Pages Missing

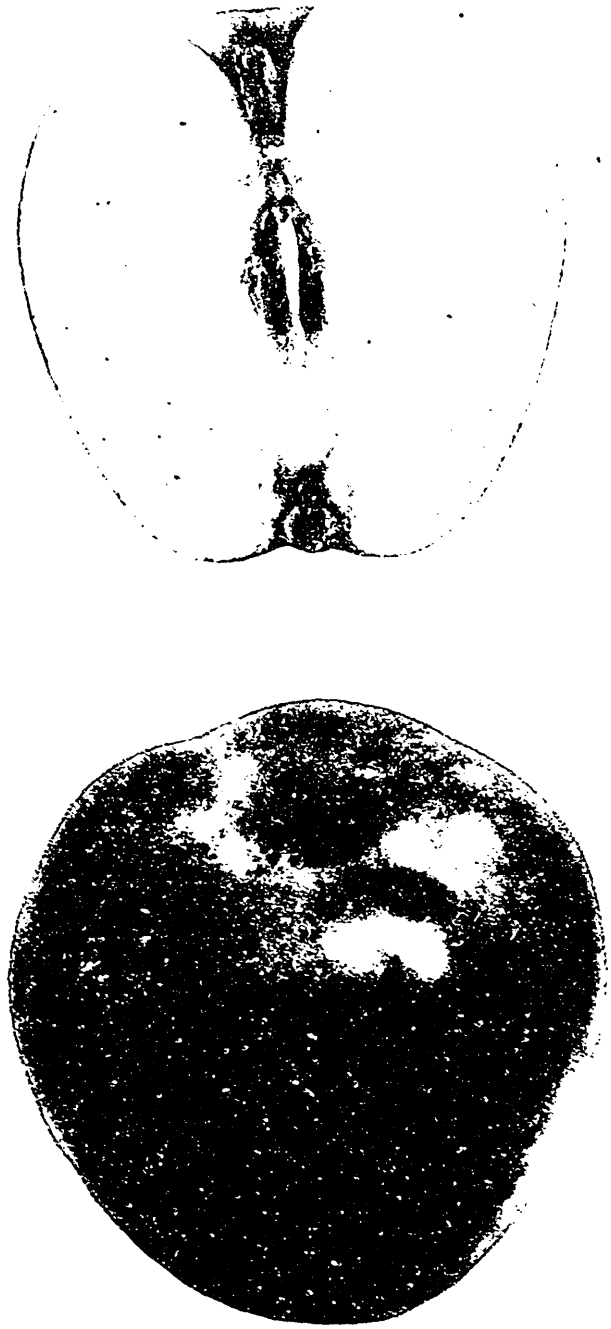


Fig. 2042. CHENANGO.

THE
CANADIAN HORTICULTURIST

SEPTEMBER, 1903

VOLUME XXVI NUMBER 9

CHENANGO

(CHENANGO STRAWBERRY, SHERWOOD'S FAVORITE.)

BY THE EDITOR.

MANY years ago, when a boy visiting his grandfather's farm on the banks of the Chenango river, at Earlville, Chenango Co., N.Y., the writer remembers being shown an old tree, laden with apples, which the old gentleman called Chenango and of which he was very proud, counting it the finest eating apple in his whole orchard. We little thought then that one day we would be very much interested in knowing the history of the apple, or how near we were to the town of Lebanon, N. Y., the place of its origin.

Of late years this apple has been coming to the front in Ontario, and has recently been placed upon the model prize list issued under the authority of the Department of Agriculture as being worthy of cultivation, and good samples may be seen every year on the fruit tables of the Industrial Exhibition. Our Russian friend, the late Jaroslav Niemetz, horticulturist of the college at Rovno, Wolinia, on the occasion of his recent visit to Canada, accompanied the writer to the Industrial Fair with an especial eye to study the fruit exhibit, and no variety on the tables seemed to interest him so much as the Chenango. He took careful notes of its characteristics and requested us to send him scions that he might propagate it in his country.

The apple is certainly a fine dessert apple for use in September and October, for it is beautiful in appearance and very agreeable to the taste. The flesh is creamy white in color, and, in texture, tender and moderately juicy, while the flavor is spicy and agreeable. The exterior is a delicate whitish ground, on which the light and dark shades and stripes of red show up beautifully.

The tree is fairly vigorous and productive, and has the special merit of being resistant to that plague of the apple grower, the apple scab, from which both its foliage and its fruit are free.

We do not advise the planting of this apple in the commercial orchards of Ontario, because it has too tender a flesh to be a good shipper, and we have other September apples which would probably give more certain returns; but for the home garden, to which, unfortunately, many people attach too little importance, a tree or two of the Chenango is very desirable.

Editorial Notes and Comments

THE NOVA SCOTIA APPLE CROP.

IN a letter to the Fruit Division, Ottawa, Mr. J. W. Bigelow, of Wolfville, N. S., gives the following estimate of this season's apple crop in Nova Scotia: According to present prospects there will be a full crop of superior apples, giving over 400,000 barrels for export. Varieties are about as follows: Nonpareil, 60,000 barrels; King, 50,000; Gravenstein, 50,000; Ribston Pippin, 40,000; Golden Russet, 30,000; Baldwin, 60,000; Rhode Island, Greening, 30,000; all other varieties, 80,000.

APPLES VS. STRAWBERRIES IN ENGLAND.

THE folly of keeping Canadian apples until late in the spring with the hope of selling them for export at an increased profit is shown by a recent report to the Fruit Division, Ottawa, by Mr. A. W. Grindley, one of the agents of the Department of Agriculture in Great Britain. Mr. Grindley says: "Prof. Waugh, of the Massachusetts Agricultural Experimental Station, and myself, were looking at some States apples in barrels, arrived 29th June in cold storage. They were soft when discharged, and did not bring much, as they will go off very quickly; besides, who wants poor apples when the market is swamped with English strawberries at their best."

A SHORT FRUIT CROP IN EUROPE.

THE Fruit Division, Ottawa, has received from several of its correspondents in Europe reports showing that the fruit crop is a small one this year, and indicating that there will be an unusually good market for Canadian apples and pears. The Glasgow Herald says: "Apples will be scarce, the destruction by spring frosts having been serious and extensive. If growers get half a crop on an average they will do well. The prospect, however, varies considerably. In some parts of Kent the trees carry excellent crops; in others hardly any. The same condition of things prevails in Herefordshire, whence the Midland counties are so freely supplied with choice dessert apples. In Cambridgeshire the crop is disappointing, although in parts of that county a fair harvest of apples will be gathered. Many growers will be satisfied if they get a quarter of a crop. Pears have suffered from the spring frosts equally with apples. In some counties the yield will be meagre; in others the crop is a complete failure. Only a third of a crop under the most favorable conditions is looked for."

E. A. O'Kelly & Co., of London, say: "We are glad to state that prospects are very favorable this year for the importation of Canadian fruit, as crops throughout Europe are a total failure. We anticipate that prices will be satisfactory all round for apples."

From Hamburg, Germany, Edward Jacobs & Sons report: "The fruit crop in Europe is this year, generally speaking, short. Should there be no duty on apples the prospects for Canadian are very promising."

Garcia, Jacobs & Co., of London, state: "There has been an almost total failure here of plums and pears, and this year there will be a good opportunity for the shipment of Canadian pears. The latter should be packed in cases similar to those sent from California. That there is a fair crop of early variety apples is a certainty, but they will all be cleared off the market before your fruit is ready for shipment. France, Belgium and Germany are large growers of

apples, and the crop this season is fairly large, but the quality is so poor that they can never really compete with Canadian fruit."

FRUIT GROWING IN THE NORTH.

IN conversation with Mr. Charles Young, our experimenter on St. Joseph's Island, Algoma, a short time ago, he remarked that "One of the ideas which the settlers of Northern Ontario must free their minds of is that fruit cannot be grown in this northern district." The crops of strawberries, raspberries, currants, cherries, plums and apples which he is growing certainly prove that in this part of Algoma, at least, the settler need never be without an abundance of fruit for home use, and in many cases profitably grow it for the ever increasing market at the north.

"The reason," said he, "that so many have failed in their first attempt is because they planted the same old varieties they had been used to in older Ontario."

Mr. Young has about seventy-five varieties of apples under test, and mentioned he following as a few of those he had found the most satisfactory: Duchess, Wealthy, Transparent, Longfield, Gideon, Charlemoff and Alexander. In Southern Ontario these would be counted as only summer and fall varieties, but they are not so here, for Algoma grown Duchess keep till winter, while Wealthy, in any good cellar, keeps in good condition till February.

NORTHERN ORCHARD ENEMIES.

TWO of the worst enemies the northern apple grower has had to contend with have been sun-scald and borers. The latter breed in great numbers in the forest trees, but take the apple tree by preference when they can get them. Sun-scald is a trouble peculiar to the northern and western districts, and is supposed to be caused by the alternate freezing and thawing of the cambium layer. It shows itself usually on the south and west side of the trunk in dead patches of bark. Trees badly affected seldom recover. The best way of avoiding it is by the selection of hardy varieties, growing low headed trees, and shading the trunk in the winter with a board, corn stalks or other material.

SOUTHERN ENEMIES UNKNOWN IN ALGOMA.

WE have heard it stated that the codling moth and curculio were as yet unknown in Algoma and Muskoka, but were a little doubtful about the truth of the statement. When, however, we find wide awake, observing fruit growers like Charles Young, of Richards Landing, and Arkin Eddy, of Hilton, who have been growing fruit on St. Joseph's Island for over twenty years, and who say that they have never yet seen either of these insects on the island, we must believe that the "Little Turk" and the other afore mentioned barbarian have not yet found this garden spot of the north.

PROFITABLE STRAWBERRIES.

PROBABLY in no part of Ontario can berries be more successfully and more profitably grown than in the north. In the first place the soil is as fertile as could be desired; then too, the snow covers the vines from the beginning to the end of winter, so that no other protection is necessary. The frequent showers afford all the moisture that is needed to bring the berries to a large size without the aid of a summer mulch, and to cap it all the grower can, as a rule, get the top price for all the fruit he can produce. As an example of what can be done, we need only mention that Chas. Young at Richard's Landing, has done this summer. From a patch of not more than a quarter of an acre he cleared over $200, all of his berries selling right at home for 10 cents per box.

BLACKBERRIES AT CRAIGHURST.

IT has generally been supposed that the blackberry could not be successfully grown much outside of the peach growing sections. With the introduction of hardier varieties, however, it seems that the area over which this fruit may be grown may be greatly extended. No better proof of this could be furnished than the sight of such a plantation as we saw last month at Mr. G. C. Caston's at Craighurst, in Simcoe county. The crop on his Agawam and Eldorado bushes was, without exception, the finest we ever saw.

JULY FRUIT CROP REPORT.

A BULLETIN from the Fruit Division, Ottawa, dated August 7th, gives the following report on the fruit crop:

Weather conditions, on the whole, have been favorable for July, and hence there is no marked change since the June report.

Winter apples will be a full crop in Nova Scotia, medium to full crop in Southern Ontario, Georgian Bay and Lake Ontario districts. In Eastern Ontario and Quebec the crop is light.

Early apples are a medium to full crop everywhere except in Quebec.

Pears will be a light crop except in parts of Southern Ontario and Nova Scotia.

Plums are a medium to full crop in all plum growing sections, with not more than the usual amount of rot.

Peaches promise well in Essex and the Niagara peninsula.

Grapes are a medium crop, except in Essex and Kent, where they are almost a complete failure.

THE SCARCITY OF FRUIT IN EUROPE.

ADDITIONAL evidence of the scarcity of fruit in Europe is furnished by a recent letter from Thos. Russell, fruit broker, Glasgow, to Mr. W. A. McKinnon, chief of the Fruit Division, Ottawa. Mr. Russell says: "The apple crop in England, Ireland and Scotland is a very poor one, while on the continent there is also a very light crop. So far as Glasgow is concerned we shall have to depend entirely on supplies of apples from America and Canada. Pears and plums are also scarce in England, and altogether there is every prospect of a good demand for American and Canadian apples, as there is practically nothing else to come against them this season."

APPLE PACKERS SHOULD BE NUMBERED.

THE Fruit Division, Ottawa, has received from a leading exporter a letter suggesting that a slip be printed in large letters and placed in the top of each package of fruit, as follows:

"You are requested to report any fault you may find in this package to ..... Montreal, Canada.

Packed by No....."

This suggestion is right in line with the recommendation of the Fruit Division, that each "boss packer" be given a number, and that this number be stencilled on every package of fruit put up by that packer. In putting up apples in the orchard the number should be marked in pencil near the chime of the barrel, and the branding done later. Mr. McKinnon's forthcoming bulletin on the Export Apple Trade will deal with this question, and the Fruit Division will show at Toronto Exhibition a model brand for apple barrels.

The plan of placing a slip with the packer's number in each package has been largely used by tobacco and other dealers, and has proved a safeguard to the wholesaler or exporter. For instance, it has been found in previous years by apple exporters that barrels bearing their brand and marked as put up by a certain boss packer, say No. 60, were in great demand, while goods similarly branded, except that they were marked

as put up by another packer, say No. 48, were not wanted. This difference in the quality of th efruit may have been due to inferior packing, or to the fact that the second packer was working in an inferior district, but in any case the advantage to the exporter of having a check on the work of his packers is quite apparent.

FRUIT MEETINGS IN BRITISH COLUMBIA.

FRUIT growers in Eastern Canada will be interested in knowing that their brethren in British Columbia are fully awake to the importance of up-to-date methods in connection with their business, and that they ever hope to capture the whole of the trade with Manitoba and the Territories. During the month of July the executive committee of the British Columbia Fruit Growers' Association, accompanied by Mr. Maxwell Smith, Dominion Fruit Inspector, made a tour of the Okanagan country, where several successful public meetings were held. Visits were also made to a number of orchards at Vernon, Kelowna and Summerland, and much valuable instruction was given and information obtained *re* the planting and marketing of fruit.

At the meetings Mr. J. C. Metcalfe of Hammond, president of the association, gave a resume of the work of the association, describing its aims and objects, emphasizing the necessity of co-operation among the fruit growers of the province, careful selection and honest packing of the fruit, and strict attention to every detail of the business, in order to obtain profitable returns. He called attention to the fact that at the present time British Columbia was supplying only 20 per cent. of the fruit shipped into the Northwest.

At Armstrong Mr. R. M. Palmer, who attended the Ontario Fruit Growers' meeting at Walkerton last winter, told of the sensation caused by the British Columbia fruit shown there. He said that Manitoba and the Northwest Territories were British Columbia's natural markets, and as British Columbia fruit had already made a good impression there they could in time gain control of that field, if only first class fruit were shipped. Oregon and Washington were now shipping apples to Britain at a profit, and the British market would always be open to the British Columbia fruit grower. He claimed that they had suffered much from inferior nursery stock, and strongly recommended the growing of their own trees, which could be done for one-third of the present cost. He discouraged experimenting with new varieties, and advised planting varieties that had already earned a reputation and that were suited to local conditions.

Inspector Smith at each meeting explained the provisions of the Fruit Marks Act, and pointed out that all that was necessary to enable any intelligent person to pack his fruit in accordance with its requirements was the possession of a copy of the act and the exercise of care, perseverance, honesty of purpose and common sense. He also urged co-operation in marketing in order to obtain the best results, and pointed out the possibilities of a large trade being established in Japan in canned fruit and pure fruit jam.

At Salmon Arm, Mr. T. W. Stirling, of Kelowna, mentioned that when he had only two tons of fruit he had great difficulty in selling it, when he had two cars it was easier, when he had twenty cars it sold readily, and when he had thirty-five cars he could not supply the demand; so there was no danger of over-production of British Columbia fruit.

PROSPECTS OF PLUM GROWERS.

THE prices ruling at the present time in Ontario for plums is certainly discouraging to the grower. To-day,

August 20th, we sold fifty baskets of beautiful Burbanks at 15 cents each, while even our Bradshaw and Washington are only worth from 30 to 40 cents.

Mr. A. Rogers, of Sparta, has a plum orchard of 700 trees, but between the rot and the low prices he says he has no satisfaction with it. Indeed, he has decided to root it all except about two hundred Reine Claude and a small block of specimen varieties.

Mr. A. H. Pettit of Grimsby, thinks Ontario plum growers should not be too much cast down by present low prices, because the great Northwest will require these and many other of our finest fruits, so soon as efficient cold storage cars are provided. "I have just returned from a tour in Southern Manitoba," said he, "and I am told out there that they want all our finest fruit—the best we can grow—and for this they are willing to pay almost any price; but our poor fruit they do not want at all."

Mr. Henry Lutz, a well known New York state fruit grower, who lives near Youngstown, says the low price of the Burbank is due to bad handling: it is almost invariably gathered in too green a stage, and is, therefore, not appreciated in our markets—indeed, this practice is spoiling the markets for Japan plums. The Burbank should not be placed upon the market until it is fully ripe, and if this hint is carefully observed these plums will be much more sought after.

As for our European plums, Mr. Pettit declares they are far superior in flavor to those grown in British Columbia, so that in spite of the advantage that country has over us in first capturing those Northwestern markets, there is still hope that we shall win it back by reason of the superior flavor of our fruit.

THE DRY BORDEAUX.

MR. LUTZ has been trying the dry powder spray and is much pleased with it. When applied in a very fine dry powder he finds that it clings to the tree very well indeed, and is pleasanter to handle than the liquid. The American Agriculturist says:

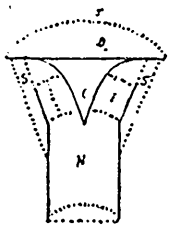


Fig. 2463. Dust Nozzle.

Dry powders are put on with a blow gun or dust sprayer, and several are on the market. An improvement on the ordinary nozzle, which distributes the powder in a solid stream, has been perfected by the Missouri experimental station, and is shown in Fig. 2643, which represents a cross section. Fig. 2644, which is 2⅜ times *d* of Fig. 2643, is a pattern for cutting the tin which, when folded, forms the deflective cone C of

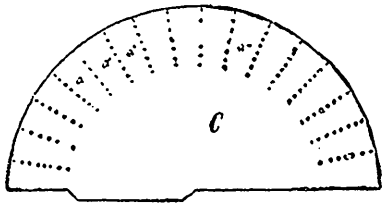


Fig. 2464. Pattern for Cutting Cone Deflector.

Fig. 2643. Cut along the dotted lines, and after bending to form a cone solder it together; curve the pieces as upward.

Solder the cone to the circular piece of tin D, and connect the whole to the nozzle of the machine by narrow strips of tin SS, turned edgewise to the opening. This nozzle N fits over the straight nozzle furnished with most of the machines. In Fig. 2643 D is 2½ times the diameter of *d*, which is the outside diameter of the nozzle furnished with the machine.

A GOOD PEACH COUNTRY.

MR. A. ROGERS, of Sparta, says that the section of country between Aylmer and Lake Erie is well adapted for peach growing. The soil is a black loam with a clay subsoil, on which both large and

small fruits succeed well, especially the peach. He has 50 acres largely in fruit, and grows Clyde and Williams strawberries with great success. Mr. Cohoon, near Port Burwell, has 1,500 peach trees in his orchard, while Dr. Marlatt, near Aylmer, has an orchard of about 1,000.

A DEFINITION OF NO. 2 APPLES.

AT the recent meeting of the International apple shippers at Niagara Falls, the following definition of what should constitute No. 2 grade of apples was adopted: "No. 2 apples shall be hand-picked from the tree; shall not be smaller than 2¼ inches in diameter, and of fair color for the variety. The skin must not be broken or the apple bruised, and practically free from scab and other defects. This grade must be faced and packed with as much care as No. 1 fruit."

THE APPLE CROP PROSPECT IN AUGUST.

AT the same convention a report was made showing the size of the crop in the United States and Canada, compared with that actually produced last year. Large percentages were given for Nova Scotia, Virginia, Maryland and Pennsylvania, indicating an excellent crop, where a very short crop or failure existed last year. "The crop in New England, New York and Ontario last year, while large, was of such poor quality that the percentage of No. 1 apples was very small. This year, although the crop is lighter, the prospective quality of the apples is much better, and with Pennsylvania, Maryland, Virginia, West Virginia, Nova Scotia and Pacific coast states more than offsets the small crop and poor quality in the middle west and other states."

ENGLAND A POOR FRUIT GROWING COUNTRY.

WHEN one travels throughout Great Britain he is no longer surprised at the immense quantity of foreign fruit that is annually imported, nor at the high prices often paid for high grade stock. The climate is so cool in summer, and so often damp from rain or fog, that the fruit does not take on a high color, nor does it ever attain that delicious flavor for which our Canadian apples are famous. The trees themselves are sickly and stunted in growth so that they are not capable of producing a very large yield of fruit. We were surprised when visiting the orchards to see the apple trees almost completely covered with moss, and no attempts made to clean the trunks. One beautiful Cordon apple walled in garden at Melrose was so covered with lichens and mosses that the wood was completely hidden and the tree much stunted in growth. We suggested to the gardener that a scraping and an application of some alkaline wash might help to cleanse the bark and give fresh vigor to the tree; but English conservatism ruled and the gardener said he did not have much confidence in such treatment and seemed to think it scarcely worthy of trial.

THE ENGLISH FRUIT CROP A FAILURE.

AFTER an extended tour among the fruit growers of Great Britain, we have come to the conclusion that the present season is a favorable one for the export of our choice apples and pears. A spring frost of unusual severity played sad havoc with all fruit crops. Not only were tender fruits like cherries almost completely cut off, but even pears and apples were blackened and fell from the trees, leaving scarcely enough to pay for gathering. There is, therefore, an unusually good opening in Great Britain for our early apples and pears, with which the English grown apples usually come into strong competition.

In regard to our winter apples, these are never much affected by the English crop,

and the price is practically proportioned to the American and continental crops. Always, however, there is a strong demand for our superb Canadian high colored crisp winter apples, such as King, Baldwin and Spy, because there are no apples grown anywhere which can compare with them.

Our own observations are backed up by letters just received from English fruit merchants, from which we cull some sentences. For example, Mr. J. B. Thomas, Covent Garden market, London, writes:

I desire specially to inform you that our market is ready to receive your early varieties of apples, and any that you think will stand the voyage will pay to ship to this market.

I think the present exceptionally favorable to try shipments of pears (best varieties) and selected peaches. Both should be gathered directly they have fully developed in size and packed with paper around each fruit in boxes of single layers. The selecting and packing must be done from the tree and at the tree side, i. e., no second handling of the fruit should take place. Such shipments made in steamers fitted with refrigerating chambers from Montreal should give satisfactory results to shippers this season.

Mr. Thomas Webster, of the Manchester Fruit Brokers, writes:

The outlook here for Canadian pears and apples is decidedly favorable because our own crop is very small this time, and there will be a great scarcity to fill up. You will remember that last year your Bartlett pears arrived in bad condition owing to having been packed too ripe, and no doubt will avoid this when you ship again. The Clapp pears did well, and we recommend you to ship liberally of this quality again. Apples such as early Astrachan and Duchess will be wanted, and if carefully packed will show good results.

In packing pears tell your people to always line the boxes top and bottom with excelsior. Last year, in some instances, the lids were nailed down on the bare fruit, and its appearance was completely spoiled.

Mr. B. W. Potter, of Manchester, writes:

The crop of English fruit is an entire failure, and we shall have to depend for our supplies largely upon Canada.

Messrs. Woodall & Co., of Liverpool, write:

The following table, showing in broad general terms the number of reports which have reached us, in which the crop is classed as "over average," "average," "under average;" and "good," "very good," or "bad," indicate the quality. These figures must of course be taken as indicating approximate truth, and not strict mathematical accuracy, which would be unattainable in this case: they may, however, be taken as substantially correct:

	Over Average.	Average.	Under Average
This year	2	17	248 reports
Against last year	12	98	184 "
" 1901	15	90	163 "
" 1900	148	138	16 "

Messrs. James Adams & Son, of Liverpool, write:

Owing to the exceedingly cold spring the fruit crop throughout Great Britain has suffered considerably, and while apples in some orchards may be a fair yield, the crop as a whole will be very short indeed. In some parts of the continent the same climatic conditions were apparently experienced, but fruit all the same is more plentiful there than in this country, and in both Holland and Germany we are given to understand there will be a fair crop. This, to some extent, is a factor that must be borne in mind when indicating the outlook for American and Canadian stock, but as we have before explained the competition offered by continental growths is, after all, not very important. From present aspects it would appear as if apples from America and Canada would be wanted more than ever this season—not only "winters," but "falls" as well—and it is for shippers themselves to say whether the season shall be a satisfactory one or otherwise. When prospects are favorable there is, unfortunately, a tendency on the part of operators to "overdo the thing"—that is by sending forward too many, and not paying sufficient care to the grading and packing of the fruit. We have emphasized the fact repeatedly—that poor apples never sell well, even in a short season—and apart altogether from the inspection of the government officials under the Canadian Marks Act, we do hope that efforts will be directed to the sending forward of good and honestly packed stock only. As is well known, it is quite impossible to form any accurate idea as to how prices will rule, but if shipments are not too heavy then we can safely say that fair values will be obtained.

Here, then, is an encouragement for our fruit growers to take advantage of their opportunity and pack their finest fruit for export.

DO NOT SHIP RUBBISH.

UNFORTUNATELY this season there is a great quantity of second class apples, especially of Kings, Baldwins and Greenings. They are under size and scabby, and such stock should not be exported; it should be sold in near markets if sold at

all. But that prince of Canadian apples, the Spy, which was a failure last year, is this year large and clean, and will be a most valuable export apple.

BOXING CHOICE APPLES.

JUST now it is quite a fad with horticultural journals to eulogize the box packing for apples as far better than the barrel, and we fear many will be misled by the advice. The box is all right for extra choice stock, and for that only; but, if growers generally were to adopt it and pack into it all classes of apples, it would be a serious mistake. Ordinary stock sells for most money in a large package, such as the barrel, and it is only the fancy stock that brings more money in a small package. We have been using the bushel box for years for choice high colored Spy and King apples; and, while we have in some cases received exceptionally high prices, our sales have at other times been very disappointing, so that on the whole, counting the extra cost of assorting, grading, sizing and wrapping in tissue paper, we are not so very much ahead. Still, we shall persevere in putting up fancy stock in boxes, and have just ordered 2,000 for the season of 1903.

SIZES OF BOXES.

UNFORTUNATELY for the trade, Canadian fruit growers have not yet agreed upon a uniform sized box for apples, and various sizes have been under experiment. In our early shipments we used a box with eight strong trays, which proved much too cumbersome and expensive. Then for apples we used a plain box, measuring 2 feet x 1 x 1, holding a good heaping bushel. But finding that the Tasmania apples come to the English market in a box holding about forty pounds, we have adopted a box holding nearly the same quantity, but much more neatly made. The dimensions of this box are 9 x 12 x 18. This size was recommended by a committee of our association at Walkerton last December as worthy of general trial during the year 1903, after which we will be in a better position to decide upon a permanent one.

PROSPECTS OF A FRENCH MARKET FOR OUR APPLES.

WHEN in Covent Garden market, London, England, we were informed by Mr. Garcia that a large part of his immense apple sales were made to French customers, and so important was this feature of his trade that he was now arranging to have a special branch of he firm of Garcia, Jacob & Co. opened in the city of Paris. No doubt the exhibit of Canadian fruit made at the Paris exposition has created a market for our finer fruits, which we ought not to let pass into other hands. We have just received a letter, first addressed to Mr. R. W. Shepherd, of Montreal, which emphasises the importance of the present opportunity. It comes from Mr. Anatole Poindron, Canadian commercial agent at Paris, who says that Mr. Barbier, 3 and 5 Rue Gombourt, Paris, is the largest importer of fine table fruits in Paris, for which excellent prices are obtainable. "In fact," says he, "color, quality, size and perfect appearance are more in question than cheapness."

THE TREE PROTECTOR.

THE Daily Telegraph, Berlin, has the following article on The Tree Protector, which has been widely sold to fruit men during the past few years. We shall be glad to hear from others who have given it a trial:

Various inventions have been put on the market during the past few years for the protection of fruit while growing upon the trees. A device, consisting of a piece of galvanized sheet iron several inches wide, lined with felt, and saturated with some sort of insecticide has come into general use in many sections of the country. This piece of iron is cut the proper length to encircle the trunk of the tree, the

felt lining being placed next to the trunk. The iron circle thus placed is provided with a coil spring which is calculated to keep the felt lining sufficiently close to the tree to prevent insects or worms climbing the trunk and getting at the blossoms or growing fruit. Mr. Wm. Hendry, of Berlin, invested $8.00 in these devices some time ago. His trees, however, during last summer, showed unmistakable signs of bad health, and this spring a number of his best plum trees are dead. Mr. Hendry never suspected that the insecticide rim was the cause of his trees going wrong until lately, when he found that wherever one of these rims had been placed around a tree the bark was dead, or nearly so. This is a matter of grave importance to fruit growers, wherever this device has been used, and if the general experience be the same as Mr. Hendry's the loss will be heavy, as large numbers of these rims are in use.

In view of these facts it would be wise for all persons having these rims in use to inspect their trees and see whether they are being injured. It is well for everyone to know that the application of any kind of sticky or gummy substance around the trunk of a tree is injurious and liable to kill it.

THE NEW PEACH DISEASE.

THERE seems to be no end to the troubles that beset the fruit grower, and one of those that has lately taken hold of the peach trees is known by the rather strange name, "Little Peach." It has doubtless been gradually spreading for a good many years, but has only attracted attention within the last two or more years, and in the western part of Michigan, principally.

The principal symptom is the stoppage or failure of the fruit in its growth in the early part of the summer; and when this once takes place there is almost no further development. These little peaches are scattered over the tree, and often on the same branches with those of normal size. It does not seem to occur or take effect equally on all varieties nor to be worse on feeble tahn on thrifty trees. However, there are other causes for the fruit not developing properly, such as poor soil or lack of tillage, and it is often difficult or impossible to detect the true Little Peach disease from such troubles. In all of them the fruit is more fuzzy than is normal and under sized, but where there are peaches of both normal and abnormal sizes it is wise to watch for further ailment.

There is a gradual turning of the leaves to a bronzy color and a slight curling. Gradually the tree dwindles, in spite of manuring and the best of treatment and finally dies. All ages and sizes of trees are affected, and the spread is very rapid. The disease breaks out very suddenly, and often in orchards where there is no evident means of infection.

The true cause is yet a mystery. Some think it is the effect of a fungus on the roots while other scientific experts say that this is a mistake and that it is safe to plant new trees where others have died from the disease.

As to remedy there seems to be none but the axe. This often takes the whole or greater part of the hard. There should be no dallying. It may be that something more may be learned of the cause and cure, but it may result as with the other dread peach disease, the yellows.—*Vick's Family Magazine.*

A WORD ABOUT APPLES

BY

T. H. RACE, MITCHELL.

MR. EDWARD TYRRELL, in his contribution to the Horticulturist last month, pointed out the advantage one has in this world by a good use of his eyes and brains. By the use of my eyes, in running over the province last spring I observed what a general lack of interest there was in the care of the apple orchard; and, comparatively speaking, what a very few new orchards were being set out. By the use of my brains I reasoned that if this state of things continued for a few years longer the supply of good fruit must fall much below the rapidly increasing demand. By a similar use of my eyes I observed but two exceptions to this state of things in all my travels. The first was in the district of Cobourg, Brighton and Colborne, and the second in a stretch of country lying between Wellington and Picton in Prince Edward county. By the use of my brains again I reasoned that the orchards in these districts must be paying the owners or they would not be receiving so much care, and, if they returned a profit for the care they got, orchards in other districts under similar treatment, must also prove profitable. I noticed further, that in these two districts named a large number of young apple trees were being set out and all apparently well cared for. This fact, to my mind, emphasised two things: first, that apples were now grown with a profit, and secondly, that the growers had faith in the future for the apple trade.

Looking at the subject prospectively, there can be no other conclusion than that the demand for apples must increase. With the thousands of settlers rushing into our northern districts, where fruit can never be much grown; with the prospects of new railroads opening up these newly settled districts and providing them with better transportation facilities; with the advantages to be gained through our Fruit Marks Act and the greater demand for our apples in Europe, where is the pessimist to say that the future is not hopeful? I will venture to say that he cannot be found in the Northumberland and Prince Edward county districts.

Mr. Alex. McNeill, while talking to the people at Orillia, urged that a commercial orchard should consist of not less than four or five acres. Nothing less than this, he said, would be sufficient to command the farmer's attention, and nothing less would warrant the expense of an outfit necessary for the proper care of both soil and trees. The points were well taken, especially applied to sections where profitable apple growing has not yet been demonstrated. But in the district about Cobourg and Brighton I noticed many small plots of apple trees, scattered here and there and all were well cared for. Every householder, in fact, seemed to regard his two or three apple trees as a source of profit, and I was informed that there were more young trees being planted out in the county of Northumberland than in all the rest of the province. I do not know what the Picton people would say to this, but, excepting the Prince Edward county district, I am quite prepared to accept the statement.

I had no opportunity to talk with any of the owners of the newly planted acres in Prince Edward county, but a resident of the Colborne district said to me: "We

have no fear of over-planting about here: there is a demand at good paying prices for all the good apples that we can grow right here at the packing houses." "What is demanded is good fruit," he continued, "and good fruit cannot be grown without proper care of the orchard, and that is why every man about here cares for his orchard, or what few trees he has, about here." Asked if everybody sprayed his trees, he replied: "Yes, if he has but two trees he has them sprayed by arrangement with some neighbor, and nobody keeps a tree on his premises that is not worth spraying for its fruit; he either cuts it out or has it grafted." This is a very different story from that told us by Dr. Mills at Walkerton of his experiences down among the orchards in the far-famed Niagara district, where the said orchards were mostly neglected and the dead trees still left standing. It shows, at least, the profitable results of care, and also the faith that the prudent grower has in the future outlook for the apple trade.

THE APPLE AS FOOD.

THE apple is the most valuable of all our native fruits, being richest in sugar and albumen. The juciest are the most digestible, but the mealiest are the more nutritious. Thoroughly masticated, digestion begins immediately, but some people cannot eat them uncooked as a dessert. The apple contains more phosphorus than any other fruit or vegetable. A Brooklyn physician, translating from a German writer, thus discourses on apples as food and medicine:

"The apple is such a common fruit that few persons are familiar with its remarkably efficacious medicinal properties. Everybody ought to know that the very best thing they can do is to eat apples just before going to bed. The apple is excellent brain food, because it has more phosphoric acid, in an easily digestible shape, than any other fruit known. It excites the action of the liver, promotes sound and healthy sleep, and thoroughly disinfects the mouth. It also agglutinates the surplus acids of the stomach, helps the kidney secretions, and prevents calculus growth, while it obviates indigestion and is one of the best preventatives of diseases of the throat. Next to lemon and orange, it is also the best antidote for the thirst and craving of persons addicted to the alcohol and opium habit."

STRAWBERRIES AT THE O. A. C., GUELPH, 1903.

DURING the past summer eighty-eight standard varieties of strawberries were fruited at the college. This number includes the best out of nearly 400 kinds which have been tested during he past eight years, and a number of new ones.

Some of the most desirable early berries, taken in order of ripening, are: Van Deman, Anna Kennedy and Splendid. Van Deman is a bisexual or perfect blossomed variety, a fairly vigorous grower, with firm, dark crimson, varnished berries, of medium size. It yields well and is very early. Anna Kennedy has pistillate or imperfect blossoms, and must be grown near some other perfect flowered kind which blooms about the same time. The berry is firm, bright scarlet in color, with bright yellow seeds. It is a very desirable fruit for canning, as its flavor is excellent. Splendid is a firm, dark crimson berry, of medium size and of very good quality; the blossom is perfect and the vine vigorous.

Ruby, Burt, Buster, Lovett, Warfield, Williams, Clyde, Haverland, Hero, Echo and Barton's Eclipse are among the best mid-season varieties. Ruby is a fine dark crimson berry, of medium size and good flavor, although slightly acid; it is a good cropper and the blossom is perfect. Burt is a bisexual or perfect blossomed variety, producing a large crop of medium sized light scarlet berries, which stand long shipment very well. Buster is a pistillate or imperfect blossomed variety, producing large, medium firm, light scarlet berries, the foliage is strong and dark. Buster promises to be one of the useful kinds for a local market. Lovett is a medium sized, firm, crimson berry, which is worthy of being more extensively grown, as the quality is good and the vine fairly productive. Warfield, that old standard variety with the dark crimson firm fruit, so much sought after by canners, did very well this year. Warfield is shallow rooted, and does best on a rather moist soil; it is a free runner and makes a very solid row; the blossom is pistillate. Williams, the berry which has been so generally cropped over Ontario, did not do so well as usual this year; nevertheless, it is too profitable a berry to be entirely discarded by the commercial grower. Clyde gave the usual heavy yield of soft to fairly firm fruit, a fine large berry, but a little too light in color to be called handsome. Where a good local trade can be supplied the Clyde gives excellent results, as it is a vigorous grower and heavy cropper. Haverland did well again this year, and the many excursionists who saw it remarked that its bright scarlet color and its good quality should make it a good canning berry. Its long flat shape is against it, but its good qualities to a great extent overcome this defect. Hero is a perfect flowered, vigorous growing kind, with fine, bright crimson berries of medium size. The seeds are bright yellow and varnished. Echo, another of the newer varieties, with perfect blossoms and good strong vines; it promises to be among the commercial varieties of the future. The fruit is of medium size, firm and scarlet, but owing to the dull color of the seeds it cannot be called handsome. Barton's Eclipse still remains among the varieties at the head of our list, it's firm crimson, high flavored berries making it a favorite with those who supply a fancy trade.

Among the best late varieties are Parson's Beauty, Saunders and Irene. Parson's Beauty did not do so well as last year. The vine is very vigorous, the blossom perfect, and the fruit a firm crimson berry, just

a little inclined to be seedy. It is a variety worthy of trial. Saunders is very much like Williams, but somewhat later, and holds its size better throughout the season. Irene is a late, strong growing pistillate variety, bearing large crops of medium sized, firm, bright scarlet, sub-acid berries. Irene promises to be one of the best late berries, as it ripens after the glut of the market is over.

O. A. C. H. S. PEART.

THE BEN DAVIS APPLE

ASK a man who is a commercial grower of apples, who grows and ships his own, and who has a good paying orchard what variety has been the most profitable, and he will be almost sure to tell you the Ben Davis. Probably nineteen out of twenty growers will tell you the same thing. If this apple had the spicy flavor and quality of the Spy, it would be about as near the ideal apple as we could hope to attain. The good points about it are its early, regular and abundant bearing, and its good shipping and keeping qualities. Its greatest fault is its lack of quality, but it has some minor ones. Like all trees that bear early and heavily, it does not attain a large size, and in many localities is short-lived. It is subect to sun-scald and decay of the trunk. It cannot be classed as a strictly hardy tree; it may be classed as only half hardy in the northern sections. It has been planted more extensively during the last ten years than any other variety, and it is now a question whether it has not been overdone. No doubt the chief reason for its popularity in the past has been its splendid keeping and shipping qualities, making it most profitable for export to the British markets. It nearly always lands in good condition, and the buyer knows it will keep in good condition and will not spoil before sold. But with improved methods of handling and transport of our best quality of apples, so that they can be laid down in distant markets in perfect condition, the Ben Davis must inevitably be discounted on account of its lack of flavor and quality.

There is now another claimant for public favor, the Gano, closely akin to the Ben Davis, said to be a seedling of it. Being a comparatively new variety, it has not been extensively grown as yet. The tree closely resembles the Ben Davis in habit of growth and early bearing, but it is decidedly a better apple. It has also the keeping quality, in which it excels, and its qualities so far would indicate it as a safer one to plant than the Ben Davis. It would be well for intending planters to not plant heavily of the Ben Davis, or of apples of its class at present, but rather plant mostly some hardy sort for purposes of top grafting, and if after a few years it is found that the Ben Davis still retains its place as a paying commercial variety, it can be top-grafted on the hardy stock, and that is decidedly the best way of growing it. But it is not with apples of this class that our reputation as an apple-growing country is to be acquired and maintained. We must aim to produce something that has high quality to commend it, for it is quality that counts in all lines, and we have the soil and climatic conditions to do this, and we can do it; we can excel all other countries if we go about it in the right way. A reputation for high quality is, undoubtedly, the surest way to success, but whatever may be in the future of the industry, it cannot be denied that in the past the Ben Davis has been the most profitable commercial apple grown in this country.—*Farmers' Advocate.*

COVENT GARDEN MARKET

BY THE EDITOR.

TO the writer, a Canadian fruit grower, no place could exceed in interest Covent Garden Market. Here could be seen fruit and vegetables from all parts of the world, in all kinds of packages. There were strawberries from the south of France, in "boats," holding between two and three quarts, at $1.00 each, two boats being tied together for shipment; tomatoes, probably greenhouse grown, about the size of our Snow apples, at from 8 to 20 cents a pound, put up in quarter seives or round baskets, containing about a peck each; green gooseberries, in half seives of about 18 quarts, at from $1.75 to $2; cherries, from the south of France, in little flat boxes, perhaps 10 x 8 x 2½ inches, in which the cherries were evenly laid against the top and showed up very prettily, at 50 cents a box, five boxes being tied together for shipment; asparagus, in "flats" or crates, holding eight "bundles," each bundle made up of six "hands," and each hand of twenty stalks, and selling at from 40 to 60 cents a bundle; peaches, no doubt greenhouse grown, packed in cotton batten, in boxes one layer deep at $3.75 a dozen; green beans, from the south of France, at $2.00 for a ten-pound basket; cantelopes, from Toulon, of course quite out of season in England on the 28th May, the date of our visit, at $4.00 each; endive in crates; apricots packed in cotton batten, in shallow crates; lemons from Naples; apples from Tasmania, etc.

The packages used at Covent Garden interested me very much, especially because nearly all of them are returnable. The great heavy round osier willow basket, made in various sizes from quarter seive (peck) to seive and even larger, was the most common, and looked as if it would stand use for ages. The buyer is charged a shilling extra for the basket, which is allowed him back again if he returns it.

Surely in this the English fruit grower is wiser than we are, for he makes the buyer pay for the basket if he wants it; while in every case with us and our gift packages, we pay for the basket and give it to the buyer whether he has any use for it or not. Usually he only throws it away and counts it valueless. Here is a constant waste in our Canadian fruit industry, amounting in many cases to hundreds of dollars a year simply *thrown away* in fruit baskets. Is it any wonder that our fruit growers do not make much money when prices are low? Is it not time to call a halt and see if we cannot get an allowance for our packages, or else use returnable crates and baskets for all near markets!

"We would like to see your American gift packages in use here," said one of the Covent Garden salesmen, "it would save us a heap of trouble returning empties." No doubt our system facilitates trade, but it goes pretty tough with the grower, who pays rather dearly for the convenience.

On a second visit we entered the auction salesroom for foreign apples, to us a most interesting department of Covent Garden. All down each side were the elevated booths of the different houses whose names are familiar to us apple growers in Canada, as, for instance, "J. B. Thomas," "E. & O. Kelly," "Garcia, Jacobs & Co.," etc. Each booth had rising tiers of benches in front, for the convenience of buyers, and, below the auctioneer and in front of all the buyers, the porters kept bringing in samples of the various lots of fruit, opening them on a table in front of all, while the auctioneer knocked them down so rapidly that to us it seemed as if no chance for fair bidding was allowed.

On handing our card to Mr. Garcia, with whom we have many times had correspondence, he received us with the greatest courtesy, and gave us much attention and the fullest explanation, while the auctioneer, Mr. Simons, sold 1,500 boxes of Tasmania apples. The time occupied was little more than half an hour, and yet the prices were very satisfactory. Their boxes are not nearly as attractive as those our apple growers are using; they are smaller, too, and the fruit is not packed in them so neatly, although in most cases wrapped with a thin paper. The favorite variety from Tasmania seemed to be the Sturmer Pippin, which sold wholesale at from $2.25 to $2.50 a box. Mr. Garcia gave us a sample to eat, and certainly the flavor was good. In size it is about equal to the average Baldwin, but not so highly colored. In our opinion it cannot be compared to our Canadian Baldwin, and, if we could place them side by side with these Tasmanians, in equally perfect condition, we would not fear the result of the sale.

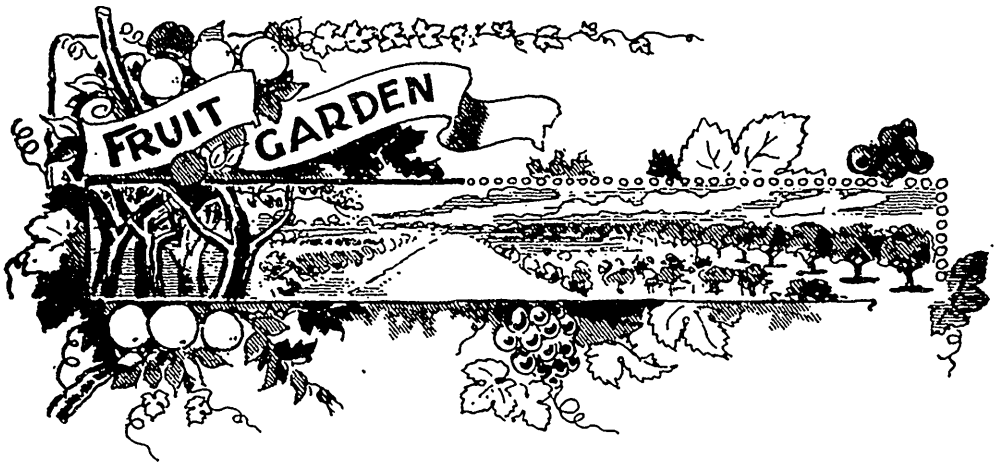
The highest prices for apples are realized toward the end of May, the lowest average price being $1.75 to $2.50 per forty-pound box, because the American apples are over and Tasmanians have scarcely begun coming in. Speaking of the best time to get the highest price, one Covent Garden salesman said bluntly, "If you are going to spend your money in cold storage you should sneak a week where you got it yourself," and no doubt he said a truth.

Messrs. Garcia, Jacobs & Co., have handled as many as 27,000 packages of fruit in one day, so it is evident they do a large trade, especially in apples and oranges. "We paid one firm in France," said Mr. Garcia, "£5,000 in one week for consignments of plums, which will give you some idea of our business."

Taking all things into consideration, we came away rather encouraged than otherwise, with the prospects before the Canadian fruit grower, and see no reason for discouragement, when we consider how favorably our fruit and our packages compare with those of the European countries.

COLD STORAGE IDEAS.

THE fruit season just closing has been remarkable in many ways, but in nothing more than in the sudden and enormous development of the cold storage business. Cold storage has been largely practiced hitherto, but never on the scale attempted this year. More important yet is the amount of really new knowledge which has come to light through careful observation, intelligent study and systematic experiment. It would not be far from the truth to say that the information developed during the current season is greater in extent and variety than all we knew about cold storage before. Possibly future experience will contradict some of the discoveries of 1902-3, but it will certainly confirm others. One discovery seems to be that low temperatures are best for nearly all fruits, including soft fruits like peaches. Further than that, fruits taken out of low temperatures seem to keep quite as well on the venders' stands as those taken out of higher temperatures. Wrapped fruit usually keeps better than unwrapped fruit and always ships better.—*Country Gentleman.*



THE FERTILIZATION OF APPLE BLOSSOMS.

BY

H. S. PEART, O. A. C., GUELPH.

THE cause of unfruitfulness in orchards and vineyards has always been the subect of much surmise, conjecture, and variation of opinion. Some authorities attribute it to lack of cultivation, others to lack of plant food, others to lack of pruning, and so on through a long list of causes. Few, however, have considered it in relation to the power of self-fertilization. For years, however, apple growers have followed the plan of growing a great number of varieties in order to make fertilization sure. This brings before us the question: Are some varieties sterile to their own pollen? Everyone will readily admit that where varieties are mixed in the plantation the chances for a perfect set of fruit are greater than where each variety stands isolated. How far this intermingling of varieties need be carried has not been definitely ascertained.

In the spring of 1892 M. B. Waite, of the U. S. Department of Vegetable Pathology, began a set of experiments to ascertain if pear blight was carried from infested to uninfested trees by insects which visited the blossoms. It was found that insects are instrumental in assisting the spread of the disease. The question then arose: How can the insects be kept out? Experiments were tried by covering the blossoms and excluding the insects. Very startling indeed were the results. It was found that fully one-half of the so-called commercial varieties of pears are sterile to their own pollen.

The results of the experiments of Waite together with inquiries from prominent horticulturists, as to the cause of unfruitfulness in orchards and vineyards caused others to follow up the work. Prof. S. A. Beach, of Geneva, began a study of the grape and published his report in the annual report of that station for 1892. Since that time he has continued this work, and quite recently has published a bulletin thereon. Prof. Goff of Wisconsin, and Prof. Waugh, of Vermont, have worked with plums. Prof. Craig did some work with apples while at Ottawa, but never published a complete report.

As the apple is now considered the main fruit product of Ontario we should know more of its power of self-fertilization. The

need for such knowledge prompted he writer to make a few simple experiments, which, at least in part, go to show that a few of our most common varieties may be grown alone and yet a perfect set of fruit secured. The observations made extend over but one year, and too much must not be inferred from them. In order to perfect a list of varieties which are self-fertile the work should be continued for at least five years, and be conducted on a somewhat more elaborate scale.

Sterility may be due to any one of several causes. Some of the more common of these are as follows: Defective pistils, insufficient pollen, difference in time of maturity between stigma and pollen, and impotency of pollen. Of these the last is perhaps the only one which can apply to any great extent to the apple blossom.

In order to ascertain whether or not a variety is self-fertile many different methods may be followed. The plan followed by the writer was very simple indeed. All the material required was a number of small paper bags large enough to cover the cluster of blossoms, some string, and some labels. One of these bags was placed over the bunch of blossoms just before they opened. The bag was securely tied about the mouth so that no insect could push its way in. Five or six such bags were placed on each variety tested to provide for accidental loss of one or more. Each bag was plainly labelled with the date on which it was placed on the tree, and with the number of blossoms in the cluster. The bags were allowed to remain on the trees until the fruit had set and all blossoms and many weak fruits had fallen.

On removing the bags on June 19th it was found that very few varieties had set fruit. It was, however, very encouraging to know that a few varieties were capable of setting fruit by their own pollen. It was found that out of twenty-nine varieties tested only eight had set any fruit at all. Those which set fruit were: Alexander, Baldwin, Chenango, Early Harvest, Greening, Holland, Twenty Ounce and Ontario. The Baldwin had set two fruits, while the others had set but one fruit each. With the exception of the eight varieties mentioned, all the other varieties set no fruit whatever in the bags, while the balance of the tree, or trees, set full crops of fruit in every case. The non-setting of fruit in the bags may have been only chance, hence it would be quite unfair to say that these varieties are at all times self-sterile. What happened in 1902 might not occur again, and many of them might prove to be self-fertile if this work were continued for a number of years.

Omitting from the list those varieties which proved themselves to be capable of even a very limited self-fertilization, many of our best commercial varieties are left out. Blenheim, Ben Davis, Canada Red, King, Mann, Fameuse, Spy, Ribston, and many other more or less desirable varieties seem to be unable to set fruit unless fertilized with foreign pollen. We cannot afford to leave all of these varieties out of our commercial orchards simply because they do not set fruit when planted by themselves, for it is well known that in a mixed plantation they produce paying crops.

The question then arises: How are these desirable self-sterile varieties to be most profitably grown?

To answer the question we need to know more about the dates on which the different varieties bloom, because it is necessary to have the pistil of one variety ripe at the same time as the pollen of another, in order to have complete interpollination. It will be sufficient in most cases to determine the date of blooming, as the pistil and pollen of the apple are both ripe about the time the petals open, and are capable of remaining receptive for from one to five days. Taking the dates of blooming, as ascertained by

careful observation, we have certain data which enables us to know ust what varieties to plant in order that the pollen from one may be ripe at the same time as the pistil of another. It also gives us an idea of the order in which to plant, so that the greatest amount of pollen may be transferred in the most simple manner, namely, by the wind. For instance, by consulting our record, we find that Spy, which by many is considered one of our best winter apples, is in full bloom at the same time as Ben Davis and Princess Louise, and but one day later than many other varieties. Now, if one desires to plant Spy he would in so far as the date of blooming is concerned, be safe in mixing with them a few Ben Davis or some variety blooming about the same time. Any number of desirable combinations may be worked out to suit each individual planter's conditions.

In regard to those varieties which have proven themselves to be self-fertile it would probably be safe to plant them singly. It is, however, seldom advisable to plant exclusively with one variety. Mixing of the varieties which we wish to grow will give us more certain results in every case, even though some of them rank as self-fertile. The reason for the necessity for mixing self-fertile varieties is that a variety which proves to be self-fertile in one place may prove self-sterile in another, and under different management, as is the case with the Kieffer pear in many parts of the United States.

Growers are often prone to condemn a variety because it produces no fruit, even though the tree may blossom profusely. In such cases it would be well to ascertain whether this so-called sterility is due to defective pistils, lack of vigor, lack of pollen, self-sterility, or lack of mutual affinity between it and surrounding varieties, before condemning it as unprofitable. If the cause be defective pistils, which rarely happens, they may be right in condemning it. If lack of pollen, let them try mixing with a few trees of some variety which produces pollen freely. If self-sterile, the last-mentioned remedy may tend to fruitfulness if the mutual affinity be perfect.

To insure the greatest number of fertile blossoms in the orchard, it is just as necessary to have the varieties intelligently mixed as it is to prune, spray, or cultivate.

VINEGAR FROM WINDFALL APPLES.

THOSE windfall apples will make good vinegar if gathered up and run through a cider mill and then the juice thus obtained allowed to ferment. The riper the apples the stronger the vinegar they will make. If the apples are very green a little sugar added to the cider before fermentation sets in will improve the quality of the vinegar very much. The cider should be placed in wooden or earthen vessels and set in the sun until fermentation has run its course. It then can be stored in the cellar or other convenient place for use.

Windfall apples in the Experiment Station orchard at Stillwater, Oklaa., were gathered July 31 and made into cider. These apples made an average of 2½ gallons of cider to the bushel. In thirty days the cider had finished fermentation and was a vinegar of fair quality. Pipe peaches were gathered on the same date and the juice pressed from them and placed in jars for fermenting. In thirty days this was a vinegar of a better quality than could be found on the local market.—*American Gardening.*

THE GRADING AND PACKING OF APPLES

AN ADDRESS BY M. ALEXANDER McNEILL BEFORE THE WESTERN NEW YORK FRUIT GROWERS' AT ROCHESTER, JANUARY 28TH, 1903.

IT needs no argument to show that systematic grading enhances the value of fruit, not only from an asthetic point of view, but even for economic purposes. A package containing only fruit of the same kind appeals first to the eye, but what is more important, it appeals also to the good judgment of the thrifty customer. A man who wants to buy large, highly colored apples has little use for those that are "off" color and somewhat deformed. On the other hand, there is a class of customers, especially in the English markets, who prefer the smaller apples, and will even pay a higher price for them, and such find the larger apples a distinct loss. Another class of customers, using fruit solely for culinary purposes, are not particular as to color, and do not object particularly to a few defects so long as they do not cause undue waste.

Making a comparison between the growers of the eastern and western sides of the American continent, noting the difference in the mode of conducting the fruit business, it is apparent that the fruit growers of California, Oregon and British Columbia excel in the grading and packing of their fruit, the fruit growers of the east having the advantage in point of flavor. In fact, the reputation of California fruit and the high prices which are obtained for it are largely a matter of grading and packages. I am not particularly hopeful that there will be a revolution soon among the fruit growers of the east in this particular. The habit of tumbling fruit into baskets and barrels indiscriminately has been too firmly ingrained into our natures, and until a new generation of better trained fruit growers takes control of affairs, I do not see that we can hope for much change. The younger generation will either have to improve upon their predecessors in this matter of grading and packing, or they will have to abandon the fruit business. No change in varieties, not even a change in modes of culture, will enable them to hold with any degree of profit against the better methods of packing and grading of the progressive energetic western grower.

The grading of apples is simply a matter of arranging them in classes according to their qualities, and in assigning an apple to any particular grade we take into consideration the following: Size, color, form, flavor, keeping qualities and material defects, such as worm holes, bruises and scabe. Of these, flavor and keeping qualities are included in the name of variety. When we speak of a Duchess apple we associate with it a certain degree of flavor and short keeping qualities. When we speak of the Ben Davis we associate with it long keeping qualities, though some would deny that any flavor is implied in the name. The other four qualities determine the grade names which we shall adopt for the different brands of apples.

The Parliament of the Dominion of Canada has passed what is known as the "Fruit Marks Act, 1901." This act designates the marks that must be used throughout the Dominion of Canada for the grade of apples. Apples of the best quality are marked "No. 1" or "XXX," second quality "No. 2" or "XX," third quality "No. 3" or "X," and one or other of these six marks must appear upon every closed pack-

age of apples. The same act defines No. 1 apples, but it does not define any other grade. This definition reads as follows: Packages marked No. 1 or XXX shall contain well grown specimens of one variety, sound, of nearly uniform size, of good color for the variety, of normal shape, and not less than 90 per cent free from scab, worm holes, bruises and other defects, and properly packed.

No definition, however, is given of a No. 2 apple or of a No. 3. This is not an ideal system of grading, but it meets with the needs of the apple business as it is conducted at the present time, and as it is likely to be conducted in the Eastern States and Canada for many years to come. In an ideal system of grading nicer distinctions of form, color and size would be noticed, and a due allowance would be made for such physical defects as scab, worm holes and bruises, but in the actual practice of the orchard this is impracticable. It is probable that 75 per cent of all the apples in the eastern part of the continent are sold to dealers who go through the country and buy by the barrel, or for a lump sum all the fruit in the orchard. In either case the buyer puts on his own gang of packers, and the apples are graded under the supervision, or supposed supervision, of the boss packer. These men are employed but a few weeks in the year, and of necessity are not skilled laborers. Any effective legislation must recognize this, and will not, therefore, insist upon a system of grading that demands great skill. A No. 1 apple is simply a fairly well colored apple of any size, not small for the variety, and practically free from worm holes, bruises and scab. No attempt has been made by the government to define a No. 2 or No. 3 apple. This is left to private agreement, or fruit so marked is sold by sample. I might add in parenthesis that all fruit must be packed so that the face or shown surface gives a fair representation of the whole package, which must also bear the name and address of the packer. As a consequence, when a barrel of Canadian No. 1, or XXX apples is exposed for sale the buyer is reasonably sure of getting sound apples, of fairly good color and size. If marked No. 2 or 3, or XX or X, the face will show the quality of the fruit. It has been suggested that in a No. 2 grade apples be admitted having worm holes in the blow end or a slight amount of scab or dry bruises or other defects, that do not cause serious waste or detract much from the general appearance of the apple, but it is to be feared that if this were embodied in the act of parliament the definition could not be given with the definiteness always desirable in legal documents. Such a definition would be a workable one between two parties who had thoroughly agreed upon the amount of the defects to be permitted, but I am inclined to think that even a most carefully worded definition admitting defects would be apt to give rise to many misunderstandings. Yet such fruit has a distinct value, and undoubtedly will be shipped for many years to come. It is much easier for the intelligent and progressive fruit grower to grow an apple of good size and color, free from worm holes, bruises, and scabs, than it is to give a definition for a No. 2 apple, permitting defects, that lawyers would not readily tear to pieces the first time a case were tested in the courts. My advice, therefore, is to improve our methods, legislate for a perfect apple, having only such defects as can fairly be said not to cause appreciable waste, and in this way not show too much leniency towards the growers and the packer, who wishes to deal with No. 2 fruit.

But the progressive fruit grower will not be contented with merely meeting the comparatively low requirements of any workable legislation. At least three grades may be made in the Canadian No. 1 class. One

grade would contain the largest apples (the sizes varying with the variety), all evenly colored and perfect in form and free from defects. Another class may be made, with the same requirements, except that medium sized apples would be used. A third grade would contain good sized, sound apples, not uniform in color or size, and having possibly some defect that does not cause appreciable waste nor seriously mar the looks.

All these grades would be No. 1 Canadian standard. Canadian shippers add description names to the grade names, thus, for best grade, some use "select" or "choice" No. 1. For the next grade "medium" or "prime" No. 1, and for the third simply No. 1.

The following grade marks have been suggested and used by Mr. L. Woolverton, editor of the Canadian Horticulturist:

For apples—

2¼ inch XXX	or small or dessert.
2½ inch XXX	or No. 1.
2¾ inch XXX X	or A No. 1.
3 inch XXX XX	or Extra No. 1.
3¼ inch XXX XXX	or Ex. large No. 1.

Others use purely arbitrary names such as "Imperial." All these names have something to recommend them—none received universal approbation. In a general way I would suggest that the names adopted be as simple as possible, or such as are well known. Instead of getting something that only the initiated could understand, choose such names as will make it perfectly clear to the consumer which brand indicates the best, the second best, and the lowest grade of fruit. Any mystification in this matter will not work to the benefit of the producer or consumer, but to the benefit of the middleman if to anyone. Uniformity in grading, packing and marking is very desirable for each particular State, but it is much more desirable to have a uniform system for all the States, and there seems to be no good reason why a uniform system should not include the whole North American continent.

FRUIT WELL SERVED.

FRUIT is many times more palatable at the table when daintily served. Those country housewives who have tried to introduce it at the family breakfast table without success should try what daintiness will do. The eye once tempted, the battle is won. Fruit is extremely healthful for the morning meal, much more so than its bulk in solid food which would probably take its place if fruit were not temptingly served.

It is important that fruit be very cold when it comes to the table. Oranges and bananas should be set on ice over night and should be served in the prettiest china or silver that the house affords. Strawberries when large are best served whole with their stems intact, so they may be dipped in powdered sugar and eaten from the fingers one by one. Cherries and currants with their stems on may be moistened in a little white of egg and dipped in granulated sugar, then piled high on the plates. Apples should, of course, be wiped dry and then polished until they shine. Pears and grapes in their season are fine breakfast fruit and look well in a center-piece, the pears half covered with the stems of purple grapes. Peaches and grapes are also a pleasing combination. A musk or watermelon cut apart in the shape of a flower is extremely pleasing as a center-piece. Either should be well chilled before serving.

MONEY IN TREES

FRENCH FARMERS WHO GROW CROPS OF CHESTNUTS FOR MARKET.

THE French understand how to make money out of trees. They appreciate the value of the forests, and have some of the largest and best in the world. There are vast woodlands belonging to the government and private holdings in which the trees are as well cared for as in our city parks. Only the ripe trees are cut, and every piece of fallen wood is saved.

The roads and streams and little canals of France are lined with poplars. Some of the trees are a hundred feet high. They are bare of branches, with only a tassel left on the top. Others are full limbed, and others are just sprouting new growth on all sides. These poplars are grown for their branches, and are finally cut down for wood or for furniture. The branches grow rapidly. They are cut off year after year, put up in bundles and sold to the bakers to make the hot fires necessary for the crisp crust on the French bread. There is such a demand for them that raising them is one of the chief industries of France. The poplars are planted in places which are good for nothing else, and after five years each will annually produce at least twenty cents. Later on the trees are cut down and sold. Willows are grown in the same way, their sprouts being used for baskets.

The French make money out of chestnuts. They grow varieties which are from two to three times as large as the American chestnut, and sell them to the fruit stands and the groceries. The chestnuts are used to dress turkeys, geese, chickens and game, and they are also used for dessert. The confectioners make candy of them, and the best candied chestnuts being forty-five cents per pound, or, if coated with chocolate, fifty-two cents a pound. There are large establishments in France which do nothing else, one at Lyons, handling 25,000,000 pounds of chestnuts a year.

The French chestnut trees are not cultivated. They are usually planted on poor earth and in time are cut for their wood. Some chestnuts are grafted, and there is o doubt but that the French and Spanish chestnut can be grafted on our native American sprouts. There are men in Pennsylvania and New Jersey who are making chestnut grafting commercially profitable, and the same might be done in other parts of the United States.

In South France, Spain and Italy chestnuts are ground into a meal and used for bread, and they command good prices in such localities. In the United States they are chiefly sold by fruit venders and by the confectioners and bring $7 or $8 per bushel. In France they sell by the kilogram for 2 or 3 cents a pound.

The French have 1,000,000 acres devoted to gardens and fruits, and in riding over the country you pass fields of hotbeds and see glass frames propped over plants outside the beds. In many places glass bells are used to cover the individual plants, and there are some sections which raise potatoes under glass for export to London.

The French have studied the soil, and the sun, and they coax both to work. They feed the crops rather than the land, and in places get three crops a year, through intensive cultivation. Near Cherbourg cabbage is raised early in February. After it is taken off a crop of potatoes is planted, and a third crop comes on in the autumn. This is on land that has been used for generations.

And still Americans talk of old Mother

Earth being worn out. The old lady has all the possibilities of perpetual youth, but coquette that she is, she must be fed with the dainties she loves and petted to make her yield her best crops. This is especially so as to the vineyards which have been used for generations. The French vines are cut down every year, and every vine has its individual stake, and one might say its individual treatment.—*Mail-Empire.*

PROTECTION FOR CHERRIES IN THE COLDER DISTRICTS

BY PROF. W. T. MACOUN, C. E. F., OTTAWA.

THERE has not been a full crop of cherries in the Ottawa district and at the Experimental Farm since 1898, owing to the flower buds being killed by frost either in winter or spring. Sometimes the flowers never open, and again when they do open, the pistil is found blackened and the flowers rendered infertile. In 1902 there was a light crop of fruit, and in some trees a medium crop, and on one tree a heavy crop, the variety being one of the seedling dwarf Koslov Morellos, mention of which has been made in the Canadian Horticulturist before. This tree was very low growing and partially protected by snow in winter. This year the crop is a failure, there being only a few fruits on trees of the hardiest varieties. The Koslov Morello, which fruited so heavily last year, was winter killed. Fortunately this tree had been previously propagated.

FIG. 2645.

The hardiest cherries tested at the Central Experimental Farm are among the Russian varieties, the Vladimir and Orel 25 being the hardiest in the flower bud.

This note was written principally to call attention to the value of protection for the cherry. The accompanying photo, taken by Mr. F. T. Shutt when the cherry tree should have been full of bloom, shows that it was only near the ground where the flower buds were protected by snow that they developed.

In the Ottawa district and in districts where the climate is similar, unless we get hardier varieties, we shall have to change our methods of growing cherries and have dwarf trees or train the trees in such a way that they can be protected. The latter method is not likely to be adopted, but if dwarf trees could be obtained of the hardiest varieties there would be the double advantage of having trees which could be protected readily from birds, as at present when there is a crop of fruit the birds get a large share of it, especially when there are only a few trees. At the Central Experimental Farm we are working to obtain a dwarf cherry which will be equal in quality to any of the tall growing Morellos.

Civic Improvement

A DEPARTMENT DEVOTED TO THE INTERESTS OF THE HORTICULTURAL SOCIETIES OF ONTARIO, AND OF ALL OTHER BODIES INTERESTED IN THE IMPROVEMENT OF THE SURROUNDINGS OF OUR CANADIAN TOWN AND COUNTRY HOMES.

CIVIC IMPROVEMENT

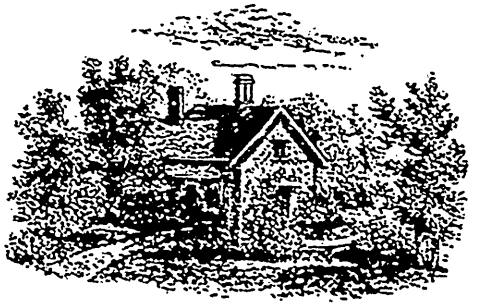
WORK FOR LEAGUES. SUGGESTIONS TO HORTICULTURAL SOCIETIES, SCHOOL BOARDS, PARK BOARDS AND CLUBS. DANGERS OF DIRT.

ANOTHER good work for leagues to undertake is to arouse the interest of the school children in botany and a general love of flowers by inducing state and county fair boards to offer premiums for the best display of potted plants and cut flowers grown by pupils of the public schools. The prize should go to the school and the moneys should be spent for something all the pupils may enjoy. A premium for the best botanical display and the most comprehensive collection of grasses native to the state or county might be given to the individual pupil.

One association exhibited at its county fair a miniature cottage with vine-clad porch and pretty window boxes, the tiny lawn and flower beds were as neat as hands could make them, and all the necessary outbuildings were designed with an eye to adornment. When what the ladies intended to do became known offers of assistance came from every direction. The carpenters, painters and other workmen had a good time over the work.

By the side of this was built another miniature house, without adornment. A weedy yard, no vines, no flowers, old unpainted buildings, untidy fence, and old board walks made a lesson all could read.

These tiny cottages were the great attraction of the fair. It was difficult to get near them, and finally a wire had to be stretched around them to prevent their ut-



Home."

"Lodgings."

FIG. 2636

ter destruction. Not a person who saw them but carried the lesson home and viewed his own premises with critical eyes.

* * * * * *

Two teachers in the manual training school of Toledo, Ohio, while on the way to school were discussing the dangers of dirt. They found a chip of wood, and stooping down scooped up less than a teaspoonful of dirt from the street, carried it to the laboratory, put it in a culture tube, and when a week or two later a professor from Johns Hopkins University happened along this tube was shown to him. Among many other germs the tube contained the well developed bacilli of typhoid, of scarlet fever, of diphtheria, of tuberculosis, and two other bacilli so rare that permission was asked to take the tube back to the university in order to see if they could be classified. Toledo's dirt is duplicated in every city in the world, and it is not agreeable to think of carrying such matter into the house, where, swept up in dust it fills our lungs with deadly germs.

The only comfort science gives us is that, following a law of nature, the big bacilli are forever destroying the little bacilli, so that while we are constantly breathing these deadly germs into our systems, yet it is only when conditions are favorable that disease develops. Let each city, town and village build to the god Uncleanliness altars called crematories and sacrifice to him therein all that are his. Let the fire burn perpetually, so that his servant Disease, finding no more work to do, will lay himself on the altar as a final sacrifice; and in the places made vacant by Uncleanliness and Disease let flowers bloom that their fragrance may ascend as a sweet incense to the god of Health, and as an acknowledgement that his servant Cleanliness has followed the command to let in a little sunshine.

Science, the other name for common sense, concedes that cremation is the only way in which garbage, offal and waste of all sorts may safely be disposed. The pollution of our streams and rivers by city sewage should be made a criminal act. Mr. Kipling says the soil of India is so impregnated with the filth of ages that a fall which grazed the skin has been known to cause lockjaw within a few days. Let us keep America wholesome. Jacksonville is one of the thirty-three cities using a typical crematory. It is a combination of three furnaces of fire brick; one to burn the solids, one for evaporating and burning the liquids, and a "combination chamber" in the stack to completely decompose and burn the vapors. Garbage, "combustible waste," night soil and dead animals are dumped into the furnaces through circular openings

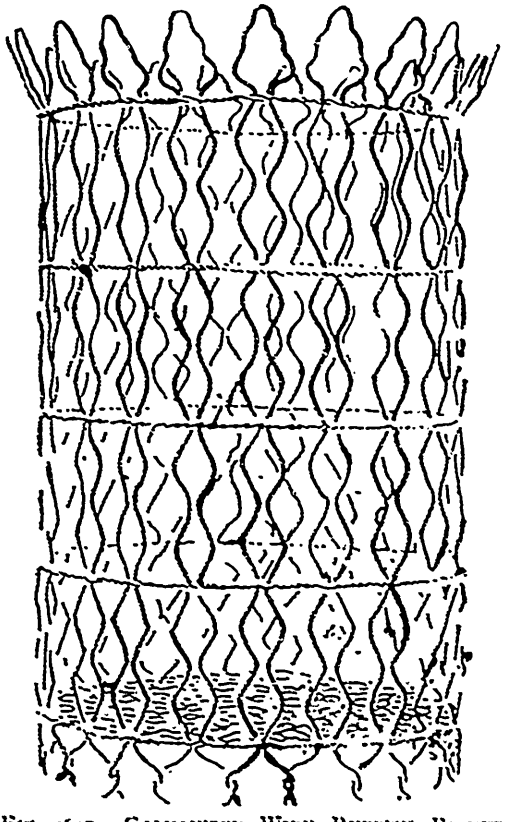


FIG. 2647. GALVANIZED WIRE RUBBISH BASKET FOR STREET USE.

This basket is strongly recommended by the Thomasville, Ga., Association, because the contents may be lifted in the basket. It is a good idea for an association in small towns, where there is a municipal collection of waste.

in the top and no handling or sorting of filth is required. The floor of the crematory is on a level with the top of the furnaces, thus making the dumping of carts and wagons quick and easy.

There is absolutely no excuse for hauling ashes, garbage, swill, etc., through a city in open wagons. The illustration below shows a water-tight, steel wagon that is easily cleaned and disinfected, making it as nearly odorless as possible. It has also the merit of looking well in service.

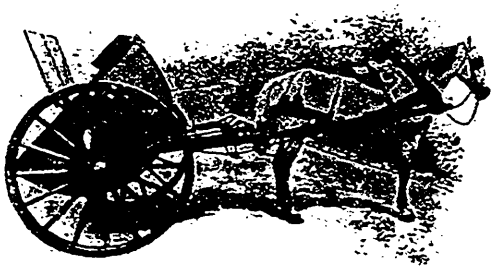


FIG. 2648. STEEL SANITARY CART.

This cart is water tight, almost air tight, and can be turned bottom side up if necessary for a thorough emptying or cleansing. It has two lids for easy loading, weighs 1,200 pounds, and carries 27 cubic feet.

The women of Bethany, Missouri, called a meeting at the court house and organized a society which was called the Woman's Improvement Association. In four months the streets had been cleaned, the city council requested to enforce with greater rigor the various sanitary ordinances, and the court house square has been made more attractive by vases of growing plants. The ladies solicited the necessary funds, and in conjunction with the fraternity owning the cemetery secured the services of a permanent sexton. In addition to this flower beds have been made in the cemetery and the churchyards. This association also opened a public waiting room, which is one of the largest and finest rooms in the city. It is light and airy, well furnished and provided with all the necessary toilet conveniences. The tables contain plenty of good reading matter, which, with the beautiful plants and pictures, makes the place seem quite home-like. The women of this club have employed a matron, whose duties are the general oversight of the room, and to make comfortable all the guests. Bethany has a population of less than three thousand.

* * * * * *

The improvement league of which I am a member has, through the generosity of one of its members, distributed to the school children of the city twenty-five thousand packets of flower seeds. Another member has offered $50 in prizes to boys and girls of fifteen years of age for the best kept lawn and premises, and for the prettiest flower beds. These flower seeds and prizes have aroused a lively interest among the school children, and cannot fail to help the appearance of the town to a marked degree. We have also induced the county fair commissioners to offer prizes for the best cut flowers grown by children. We are trying to induce the city school board to make an exhibition of the drawings and water colors of the school children at the county fair. It is only a very few years until the question of the centralization of the country schools will be up before the people, and an exhibition of some of their work will give the country people an idea of the advantages of the graded schools. These are a few of the things we are doing, and we yet hope to have a botanical school garden started near the city.

The Fairhaven Improvement Association, Fairhaven, Massachusetts, is eighteen years of age, and has done a great deal in the way of setting out trees (over two thousand), establishing bath houses (over one hundred), converting an old cemetery into a park, instituting work toward another park, reclaiming another old graveyard and making it sightly. The association is now projecting the erection of a fine drinking fountain at the entrance of a new and beautiful bridge.

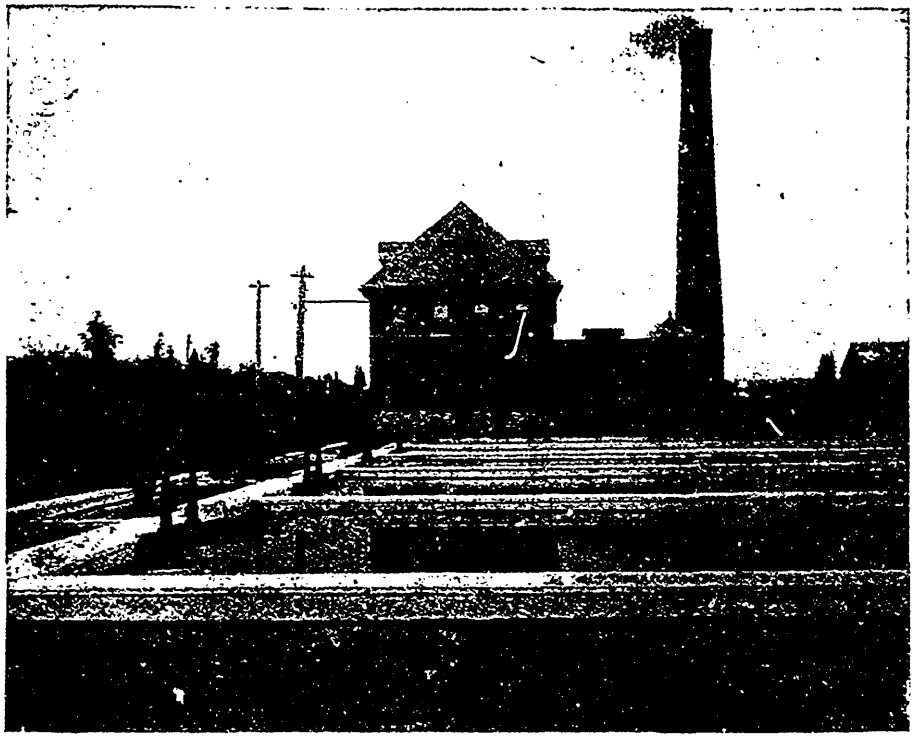


FIG. 2649. SEWAGE DISPOSAL WORKS AT HAMILTON, ONT.

AN IMPORTANT PHASE OF CIVIC IMPROVEMENT.

ABOUT eight years ago Hamilton undertook to solve the sewage disposal problem by building an elaborate system of intereception works to prevent the pollution of the waters of Hamilton Bay.

The sewerage system of the city is one of the most complete to be found anywhere. There are about 31½ miles of main trunk sewers and 40 miles of laterals or small service sewers. By means of the trunk sewers the city is divided into three districts for sewer purposes. The sewage from the easterly district flows to the Wentworth street disposal works, that from the center to the Ferguson avenue works, and that from the westerly district into the marsh land lying between the city limits and Dundas. Already provision has been made for a third disposal works in the westerly district, and when these are in operation there will be nothing but a clear water flow into Hamilton Bay.

The disposal works now in operation, which handle the great bulk of the city's sewage, are the first to be erected in Canada. They were built in 1896, and are of the well known chemical precipitation sort. The effluent or clear water flow from these works, after the solids from the sewage have been extracted, flows into the bay. The solids are pressed into a stiff, clay-like sludge, which is used by farmers for fertilising purposes. The cost of operating the two works now in operation is about $13,000 a year.

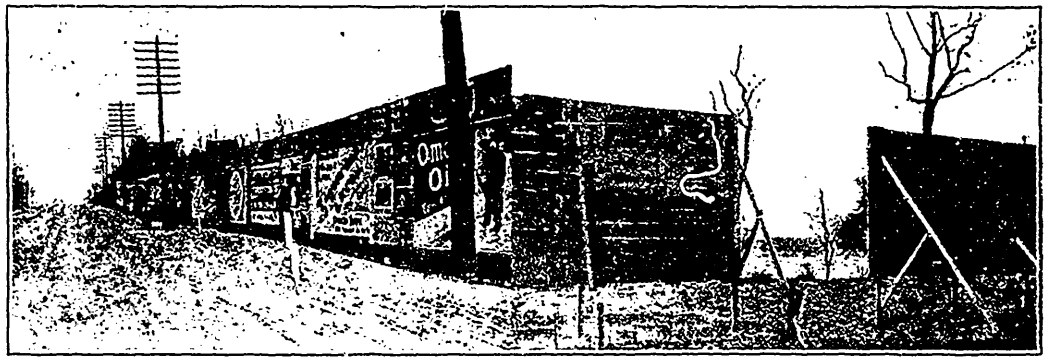


Fig. 2050.

THE BILLBOARD NUISANCE

THE billboard nuisance is one that should be taken in hand by our horticultural societies, and all clubs having in view civic improvement work. It is a shame the way in which some of the most beautiful parts of town and country scenery are disfigured by ugly billboards advertising various soaps, tobaccos or oils, and there is no limit to the abuse, except possibility, for, if they could, these money grabbers would paint their waves upon the very clouds of heaven.

In some of the States laws have been prepared to prevent this abuse, and the following is a copy of an Act to be introduced in the Pennsylvania Legislature:

AN ACT

To prevent the pasting, painting, branding, stamping of advertisements, notices, signs, cards or posters in certain places, and providing penalties for the violation thereof.

Be it enacted, etc.

Section 1.—That no person shall paste, paint, brand or stamp, or in any way whatsoever place upon or attach to any building, fence, bridge, gate, outbuilding or other object upon the grounds of any charitable, educational or penal institution of the State of Pennsylvania, or upon any property belonging to the State of Pennsylvania, or to any county, township, borough or city therein, any written, printed, painted, or other advertisement, bill, notice, sign, card or poster: provided, that nothing herein shall be so construed as to prevent the posting of any notice required by law or order of court to be posted, nor to prevent the posting or placing of any notice particularly concerning or pertaining to the grounds or premises upon which the same is so posted or placed.

Section 2.—That no person shall paste, paint, brand, stamp, or in any manner whatsoever place upon or attach to any building, fence, bridge, gate, outbuilding or property of another whether within or without the limits of a highway, any written, printed, painted, or other advertisement, bill, notice, sign, card or poster, without first having obtained the written consent of the owner or tenant lawfully in possession of occupancy thereof.

Section 3.—Any person convicted of violation of the provisions of this Act shall be deemed guilty of a misdemeanor and shall, upon conviction, be fined in a sum not less than five nor more than twenty dollars; and such written, printed, painted or other advertisement, bill, notice, sign, card of poster is hereby declared to be a public nuisance, and may be removed and abated as such.

FLORAL NOTES FOR SEPTEMBER

BY

WM. HUNT,

O. A. C., GUELPH.

PLANT PROTECTION. The temporary protection of the more tender varieties of both pot and border plants from early frosts is a matter that will demand watchful attention on the part of plant lovers during September. By the exercise of a little watchfulness and care at this season the beauty of many a fine specimen plant—or perchance of a bed or border of plants—may be prolonged well on until late autumn if a slight covering or protection of some kind be given them at night during the prevalence of the slight frosts of early autumn, that often precede perhaps a month of beautiful summer weather experienced later on. By keeping even a light cotton or perhaps a woollen covering near at hand to cover the plants with, or by lifting the plants in pots for a night or two underneath the shelter of a veranda, tree, or fence, their beauty and safety may be insured against these slight frosts that will at least mar their beautiful summer tints, if it does not, as is oftentimes the case blacken and destroy their beauty entirely. Watch the thermometer closely; and remember that 40 degrees at sundown certainly means a decidedly chilly, if not a frosty night. Cover up the plants even if doubtful; it is far better to be sure than sorry, especially when it is only a question of a little pleasing exercise to ensure safety.

THE HARDY BORDER. This is a good time to transplant—and divide if necessary a few of the hardy border plants. Herbaceous Pæonies, German Iris, Dicentras (Dielytra), and any of the early flowering garden lilies and Lily of the Valley. If the clumps of Iris, Pæonies or Dicentra are very large, they should be divided into clumps having from three to five crowns. These will make fine strong clumps, and give good flowering results the first season if properly planted. In planting Iris, the mistake of planting too deeply is often made. The large fleshy rhyzomes of these plants should be only barely covered with soil when planting them, burying them en-

tirely underneath the soil is unnatural and invites rot and disease to the plant. The German Iris will succeed in almost any kind of soil, or in any part of the garden, but a rich, loamy, well drained soil, and a position shaded from the sun for a few hours at noonday gives the best flowering results and prolongs the flowering period of the plants.

The several varieties of Hemerocallis or Lemon Lily can also be transplanted successfully at this season.

I have also had good success in transplanting many other hardy border plants in early autumn. Amongst others may be mentioned the Japanese Spireas, as well as the hardier double and single varieties of Spirea filipendula, both of which are pretty and useful border plants.

Pack the soil firmly around the roots when planting, and water the plants well once if the weather is very dry. Packing the soil firmly will help to prevent the plants lifting, from the action of severe frosts. Another point to be considered in transplanting these, or indeed, any hardy perennial plants, is to carefully pick out from the clumps every vestige of any perennial weeds, such as twitch grass, yarrow, dandelions, etc., as the bane of all perennial borders and border plants are perennial weeds, and there is no better time for eradicating these than at the time of transplanting.

SEED SAVING. Many varieties of plants, both of annuals, biennials and perennials, will now be producing seed that might be of service at least in supplementing the supply usually purchased. The saving and drying of seeds, so as to have them of the best quality possible, requires watchfulness nd care. Many varieties, such as balsams, portulacca, aquilegia (columbine) and others require to be picked early in the pod, as if the pods are allowed to stay on the plant until the seed is ripe much of it is lost. In drying seeds never tie them up in close ir-tight bags when first picked, as this plan induces mildew and possibly rot. Either spread the seeds or pods out on a tray or fine sieve and place them in a cool, dry, airy place until they are quite dry, or tie them up loosely in coarse muslin or cheesecloth bags and hang them up in a dry, airy place under cover from rain or heavy dews. Placing the seeds outside in the sun in the day . e and removing them under cover at night will hasten the curing and drying of seeds without injuring the germinating property of the seed. Avoid drying seed too near a hot stove, as they are often spoiled in this way. Large seed growing establishments usually have kilns built expressly for drying seed. Even these, built as they are on scientific and practical principles, are oftentimes responsible for the immature and weak germinating power of many seeds that would have been of much better quality if ripened off and dried more gradually.

Seed should always be saved from what have been the best specimen flowers, so as to secure as good a type of flower as the original, if possible. By careful selection of the best typical blossoms of each variety, much can be done toward the improvement of strains and varieties of plants, more especially annuals.

FIG. 2651.

COUNTRY EFFECTS IN TOWN.

THE accompanying illustration gives but a glimpse inside the grounds about a city home, larger than an ordinary city lot, of course, but not so large as hundreds of our modern city residences where the inhabitants have none of nature's beauty. Very few people understand how simple a task it is to build up country life about them. The high board fence covered with ampelopsis looks like a covered building; it screens a vegetable garden. From the drive to the barn is partitioned by a fence of birchbark logs. The drive having a bend, trees and shrubbery to the right cover closely. Under the tree is a footpath with perennials on either side, perfectly wild. To the left, in front of the residence, is the open lawn. This sort of condition is easily brought about on a place 150 x 150 feet. The material used is nothing more than can be selected from any up-to-date nurseryman's catalogue of trees, shrubbery and perennials.—*American Florist.*

SOME FLOWER LEGENDS*

BY

EDWARD TYRRELL, TORONTO.

THIS is the time for holidays, when many of your readers will have the opportunity of taking a month or two months' rest and recreation. There is pleasure in the anticipation of a good holiday. I remember as if it were yesterday when I was an apprentice in London, the proprietor of the house I was in made it a rule that every one of his employes (and there were about one hundred and sixty of us) before going on their holidays should go into his office and see him before leaving. His kind remarks as to our work, and the desire to be remembered to our parents or relatives, and the hope that we would spend a pleasant outing and return refreshed and strengthened was very encouraging. To many he would say, "Where are you going for a holiday and a rest from business? The mind is often better rested by reading, allow me to give you this book," and he would select one from a large supply he always kept in his room, and it would be a good one, not a goody goody tract, but by a standard author. Those of us who have one or more of these books, money cannot buy them. I echo his words to those taking their holidays, "take a number of books with you." What friends you can have, how much information they will give! If you are ignorant they will not laugh at you, if you mistake them they do not get offended. A favorite writer says: "I have friends whose society is extremely agreeable to me, they are of all ages and of every country, they have distinguished themselves both in the cabinet and in the field, they relate to me the events of past ages, and reveal to me the secrets of nature. Some, by their variety, drive away my cares and exhilerate my spirits, and others teach me how to live, and how to die. In return for all their services they only ask me to accommodate them in some corner of my humble habitation." It is good advice, try it, you will be helped as I have been.

My notes this month are on the House Leek (Sempervivum), commin in Europe, called Fous or Fousts in Scotland; Poor Leaf and Hen and Chickens in Devonshire; in other places House Leek and Jupiter's Beard. The leaves, cut or bruised, and applied to burns or stings of bees or wasps afford immediate relief. They are a beneficial application to ulcers and sores, and are esteemed for fevers. In early times, so it is recorded, by growing them on the roofs of houses they would keep the lightning off, and in confirmation of this belief Charlemange issued an edict for their general culture in these words: "Let everyone have the Jupiter's beard on his house to keep off the lightning."

Lilium candidum (white lily). The common white lily is one of the oldest and noblest as well as commonest flowers of the garden, more especially in England. It belongs to a family of plants that has no poor relations. Poets from Homer down have sung its praises side by side with the rose and violet, for its beauty and stateliness, the snowy whiteness of its flowers and its fragrance as to be quite without a rival. It has been claimed as an emblem by nearly a hundred saints. It is a native of the country called the Levant, and as the Levant includes Palestine, it is by no means proper to consider this as the "Lily of the Field" referred to by our Lord in his sermon on the

*This article was written for our August Number.—EDITOR.

Mount (although other flowers were very plentiful, such as Scarlet Martagon or the Lily of Byzantium, white Cyclamens and scarlet Anemones). It is dedicated by the church of Rome to Mary, the mother of Jesus, and it is known as the Madonna lily. In Ireland it is said that travelers can distinguish the houses of Protestants and Catholics when lilies are in bloom by the orange and white lilies. The Romans call it Juno's rose. It seems to have a special charm of its own, so chaste it is, so inviolable in its purity, and on this account we cannot behold the lily without feeling a kind of reverence for the flower mixed with our admiration for its elegance of form and purity of color. To me a garden does not seem complete without this flower, it is all that can be imagined, desirable and perfect in floral form. A great inducement to the cultivation of this species is their ease of culture and their almost perfect hardiness, thriving vigorously in the garden border, where they can remain for years undisturbed.

"Within the garden's peaceful scene
Appear'd two lovely foes,
Aspiring to the rank of queen,
The lily and the rose.

The rose soon reddened into rage,
And swelling with disdain,
Appealed to many a poet's page
To prove her right to reign.

The lily's height bespoke command,
A fair imperial flower;
She seemed designed for Flora's hand,
The sceptre of her power.

This civil bickering and debate,
The goddess chanced to hear,
And flew to save, ere yet too late,
The pride of the parterre.

'Yours is,' she said, 'the nobler hue
And yours the statlier mien,
And, till a third surpasses you,
Let each be deemed a queen.'"

THE GORGEOUS PEONIES.

I WISH to add my mite of praise to what others have recently said in commendation of these majestic flowering plants. I think of all the blooming plants of our gardens these produce the largest, most attractive, most gorgeous blooms and most varied in pleasing colors, and easily rank, when in bloom, as the queen of showy flowers. The herbaceous peonies are perfectly hardy and will endure many degrees below zero when properly planted. They are strong growers, requiring a strong, rich soil, and are succeeding to perfection all over the country, especially in the west.

The plant is a gross feeder and when transplanted should have a liberal allowance of strong rotten manure worked into the soil, planting four inches deep, which will settle to three inches. They should be mulched with manure after planting. The peony will remove at any time, even in full growth, which is, however, not to be encouraged. Some of our customers beg to get plants even when in bud, which we never agree to.

The best time to plant peonies is in early fall. Then they are more dormant than at any other time of year. The old stems should be cut off close to the roots, for when left on they have a tendency to heave out of the ground by action of frost. Be sure and mulch them after planting. When planted in fall they do much better the next season than if transplanted in the spring of the year. Peonies do not need frequent removal, but will succeed in the same spot for many years after being planted, and if once in several years they are well fertilized they will last one's lifetime.—*American Florist.*

FLOWER AND PLANT LORE

BY

EDWARD TYRRELL, TORONTO.

THE present month brings with it unspeakable signs of autumn, one of its chief beauties consisting in the change which takes place in the tints of the foliage of trees and plants. The garden begins to assume a somewhat ragged appearance, many of our summer flowers are beginning to lose their beauty, but the flora of this month, though not so extensive, is not without interest. One attractive species is the

PHLOX (from Phlox a flame). This plant is a native of the northern part of this continent, and is one of the many perennials that deserve our admiration. There are few flowers amongst the large variety which have been brought by collectors from distant regions and naturalized in our gardens more deserving of attention than this pretty native. Nearly every species of this somewhat extensive genus is perfectly hardy; it is well suited for various purposes in the tasty arrangement of a flower garden, the height to which they grow, the colors of their blossoms, for we find them in nearly shade of color, and the flowers growing in terminal spikes and prominent colors, make them a desirable contrast to the almost universal similarity of autumnal flowers, both as to form and color. They can be increased with a certainty of preserving the distinctive characteristics of the plant by the divisions of the roots.

DRUMMONDI is an annual variety of the Phlox, and esteemed one of our most useful annuals; it was found in Texas in 1835 by Mr. Drummond, a gentleman engaged in collecting new plants for the Glasgow Botanical Society. He died with fever in Cuba in the prime of his life, and Sir W. J. Hooker, to preserve the memory of this gentleman's labors, named it Phlox Drummondi.

ACONITUM NAPELLUS (Monkshood, a native of Northern Europe). In Monastic herbaries it was known as Odin's hood, Thor's hat, Friar's cap, and Helmet flower. Afterwards it became known as Monk's hood. It has another name, Wolf's bane, or Wolf's poison, which originated, as Gerard says, from the fact that hunters which seek after wolves put the juice thereof into raw flesh which the wolves devour, are killed. Every part of this plant, from pollen to root, is poisonous. It's handsome leaves and blue flowers make it a favorite, but it should not be grown in the garden where there are children in the family.

Shakspeare thus refers to it:

Let me have
A dram of poison, such soon spreading gear
As will disperse itself through all the veins,
That the life weary taker may fall dead
And that the trunk may be discharged of breath.

ABOUT GLADIOLI

NOW to get the most enjoyment out of a collection of gladioli is something worth knowing. Perhaps my experience may be helpful to another. For some years I gave up raising gladioli; they did not fit in well with my other plants; they did not always blossom; they faded soon and seemed to be altogether unadapted to my conditions. Finally I purchased a named collection and planted them in the garden to share with peas and beans and cabbages in the general cultivation. The

result was most gratifying. They grew strong and thrifty. At blossoming time the stems were cut on the opening of the second flower—care being taken not to cut below any side spikes—and brought into the house. Every day the water in the vases was changed, the ends of the stems clipped, and the wilted flowers removed. Treated in this way each stem lasted nearly two weeks and blossomed perfectly to the last bud. Every day added something new and in a short time the house was a glow of color. The changes which the blossoms underwent in confinement, growing more and more delicate in hue, were not the least interesting part of the color feast.

Since that summer, gladioli, even more than sweet peas, have been our chief reliance. We add each season a few choice named bulbs, a dozen or so of Childsi and Lemoine, and thus have come to have several hundred bulbs. They still get only garden culture, except that when setting them I put into a hole a mixture of leaf-mold and mulch with a very little litter from the hen house. This is mixed with the sandy soil. It gives the plants a good start and they are not so apt to feel the dry weather later on. The bulbs are set out at different times, so that the season of bloom extends from the middle of July or earlier till near the time of frost. We have come to look forward with longing to their blossoming time. They constitute in our own home a *perpetual supply of sunshine*, and they carry it to the sick, the shut in, the flowerless poor, the weary girl behind her desk in the city, the tired mother with her many cares, and to the aged who are too feeble to cultivate flowers but still love them passionately. They are our floral bank which never fails to honor a draft.

In the autumn, when they are taken up, the bulbs are grouped and labeled in accordance with the planting record and the notes kept through the summer. Selections are made for the friends to whom we wish to send a gift or with whom we make exchanges, and the body of bulbs is put away in condition for the spring planting. Any plant becomes interesting *when you make* a special study of it, and the gladiolus is an excellent subject to begin with.—*Vick's Magazine.*

DAHLIAS.

WHERE dahlias are propagated from cuttings the dry roots may now be placed in a gentle heat to start them. The usual way is to place the tubers on the bench or table or in shallow boxes, and cover them with soil to the crown. The cuttings are taken when the shoots are some three or four inches long, and put in sand to root. Two or three buds should be left below the cut to produce more shoots, from which cuttings may be taken in the same way, and the process repeated till as many cuttings as may be wanted are procured. In this way a single plant or clump of tubers may be made to produce a great number of cuttings. Such amateurs, however, as grow plants in a small way can get as many plants as they want by dividing the tubers after they have begun to grow, and in this case the tubers need not be encouraged to grow for some time yet, at least the double flowered varieties. We rarely get perfect blooms from the double varieties before the approach of cool weather, and little is gained by starting them early. Something may be gained, however, by starting the single flowered varieties in March, as we expect them to bloom both early and late. Seeds of the single kinds may be sown now.

THE CYCLAMEN

BY

WM. BACON, ORILLIA.

THESE delightful winter and early spring flowering plants have of late years been so much improved that we shall scarcely recognize the small, comparatively insignificant blooms we used to meet with, in the splendid, large, broad-petalled, distinctly colored forms and highly scented types of this flower, now so plen'iful. They are now of a very robust on-s'itution, remarkably free blooming, and in every way well adapted to house cultivation, and as house plants have few equals, if any superior. Few flowers respond with such a generous profusion of bloom, to moderate care and cultivation, as does this plant. This fact is impressed upon me more every

FIG. 2052. THE CYCLAMEN.

season as I look upon the magnificent array of color, smiling as they stand upon the benches, clean, bright and cheerful, like the refreshing greetings of the sunbeams after dark and dreary days. It gives a thrill of real delight, such as the millionaire cannot abstract from the intrinsic worth of his gold, as we approach them and count, as I did this morning, on one plant nearly 100 perfect blooms, and buds uncountable, nestling at the base of the leaf stems and on the crown. To the ladies, let me say, this attractive and very useful plant, flowering from October till August, is very easy to manage, even to growing from seed. Sow in a small box about two inches deep, in a soil of a light nature, press the seed its own depth into the soil with a flat piece of board or shingle, and cover lightly. Place in a temperature of 55 degrees or thereabouts, cover with glass for a while in order to keep slightly moist, not wet. After a while lift the glass and keep evenly damp. You will soon see the bulblet appear.

Then as soon as they have two leaves, if they need more room prick off into another box farther apart, or better still, into small or two inch pots singly. This is the better way, not five or six in a pot. Grow on and give plenty of air, and don't let the hot sun strike them directly, as they are fond of shade, especially in the hot days of the fall and spring months. Repot as soon as the roots move well to the pot, and let the soil have a little well decayed manure mixed with it; drain the pots well. Keep them growing at 55 to 65 degrees and will soon be rewarded with bloom that will surprise you.

Keep off green fly and thrip. Watch them closely on the younger leaves, and if they appear, ask a friend who smokes to throw a whiff or two under the leaves and the flies will fall so that you can easily destroy them.

If you wish to keep your corms till a second season, don't dry them out to a withering degree, but simply let them rest with sufficient life in the soil to give nourishment to the bulbs in which lies all the vitality for a greater abundance of bloom next season. Start them afresh by watering more freely any time from August to October, as you may wish them in succession; also grade the temperature, as you may wish to keep back or hasten into bloom.

EXPERIENCE WITH CANNAS

G. A. WOOLSON.

FLOWER OF CANNA AUSTRIA,
TWO-THIRDS NATURAL SIZE

FIG. 653.

THE advent of Canna Austria marked an important era in the culture of these semi-tropical plants, which are now considered so essential to every lawn. The foretelling of its glory impressed me favorably, hence a fine specimen was duly installed in a prominent bed in my garden. Somewhere I had read that the variety "did best in poor soil." This I did not in the least believe, for I had had long and intimate acquaintance with cannas of many kinds and had fully demonstrated their ability of appropriating for personal glorification the desirable elements in the richest and strongest soil which the ingenuity of man could concoct. Consequently I expected to break all previous records of the new acquisition.

Cow manure was liberally spread over the bed and the soil forked over and thrown out. Just what the excavation was filled with I positively refuse to tell. However, the reservoir was to serve as bank account for the plant to draw from later on. The soil was then thrown back and the bed got in shape. All went well for a while. Fine fresh leaves unrolled rapidly, but after a little they blanched strangely, turned brown and withered.

"Drench it with plain straight water," was the advice given, but of no avail. The roots had struck the reservoir, and deluging the soil only choked them with a bigger drink. My "centre piece" was facetiously commented on. The roots were lifted in the fall, and as they were sound, but not vigorous, were ensconced in a 10-inch pot, given indifferent soil and placed in a sunny bay window. Liquid fertilizers were dutifully passed on to more appreciative cannas, nevertheless nothing but leaves resulted; these were good to look at, and Madame Crozy and Gen. de Miribel made up all deficiency of bloom, showing what a canna should and could do indoors in midwinter.

Last spring I cut down the stalks and divided the root growth into thirds; two of these were repotted in ordinary soil and a moderate allowance of liquid fertilizer given occasionally, but out of door pot culture was no more fruitful than that indoors, in fact the foliage was less luxuriant, owing to the more rapid evaporation of moisture in the open air. The third section was located in the poorest vein of soil my garden could furnish: some water was of course given, but assuredly the subject was not "fussed with." As a result thereof there stands in that unusually barren spot a robust plant stretching its glorious spikes of clear yellow to a height of six feet. Individual flowers measure fully six inches across, and the larger petals are fully two inches wide. Obviously Canna Austria is a law unto itself, a fact de-

monstrated at the expense of a little personal conceit.

A dwarf canna (Nellie Bowden) growing close by, looked quite like a small edition of its "lily-flowered" superior. It is the only canna which might properly be called dainty looking, and it is that in leaf and flower, as both are small, trim and slender. The color is a little deeper yellow and lacks the clear transparency of petal; the two smallest petals are stained with red much deeper than the faint dots of Austria. This is also a free bloomer out of doors, but has never done anything indoors. The extreme height thus far attained is 38 inches.—*Am. Agriculturist.*

THE CRIMSON RAMBLER ROSE.

BY T. H. RACE, MITCHELL.

"I AM sure," says the editor of National Stockman and Farmer, "that many readers of this paper have this beautiful rose but they do not all have it, as they sometimes drive in to my place to see the Ramblers in bloom. About four years ago I planted a dozen of the Ramblers, and now they make a grand showing on the green lawn. What I particularly want to ay about this rose is that once you have it started it will take care of itself, and is insect and disease proof, which can be said of very few beautiful flowering plants. We all love beautiful flowers, and if we can have them without too much nursing and petting we want them, and of that class the Crimson Rambler is one of the best."

Every word of the foregoing is true about the Crimson Rambler. But even this thing thing of beauty is likely to have a popular rival in the more delicate Dorothy Perkins. I have two of the latter blooming this year; one-year-old plants planted a year ago, and they are pleasing me very much. The stock is more slender in its growth than that of the crimson and the foliage is somewhat finer and brighter green. The individual bloom, a soft pink in color, is no larger than the crimson, but it is finer and fuller, and the clusters are quite as heavy. Being slender in growth, it is easily laid down, and mine came through the winter with no covering except the snow.

FALL PLANTING OF ROSES.

BY

T. H. RACE, MITCHELL.

I AM asked if I would recommend planting Rambler roses in the fall, or any other class of roses. I decidedly prefer fall planting for all out-door roses. Last fall I planted a number of Ramblers, crimson and pink, two-year-old bushes, and left shoots two feet long. This year they are covered with a mass of bloom, as if they had not been moved. This spring I planted a row of twenty crimsons in very strong ground. They were strong two-year-old plants, and are doing well, but not blooming like those planted in the fall. My experience is the same with all other kinds of roses.

OUR OUTCAST GARDEN FOLK

"After all, nothing prospers like weeds, all the world over;
Nought makes them rue, neither cold nor heat nor drought dismays them ever."

ON a bright day in spring, while wandering round one's garden, it is impossible not to give a thought sometimes to the poor outcasts who would like to live in it, but who, for the most part, are destined to a very different fate—the burn-heap of the weeds. It may be that there are not so very many of them about, for the weather may have been dry and the season late, but they are only biding their time: the first warm shower will find them pushful as ever, and there will be plenty of enemies to challenge them at the gate.

Scores of very particular people there are, who simply cannot pass a dandelion without rooting it up, or a daisy (especially in the lawn) without longing for a fork. Nettles of all sorts, even the pretty white and yellow ones, as also do thistles, vetches, and spurges, all of which are very fond of intruding into gardens; they are known to be troublesome, and have bad characters.

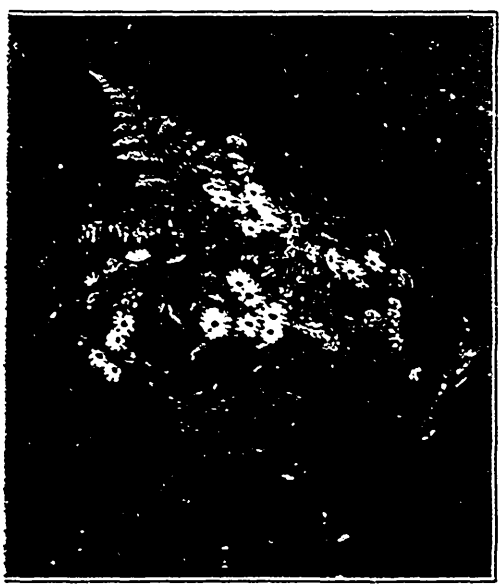


FIG. 2654. AN ARRANGEMENT OF OX-EYE DAISIES, WILD PARSLEY AND FERNS.

The measure of morality, as applied to plants, seems to vary as much as it does with reference to the human family. The pariah of one place becomes the pet of another. Like the question of how many wives it is expedient for a man to have at a time, much depends on latitude and longitude. In different parts of the country, in the same week I have heard the same plant—the grape-hyacinth—spoken of as "that pernicious weed," and "the precious little blue flower that lives in rockeries." When and where make all the difference: it is possible to have *too much* even of a *good* thing, and numbers of pretty common flowers, by making themselves too cheap, earn the opprobrious and scarcely-deserved epithet of "weeds." Marigolds are flagrant offenders: gay in color, and gifted with a pleasant bitter-sweetness, at times they are a plague, and I have myself suffered many things of my favorite oxalis. Only last year it threatened to swamp us in clover, wanting to carpet the rose beds, and make an emerald setting for the geraniums. We rooted it up, scattered it, and dried it in the sun. In vain: it always turned up a short time after, smiling, and apparently unconscious of any check.

To many people weeds have a peculiar fascination. Their very wildness appeals to an instinct of human nature; that is by no means unaccountable, but one has to dive below the surface to understand it. The same Bohemian spark it is that makes us enjoy uncomfortable picnicing and the trials of life in camp: that lends a charm to every kind of sport, and sends the Englishman hunting for wild things all over the

globe. We cannot all of us, in pursuit of new daffodils or orchids, rush after these wildlings, to look for them in their native haunts, or track them in the dim recesses of the jungle; but another field is always open, if we will only look for it. At our feet it lies, and it is well worth exploration. The very best place I know of for studying weeds is one's own garden, and the next best places are other people's gardens. What with winds and wild birds, we need never fear the supply of specimens will run short.

On the whole, other people's gardens are the most entertaining on account of their variety. Country houses of friends, hotel gardens, and the houses we own for a season affords us opportunities. The weeds vary, of course, with every locality, and most gardens provide something fresh if it be only a stowaway, that has come from afar, in moss, or litter, or packing stuff. Such errants are misleading, but they add to the excitement of the chase.

It was once my good fortune to own a garden in gravel land, near a forest. A half filled gravel-pit that had been left in it was a paradise for weeds; never to be forgotten was the way the trefoils, thrincias, and cat's ears flourished in the sunshine. Most beautiful of all were the tufts of viper's-bugloss, its fuzzy green leaves and clusters of brilliant blue flowers, dazzling between the yellow earth and sapphire sky, blue against blue. A chalk garden has many delightful weeds, and so has a garden that owns a stream or lake, all different, with differing ways and scents.

When one comes to think of it, what an untold debt of gratitude we owe the weeds of by-gone centuries. How about those that were good enough to turn into coal, and are now burning for us? A coal-box is not a usual place for the study of botany, but one might do worse than turn one over, now and again, in search of floral impressions. Lignite, of course, is better; being in the transition stage, it is quite easy to pick out little stems and stalks. Two friends, one a geologist and the other a botanist, once took me for a walk, and for fear of being considered a wild romancer, I will not say how many kinds of weeds were recognized in some seams of lignite, brown and black. In fact, had everything we came to not been in a fossilized condition, we could have had an oyster feast out of the rocks, and salad to go with it.

Sometimes in gardens one comes across an unattractive outcast, commonly known as the horse-tail. At sight of this small weed an imaginative mind may take a leap backwards across past æons, and see the horse-tails as they used to be, when, giants in the land, they lived along with the mammoths of the period, the slow-moving reptiles and the silent lizards, half fish, half bird. We must forgive this homely weed its flowerlessness and want of beauty, for the sake of the tales it dumbly tells us.

FIG. 2655. A BEAUTIFUL ARRANGEMENT OF WILD FLOWERS.

Others we have to pardon, remembering the many good turns they do for us in the country and in town.

Their role it is, not only to make the lovely more beautiful, but also to beautify the unlovely. Over the hedgerows they scatter showers of gipsy-roses, the lanes they stud with starry stitchworts, white as milk, along with cuckoo-loving campions, lilac scabious, blue chicory, and all the other weeds that lead their lives 'twixt dusty road and meadow grass. No barren space, be it railway cutting, neglected churchyard, or any other vacant spot, is left unfilled, at any rate with leafage.

"Soon is the foliage soft and green
Drifts of hawthorn fall for a s reen."

Through all the changing seasons from spring to winter's fall, the weeds and wildlings are very busy filling gaps and making backgrounds for us. Let us be grateful, and look with lenient eyes even upon our "outcast garden-folk."—*The Gardener's Magazine.*

IVY FOR PICTURE FRAMES.

IVY is one of the best plants to have in the house, as it bears a large amount of neglect and abuse, and gratefully repays good treatment. It is not rare to see a pot of ivy placed where it can be trained around picture frames or mirrors, and thus border them with living green. A good plan is to dispense with the pot, or rather have a substitute for it, which is kept out of sight.

Our illustration shows a picture frame wreathed with ivy after this method. Only a good-sized picture or mirror can be treated in this way, and as such are usually hung so that the top of the frame leans forward, the space between the frame and the wall is available for the receptable for the plant. A pot or pan of zinc, of a wedge-shape, and size to suit the space between the frame and the wall, can be made by any tinsmith. This is to be hung against the wall so as to be quite concealed by the picture, and the ivy tastefully trained over the frame. A rustic frame is better suited to this purpose, as it not only affords better facilities for attaching the stems to the frame, but its style seems better adapted to this kind of decoration than more pretentious ones. Still, a gilt frame may be made beautiful in the same way. There is only one precaution to be used, viz.: Not to hang such a frame over the fire place, for the combined heat and dust would soon destroy the plant. Let it hang so that it may face a north or east window. Don't forget the water; the pan holding the plant is out of sight, and, therefore, should be kept in mind.

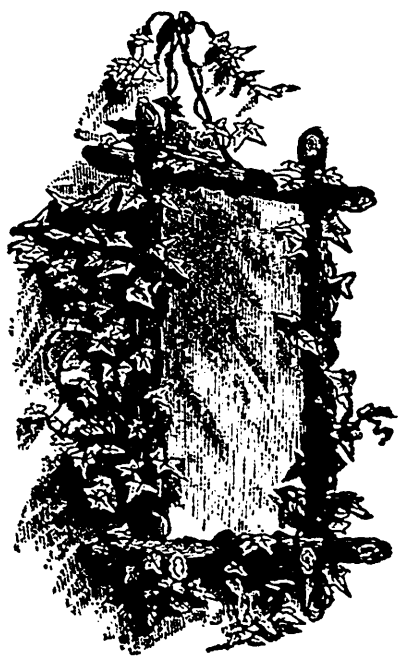


FIG. 2656. IVY FOR PICTURE FRAMES.

The Canadian Horticulturist

COPY for journal should reach the editor as early in the month as possible, never later than the 12th. It should be addressed to L. Woolverton, Grimsby, Ontario.

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.

REMITTANCES by Registered Letter or Post-Office Order addressed The Secretary of the Fruit Growers' Association, Parliament Buildings, Toronto, are at our risk. Receipts will be acknowledged upon the Address Label.

ADVERTISING RATES quoted on application. Circulation, 5,500 copies per month. Copy received up to 20th.

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.

ADDRESS money letters, subscriptions and business letters of every kind to the Secretary of the Ontario Fruit Growers Association, Department of Agriculture, Toronto.

POST OFFICE ORDERS, cheques, postal notes, etc., should be made payable to G. C. Creelman, Toronto.

Question Drawer

WISTARIA NOT FLOWERING.

SIR, Could you through the columns of your paper give me any information how to make a white Wistaria blossom. It has been planted about ten years against a south wall, slightly under an overhanging roof. I have tried partial roof pruning, and have tried spur pruning as well as less severe top pruning, but no plan seems to induce it to bloom. The plant has a fine healthy foliage but no blossom.

Toronto, Ont. F. W.

Answered by Wm. Hunt, O. A. C., Guelph.

Wistarias are sometimes very fickle and difficult to induce to flower. The overhanging roof mentioned is certainly of no benefit to the plant in this respect.

I would recommend that the plant be well pruned back late this autumn, or still better early next spring, and if possible the plant removed to a more open position. If this —from the age and size of the plant—is not practicable, dig a trench around the plant about 3 feet from the base of the stem, about 2 feet deep and 1 foot in width. Fill this trench with fairly large stones, rubble, or gravel, so as to confine the roots somewhat more than they probably are at present. I tried this plan once on a plant of Wistaria that had been planted for eight years without flowering, and it proved quite successful in bringing it into flower. This plant I purchased for a white Wistaria, but it proved to be a worthless variety with short stunted racemes of dull blue flowers.

not worth growing. It was probably the variety known as Wistaria brachybotris, or the short clustered variety.

A good specimen of the white Wistaria is seldom seen, the only one that I know of in this section is a plant growing on the verandah of a house at the northwest corner of Herkimer and Macnab streets, Hamilton. This specimen could be seen flowering beautifully every year in July, and was a pleasing and conspicuous ornament to the residence.

PLANTING PEONIES.

SIR, I am planting some peonies in the fall, and as the soil is very poor and sandy, would you kindly tell me whether I should replace the sand with some other good soil that would be better for peonies. If not, what kind of fertilizer would you advise me to enrich the soil with, and how deep should I plant the tubers.

London, Ont. SUSCRIBER.

Answered by Wm. Hunt, O. A. C., Guelph:

If the soil is very sandy, it would be best to remove it to about a spade's depth and replace the same with a good admixture of well rotted manure thoroughly mixed with it. Fertilizers would be of very little use in very sandy soil. Each plant should have a space of ground prepared for it in the manner I have mentioned at least two feet equare.

The tubers should be planted so that the tips of the young crowns are about half an inch under the surface of the soil. A mulching of long strawy manure about two inches in thickness placed over the plants in November would benefit them. Remove the mulch in early spring.

OPENING FOR EUROPEAN MARKETS.

Will you kindly permit me to use the columns of your valuable paper to call attention to a number of lines in which I believe an excellent opportunity is offered for the extension of our trade with Germany, Belgium and Holland.

At the present time there appears to be a good opening for trade in fresh, dried and evaporated apples in Germany, where the latter pay a duty of $1.25 per 110 pounds and the former enter duty free. It is true that an act has been passed imposing a duty on fresh fruit from Canada, but it has not been brought into force, and will only become operative by Imperial proclamation. Large quantities of evaporated apples from the United States are sold annually in Germany, and as the quality of the Canadian goods is admitted to be better, there is no reason why we should not be able to compete with the Americans.

In Holland only fancy evaporated apples are wanted. The duty is 5 per cent. ad valorem for both fresh and dried fruits.

Belgium will take considerable quantities of both dried and fresh fruits, particularly Spy, Baldwin and Greening apples in boxes. Fresh apples are free of duty, but 10 per cent. ad valorem is collected on dried and evaporated goods. Canadian cheddar cheese, if mild, will sell even in competition with the best Holland. It would bring about 20 cents per pound retail, leaving an ample margin for profit after paying freight and commission, and the duty, which is slightly over one cent per pound. It is particularly to be noted that only a mild cheese is wanted. Belgium takes annually 23,000,000 to 32,000,000 pounds of Dutch cheese, 6,500,000 pounds of Swiss Gruyère, and 2,100,000 pounds of fine cheese from France. Practically none is made in Belgium. Tinned meats, game, poultry and tinned tomatoes are also in demand.

If Canadians are to secure a share of this trade they will have to get out and "hustle" for business. The merchants as well as the consumers of Belgium and Germany are very conservative in their tastes and methods, a statement that we often hear but do not fully appreciate. Americans and Canadians will buy and test a new article simply because it is new, but with the European consumers the opposite is the case. The merchants over there have their trade established and are content. Why should they change? We must show them that it would be to their advantage to do so. In this connection I desire to emphasize particularly the advisability of Canadian shippers sending over liberal samples of their food products for distribution. They will find it profitable to do so, and to quote prices freely. At first goods would have to be shipped on commission, but when a footing is gained business can be done on a cash basis. It is, of course, necessary above all things that goods shipped shall be carefully packed and true to sample, as this is the only way to gain and hold the confidence of the merchants.

It may be mentioned that the Canadian agent in Belgium, Mr. D. Treau de Coeli, 75 Marche St. Jacques, Antwerp, will be glad to answer inquiries and to give all the assistance in his power to enable Canadian shippers to make satisfactory connections in that country. If liberally supplied with samples, he will see that these are properly stored and distributed to the best advantage as occasion offers. Among the firms who may be consulted, and who will handle consignments on a reasonable commission, might be mentioned Alfred B. Stellens, Hamburg & Luisenhof, Germany, and J. Tas, Ezn, and the North Atlantic Trading Company, both of Amsterdam, Holland.

W. A. MACKINNON,
Chief, Fruit Division.

DUCHESS APPLES IN GLASGOW.

Mr. John Brown, Dominion Government Inspector at Glasgow, reports that the first shipment for the season of American Duchess apples arrived there on the 3rd of August in good condition. They sold at prices ranging from 12 to 21 shillings, notwithstanding the fact dealers showed some hesitation in taking such early fruit.

WHAT THE FRUIT INSPECTORS ARE DOING.

Mr. J. J. Philp, Dominion Fruit Inspector of Winnipeg, is coming east and will address a number of meetings in the fruit growing sections of Ontario. There are great possibilities for Ontario fruit in Manitoba and the Northwest, and Mr. Philp hopes that the information he will be able to give regarding the western markets will be appreciated by the eastern growers and shippers. Full instructions will be given regarding the quality of fruit and shape of packages wanted in the west. Meetings have already been arranged for Chatham, Burlington and St. Catharines, and it is expected that others will be held at Walkerton and some other fruit centres. After the meetings are over Mr. Philp will spend some time doing inspection work through Ontario and at Montreal, so as to become thoroughly familiar with the methods practised in the east.

While Mr. Philp is in the east Mr. J. F. Scriver, the Montreal inspector, will take his place in Winnipeg to study conditions and get in touch with the dealers and consumers in the west. Lieut. Vroom, Nova Scotia inspector, who was a member of the Bisley team, is now returning to Canada by the Tunisian. After the shooting was over he spent a few days studying the conditions of the fruit trade in the chief British markets, and will be able to take up his work in Nova Scotia with a better understanding of the requirements of dealers and consumers in the Old Country.

Mr. A. McNeil, senior inspector, will have charge of the Fruit Division's exhibit at the Toronto Industrial Exhibition and will also conduct the packing demonstrations.

OUR BOOK TABLE.

American Horticultural Manual—Part II. Systematic pomology, containing descriptions of the leading varieties of the orchard fruits, grapes, small fruits, subtropical fruits, and the nuts of the United States and Canada, by J. L. Budd, professor emeritus in horticulture in the Iowa State College of Agriculture. Illustrated by hundreds of outlines of the leading commercial fruits and nuts. Published by John Wily & Sons, New York City. Price, $1.50.

A most valuable work for the fruit grower, and published at a marvellously low price, considering the immense amount of work entailed upon the author in preparing the technical descriptions.

THE FOREIGN APPLE CROPS.

A Short Crop Everywhere—Higher Prices Than Last Year Should Prevail.

All reports agree that both apples and pears are a short crop in Europe, and that our Canadian stock will be in great demand. A very complete report is just to hand from E. A. O'Kelly & Co., Covent Garden, London, from which we cull the following portions:

England.—There are no crops whatever of English apples this year. The London market, as is well known, is the natural outlet for apples from the home countries. We therefore believe that the London market will be as high as it was last year, and we shall most probably see London speculators take advantage of this, to buy apples in Liverpool, send them to London and realize a good profit, as was frequently done last year.

France.—The Dieudonne district (red apple district), the Charente district (Russett's district), and the Anger's district cannot be taken into account this year. We hear from reliable information that there are no apples whatever in France, and we believe that a few good good American or Canadian apples, such as prime Baldwins, and especially Russets, might be sold with advantage there. Shippers should only send small lots, and only the very best. We are in a position to take charge of shipments for Paris.

Italy has a fair crop of apples, but they will probably all find their way to their usual outlet, that is to say, the south of Germany and Hungary.

Spain has a medium crop, but the bulk of same will be imported into France for cider making.

Germany.—There is a good middling crop in that country this year, but as the bulk of apples grown there are cooking apples, Germany will be open this year again to receive large quantities of prime red apples, and we feel sure results will give shippers satisfaction.

Holland.—There is a fair crop of apples in Holland, but the quantity of apples grown there is limited.

American and Canada.—As far as we can judge, the crop of Canadian and American apples is not quite so large as last year, but the quality is, if anything, better. We are of the opinion that this year again American and Canadian operators are going to have things their own way. There is really no competition to be feared from apple growers this side of the water. It remains for operators to act in a judicious way, and this season ought to be a good one for all concerned. In consequence of the complete failure of English and French crops of pears, apples and plums, we are sure that early apples will do well. The same can also be said with reference to pears, providing they reach us in good condition.

The editor of this journal is now (August 25) packing a carload of his Bartlett pears and Duchess apples for Glasgow, to go in cold storage on the steamer Lakonia on the 3rd of September. He will report the result as soon as he receives his account sales.

BOOKS FOR HORTICULTURISTS.

FRUIT, FLOWERS, ETC.

Amateur Fruit Growing. Green $0.50
Apple Culture, Field Notes on. Bailey. ... 0.75
Bulbs and Tuberous Rooted Plants. C. L. Allen 1.50
Bush Fruits Prof. A. Card 1.50
Canadian Garden. Mrs. A L. Jack ..... .50
Chrysanthemum Culture. Morton. Cloth .. 1.00
Chrysanthemums, How to Grow ..... .25
Cider Makers' Handbook. Trowbridge 1.00
Cranberries, Cape Cod. James Webb. Paper ..... .40
Cranberry Culture. White 1.00
Crops, Spraying. Clarence M. Weed ..... .25
Dahlia, The. Lawrence K. Peacock ..... .30
Evolution of Our Native Fruits. Bailey 2.00
Floriculture, Practical. Peter Henderson ... 1.50
Flower Garden, Beautiful. Matthews ..... .40
Flowers, and How to Grow Them. Rexford .50
Forcing Book. Bailey 1.00
Forest Planting. Jarchow 1.50
Fruit Culturist, American. Thomas 2.50
Fruit Grower, Practical. Maynard ..... .50
Fruit Harvesting, Marketing, etc. F. A. Waugh 1.00
Fruit, The. P. Barry 1.50
Fumigation Methods. Willis G. Johnson ... 1.50
Fungi and Fungicides. Clarence M. Weed. 1.00
Garden Making. Prof. L H. Bailey 1.00
Grape Culturist. A. S. Fuller 1.50
Grape Grower's Guide. Charlton ..... .75
Grape Growing and Wine Making, American. Prof. George Husmann 1.50
Greenhouse Construction Prof. L. R. Taft. 1.50
Greenhouse Management. Prof. L. R. Taft. 1.50
Horticulture, Annals of. Prof. L. H. Bailey. 1.00
Horticulturist's Rule Book. Prof. L. H. Bailey ..... .75
House Plants and How to Succeed with Them. Lizzie Page Hillhouse 1.00
Insects Injurious to Fruits. Saunders 2.00
Irrigation Farming. L. M. Wilcox 2.00
Lessons with Plants. Bailey 1.10
Mendel's Principles of Heredity. Bateson .. 1.30
Nursery Book. Prof. L. H. Bailey. Cloth . 1.00
Nut Culturist, The. Andrew S. Fuller 1.50
Peach Culture. Fulton. Revised edition ... 1.00
Pear Culture for Profit. Quinn. New and revised edition 1.00
Plant Breeding. Bailey 1.00
Plants, Handbook of. Peter Henderson. New enlarged edition 3.00
Plants, Propagation of. A. S. Fuller 1.50
Plants, Your. James Sheehan ..... .40
Plums and Plum Culture. F. A. Waugh 1.50
Principles of Fruit Growing. Prof. L. H. Bailey 1.25
Pruning Book, The. Prof. L. H. Bailey 1.50
Quince Culture. W. W. Meech 1.00
Rose, The. Its Cultivation, Varieties, etc. H. B. Ellwanger 1.25
Rose, Parsons on the 1.00
Small Fruit Culturist. A. S. Fuller 1.00
Spraying of Plants, The. E. G. Lodeman .. 1.00
Strawberry, The A B C of the. T. B. Terry A. I. Root .... .50
Strawberry Culturist. A. S. Fuller. Illustrated .... .25
Survival of the Unlike. Bailey 2.00
Vineyard at Lakeview. My ..... .50
Woman's Hardy Garden, A 1.50

LIVE STOCK.

American Standard of Perfection 1.00
Artificial Incubating and Brooding. Cypher .50
Cattle Breeding. Warfield 2.00
Feeds and Feeding. Henry 2.00
Horse Breeding. Sanders 1.50
Horses, Cattle, Sheep and Swine. Curtis ... 2.00
Pigs, Breeds and Management. Spencer ... 1.00
Stock Breeding. Miles 2.00
Success with Poultry 1.00
The Domestic Sheep. Stewart 1.75

VEGETABLE GARDENING.

Asparagus. Hexamer $0.50
Cabbage, Cauliflower and Allied Vegetables. Allen .... .50
Vegetable Gardening. Green 1.25

GENERAL AGRICULTURE.

Agriculture. C. C. James ..... .30
Chemistry of the Farm. Warington ..... .90
Fertility of the Land. Roberts 1.25

Any other book on Agricultural topics will be procured at lowest price.

Address all communications to

G. C. CREELMAN,
Parliament Buildings, Toronto.

SHETLAND PONIES

Real Shetland ponies, says *Country Life in America*, are scarcer than most persons imagine. At last accounts there were only a couple thousand, roughly speaking, on their native isles, and they are rapidly being exported or spoiled by the admixture of other and larger breeds. There are comparatively few pure Shetlands in this country and many of the ponies offered for sale by dealers as such are really half-breeds or Iceland ponies.