them from this office.

We have also a good many Reports of past years, which are of great value. One of these we shall have pleasure in sending out to each of those who failed to receive the Report of 1886, on receipt of a post card saying what Reports they have already. Others may have these Reports for 25c each.

Members who have received no share in the plant distribution, of last year, may select the package of fall bulbs; or may make two selections from our list for next spring, when sending in their member's fee for the new year.

Where shall we meet next?—We are not by this begging an invitation. Plenty of places appreciate the great impulses given to the study of horticulture, and

to better cultivation of orchards and gardens, by the presence of so many enthusiastic horticulturists, and fruit-growers, and by hearing them discuss the subjects of flowers, fruits and forestry. But wherever the Winter Meeting, which is fixed for the second Wednesday in February, is most wanted, there the executive committee will arrange to hold the meeting. Some of our members in the eastern part of the Province complain that we seldom hold meetings within their reach. Well, then, now is the time to speak for the meeting to be held in one of the cities in that direction.

Careful Transportation of Fruit.—A resolution was passed at the Annual Meeting that the President, Vice-President, Secretary, and Mr. P. C. Dempsey be a Committee from the Fruit Growers Association of Ontario, to correspond with the steamship companies, with reference to the careful transportation of our fruits to England.

This is an important point, and upon it largely hangs the development of our future export trade. In his annual address Mr. M. Allan said—"If our steamship companies would provide cold blast for the compartment where fruit is stored, so that damage by heating would be avoided, we could successfully ship such apples as the Duchess of Oldenburg and realize high prices; and if the market demand would permit, even such pears as Clapp's Favourite, Bartlett, Flemish Beauty and Boussock could be shipped. Our shippers would find it greatly to their advantage to provide good storage, so that varieties could be sent forward in proper season when the market demand is best for each particular variety.

Mr. G. W. Gline, of Winona, sends us a collection of varieties of plums, of which he makes a specialty. Among them we notice Gen. Hand, Golden

Gage, Reine claudé de Bavay, Coe's Golden Drop, German Prune, Pond's Seedling, Columbia, Duane's Purple, and Lombard. Mr. Cline has satisfactorily demonstrated the advantage of using Paris green in fighting the curculio. By applying it each year about the time of the fall of the petals, he has succeeded in raising abundant crops during the past two or three years in a section where plum growing had long ago been totally abandoned, on account of this pest.

Winter Protection of Blackberries.—W. A. B. writes to the *Rural New Yorker*, from the east shore of Lake Michigan, strongly advocating winter protection of the blackberry, and thus growing the better kinds, as he considers the Taylor, Snyder, and Stone's Hardy inferior to the wild varieties growing there. His method of covering "requires two men, one of whom removes a spadeful of earth from one side of the base of the canes, while the other grasps, with a pair of leather mit'ens, the top of the canes and brings the tops to the earth, laying the canes as near the ground as practicable without breaking, when a few spades of earth are thrown upon the tops to keep them in a horizontal position." A covering of hay or straw completes the work. This plan is quite practicable with the Wilson, but is a little more troublesome with such stout growing kinds as the Lawton or Kittatinny.

Ferrous Sulphate.—Dr. A. B. Griffiths, F.R.S., finds that ferrous sulphate will destroy parasitic fungi; and the same article, according to the *Scientific American*, is under test as a special manure for the vineyard.

Industry Gooseberry.—Mr. M. H. Beckwith, of Geneva, N. Y., says this berry mildewed with him, last year worse than any other variety. The fruit was affected so badly that it nearly all

dropped off before being fully ripe. What is the experience of our readers?

The Northern Light was shown at the American Poulological Society's Meeting at Boston. The *Rural* says of it: "A very showy white grape, with immense clusters." It was also shown at Grimsby, and was the object of much attention, owing to the great length of the clusters.

New Strawberries.—A writer in the *Rural New Yorker* has fruited Itasca, Logan and Bubach this year with great satisfaction. He finds the *Itasca* larger and more productive than the Crescent, about as firm as the Wilson, and of the best flavor. The *Logan*, he thinks, may prove the most productive large berry yet offered, surpassing even the Bulbach in uniformity and in size and in flavor.

Prunus Pissardi.—The *Gardener's Monthly* thinks it would be much better to call this plant the blood-leaved cherry plum, instead of the Latin name, which would give the impression that it is a distinct species when it is only a purple-leaved variety of the Myrobalan plum. It was named after Mr. Pissard, gardener to the Shah of Persia, who discovered it.

American Apricot Peach.—The *Gardener's Monthly*, for October, describes a new peach upon which it has bestowed the above name.

Like the Delaware grape, the Lady apple, and the Seckel pear, this peach is supposed to be desirable as a desert fruit, notwithstanding its small size, on account of its delicious flavor.

It is medium in size, of a golden apricot color, with rich red shading on the sunny side. It is a free stone, and the flesh is sweet and melting. It originates in South Carolina, and the time of ripening is with that of the Pine Apple peach.

In one day last summer, one hundred and ninety-five car loads of strawber-

ries were shipped over the Delaware Railroad.

Question Drawer.

This department is intended as an open one to every reader of the "Horticulturist" to send in either questions or answers. Often a reader will be able to answer a question which has been left unanswered, or only partially answered by us. For convenience of reference the questions are numbered, and any one replying or referring to any question will please mention the number of it.

71. Bliss' Triumph Potato. — *Do you know anything of Bliss' Triumph potato? Is it earlier or later than the Early Rose?* L. F. S.

REPLY BY J. A. BRUCE.

Bliss' Triumph may be thus described: tubers of medium size, round and uniform in shape, with but very few small ones; eyes slightly depressed; color a beautiful light red; flesh fine grain and of excellent flavor. Messrs. Bliss & Sons described and recommended it as earlier than the Early Rose, but the public preferred the Early Rose. We observe by United States catalogues that it is better adapted for a southern latitude than most other varieties.

72. Bursting Bark.—*For bursting of the bark on apple trees, some growers recommend slitting the bark from top to bottom of trunk with a sharp knife. Is this advisable? If so, on which side of the tree should it be done? And at what season?* G. J. R., Penetang.

The bursting of the bark of apple trees is caused by excessive cold in winter. The freezing of the sap causes a sudden expansion of the cells which contain it, rupturing their walls, and destroying the bark. Some varieties called "iron-clads" withstand a greater amount of cold than others. Slitting the bark would neither prevent nor cure this evil.

73. Budding and Grafting. — *What is the*

best practical work on budding and grafting?

G. J. R.

Either "Thomas' Fruit Culturist" or "Barry's Fruit Garden" would probably give you all the information you require, and very much beside.

74. Clay Loam.—*What chemical constituents does clay loam possess which are lacking in sandy loam?* G. J. R.

ANSWER BY J. A. MORTON, WINGHAM.

Loams are soils, mixtures of clay, sand, carbonate of lime and animal or vegetable matter in decay, which derive their distinctive names from the preponderating ingredient — clay loam, when the greater proportion is clay, calcareous loam, when lime is the chief ingredient and sandy loam, if a greater admixture of sand than either of the others. Speaking generally, all loams contain the same elements; the difference being one of proportion in the elementary constituents. The chemical constituents in fertile soils are: Oxygen, carbon, hydrogen, nitrogen, phosphorus, sulphur, silica, alumina, soda, potash, iron, magnesia, calcium (lime), chlorine, and perhaps iodine, bromine, lithia, and fluorine, with maybe other elements, according to the composition of the rocks of which the soil is disintegrated.

75. Rogers' Grapes, 9, 15, and 22.—*Does the Lindley, the Agawam, and the Salem grape ripen with the Concord, or is each earlier or later, respectively? Which of the three is the better grape? Will they ripen in this district before the frost comes?* L. F. SELLECK, Morrisburg, Ont.

The Salem and the Agawam ripen very soon after the Concord, and the Lindley a little before it. In quality, the Salem is preferred by many. It is large, showy, rich, and excellent; but it is very subject to mildew, for which reason it is now seldom planted, except by the amateur. The Agawam is also

a very fine large grape, with tender juicy flesh, but is subject to rot in unfavorable seasons. On the whole, the Lindley is the best grape of the three for general planting in Canada, as it is more certain to mature, and the vine is very vigorous and productive.

76. Grafting Grapes.—*Is moist sand in the cellar the best receptacle for the cuttings for spring grafting?* L. F. S.

Yes, it is the best, generally speaking; although the writer usually berries the cuttings in the earth outside, in the dry sandy loam. They will not be needed for grafting until May or June.

77. Spirea Japonica.—*Will the roots be best set in the ground this fall, or put in moist sand in the cellar?* L. F. S.

Probably in your district they would be safer kept in the cellar until spring.

78. Asparagus Culture.—(1) *When is the best time to transplant asparagus roots, seeds sown last spring?*

J. R., Berlin.

REPLIES BY J. A. BRUCE.

As the plants are only five months old, would advise spring planting. It should not be done whilst the ground is too cold, or, in other words, not before the plants begin to push. If possible, advantage should be taken of mild, cloudy weather. When the air is moist they should be carefully taken up with a fork, and the roots preserved as entire as possible. They should not by any means be allowed to get dry; as soon as the roots are in proper position, they should instantly be covered with the soil.

(2) *What kind of soil is best?*

A rich sandy alluvial soil is naturally best adapted for the growth of asparagus, and in such soil its cultivation is an easy matter. In preparing the ground for a plantation attention should be directed to the texture of the soil; and if this is too close, as is generally

the case, such means should be adopted as will effectually reduce it to a sufficiently light and porous style. The application of large quantities of manure has this tendency.

(3) *How would black muck do?*

Black muck, when largely mixed with silver or other sands, and the subsoil made porous and thoroughly drained, will grow fine succulent stalks, always keeping in view that large quantities of manure are essential in the formation of an asparagus bed. The autumn is the proper season to prepare the ground for spring planting, as it allows time for the beds to get settled, and the winter frosts mellow the soil, which tends to vigorous growth, the great desideratum in asparagus culture.

79. Japan Ivy.—*In the October number of the Horticulturist is a picture of, and an article on, Japan Ivy. Could you kindly inform where it can be procured—and price.*

C. GREENAWAY, Strathroy.

NOTE.—Write to Mr. James Vick, Florist, Rochester, N. Y.

Fruit Reports.

APPLES.

Reports from all sides are encouraging. Chicago and Montreal men are competing at \$1.75 to \$1.85, f.o.b., west of Hamilton. The Montreal market ranges from \$2.25 to \$3.00 for prime winter fruits, with an upward tendency. The returns from shipments to England are encouraging, prices running from \$3.00 to \$4.00 for such kinds as Greenings, Baldwins, etc., and from \$4.00 to \$5.00 for such fancy kinds as King of Tompkin's Co. The supply of apples in the United States is very light, and prices are steadily advancing in Philadelphia. Advices from there on the 13th October quote choice fall apples at \$2.75 to \$3.00.

A REPLY TO INQUIRERS.

In reply to a large number of enquiries, which I cannot find time to answer personally by letter, I can confidently recommend the following firms to our Canadian shippers. In London, Eng.—Mr. J. B. Thomas, Covent Garden Market; Messrs. Williams, Thomas & Co., Liverpool; Messrs. L. & H. Williams & Co., Glasgow. These firms have very large storage capacity. Their method of handling is this: When a cargo arrives it is transported to the storehouse and every barrel opened and examined. Those that are decaying are sold at once. Those loosened slightly by the voyage and not shewing signs of decay, are tightened thoroughly. Then in selling they offer in the auction mart, but do not sell unless a bid is made up to what they consider the fruit fairly worth. They sell largely in lots in the warehouses. A grower can ship direct to these firms, and get returns promptly. They will pay drafts for a proportion at time of shipping, say from \$1 to \$1.75 per barrel, according to brand. The freight rates vary from 80c. to \$1.15 per barrel through the season. At present the rate is 90c. average. Fruit shipped this season has carried best via New York, owing to the fact that the American roads handle with less shunting, and steamships will give special apartments and cold blast.

ALEX. McD. ALLAN,
President F. G. A.

Review.

We will gladly give our candid opinion of any books, magazines or catalogues received, especially if they are likely to interest or benefit Canadian fruit growers, but will not insert cut and dried reading notices in favor of any publication whatever.

THE ILLUSTRATED LONDON NEWS. American edition. Published at No. 237 Potter Building, New York.

The number for Oct. 15 contains an

article of two and a half pages about the "Green Lanes" of England. The writer claims that the beauty of the country cannot be seen or appreciated in a hasty ride through it in a phaeton, a four-horse drag, or, much less, "on that abominable piece of mechanism, a bicycle. Patient and persistent way-faring through its green lanes—by no other means can you get at the secret of its beauty, and understand why it is, and how it is, that Englishmen, who thoroughly know their country, love it with so deep and passionate an affection." A series of pictures illustrating the scenery in the Atlas Mountains in connection with an account of the British Mission to Morocco is also highly interesting.

REPORT OF THE BUTANIST to the New York Experiment Station, Geneva, N.Y. By J. C. Arthur.

The Report treats of Pear Blight, Rotting of Tomatoes, Strawberry Mildew, Plum-Leaf Fungus, Smut in Oats, etc.

CATALOGUES.

SIMMERS' ILLUSTRATED AND DESCRIPTIVE CATALOGUE OF FLOWERING BULBS. J. A. Simmers, 147 King St. E., Toronto, Ont.

LOVETT'S ILLUSTRATED CATALOGUE OF TREES AND PLANTS. Autumn, 1887. Choice small fruits a specialty. J. T. Lovett, Little Silver, N.J.

THE GREENWOOD NURSERIES, Como, Quebec. Hardy apple trees for sale, suitable for the Province of Quebec. R. W. Shepherd, jun., Montreal, Que., proprietor.

CATALOGUE D'OGNONA A FLEURS, graines et plantes d'automne, divers objets et ustensiles horticoles de H. Schmitz, 20 Rue de Brabant, Gand., Belgique.

BEES AND HONEY. Illustrated Catalogue and Price List. A. I. Root, Medina, Ohio.

"AH! WHAT'S THIS?" exclaims the intelligent compositor. "Sermons in stones, books in the running brooks?" That can't be right. I have it! He means 'Sermons in books, stones in the running brooks.' That's sense." And that is how the writer found it. And yet he was not happy.—*Boston Transcript.*