

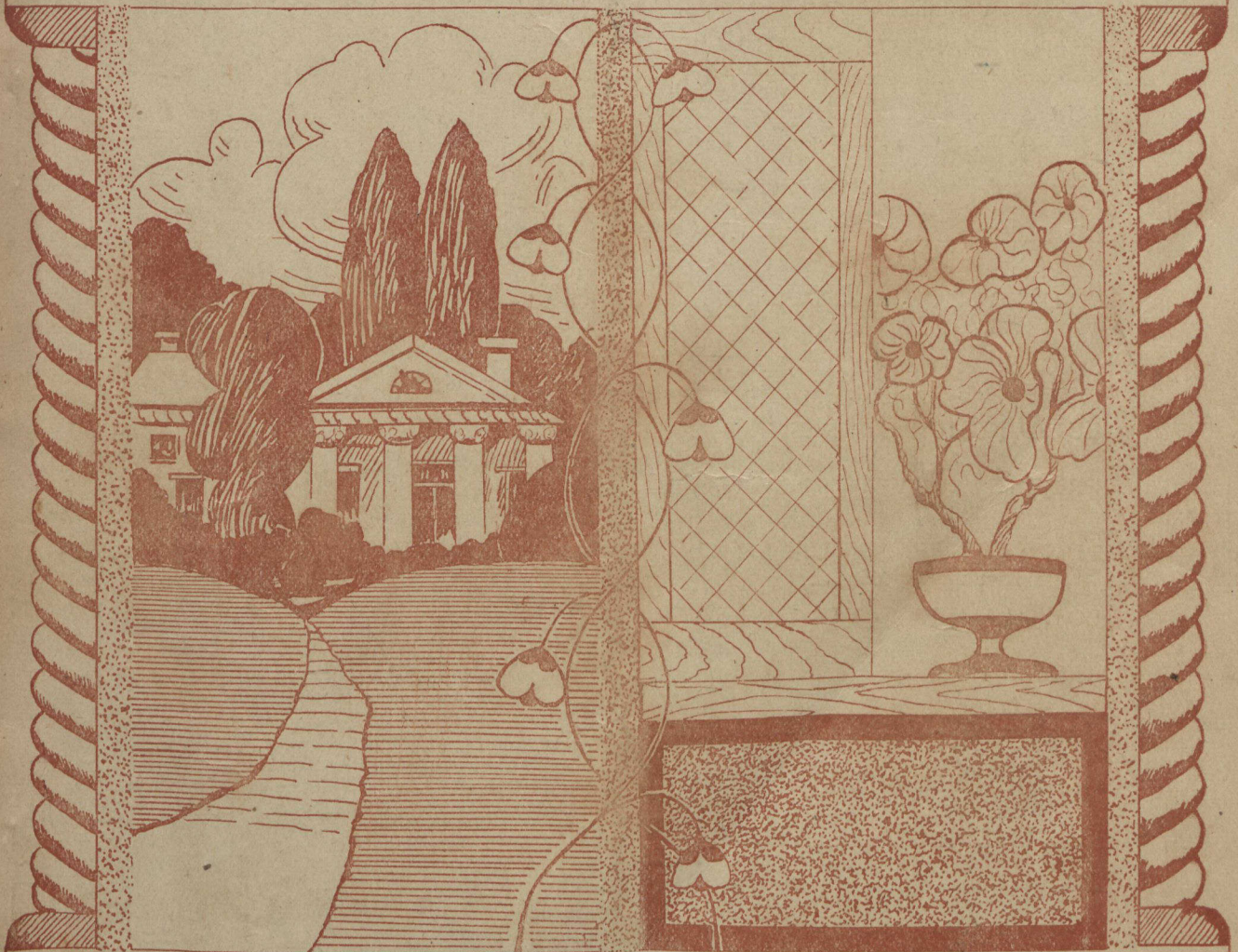
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JANUARY, 1904

\$1 A YEAR

THE CANADIAN HORTICULTURIST.

Scott W G
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Allans Mills
Ont.



DEVOTED TO FRUITS AND FLOWERS, CIVIC
AND RURAL IMPROVEMENT.

PUBLISHED BY THE ONTARIO FRUIT GROWERS' ASSOCIATION, TORONTO, ONT.
G. C. CREELMAN, SEC'Y, PARLIAMENT BUILDINGS.

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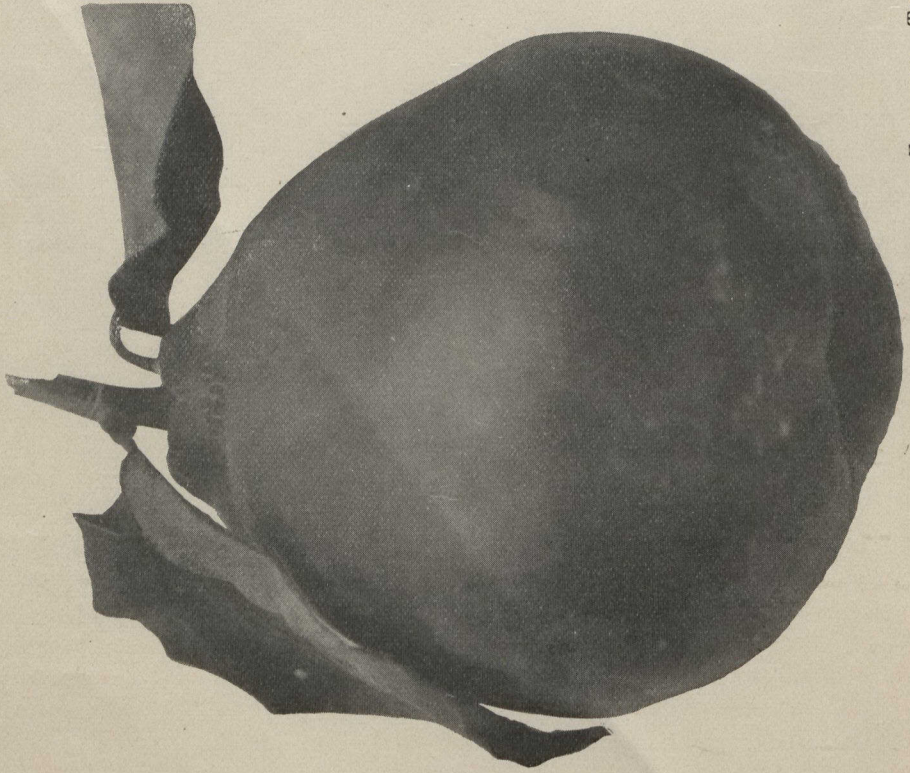
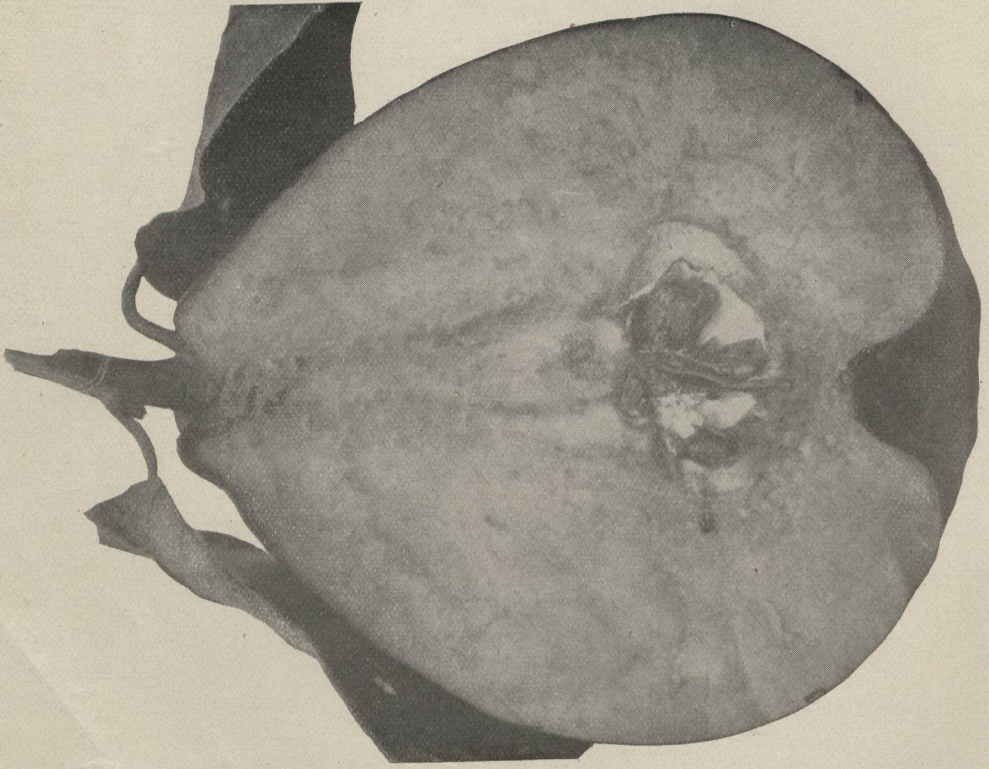


FIG. 2710. THE FULLER QUINCE.

The Canadian Horticulturist

JANUARY, 1904

VOLUME XXVII



NUMBER 1

THE FULLER QUINCE

AMONG several varieties of quinces fruited at Maplehurst in 1903, was the Fuller, a sample of which we had photographed for use as a frontispiece to this number.

The variety is named after Mr. A. S. Fuller, of Ridgewood, N. J., who noticed it fruiting on a neighbor's grounds in about the year 1870, took some cuttings and introduced it to public notice. It may be described as follows:

TREE: A good grower and showy both in fruit and flower.

FRUITS Large, $3\frac{3}{4} \times 4$ inches; distinctly pyriform in shape, sometimes with an elongated neck, somewhat ribbed.

COLOR: A rich yellow; calyx set in a deep wide basin.

FLESH: Tender in texture; flavor good.

SEASON: Last of September.

VALUE: Market, good; home uses, good.

QUINCE CULTURE.

Quince culture is not so profitable of late years as formerly. Thirty years ago the writer had orange quinces sold in Toronto at \$6.00 a barrel, and these prices soon gave such encouragement to the planting of quince orchards, both in Ontario and in New York state, that the markets were soon

overstocked, and the price came down to \$2 and \$3 a barrel. This season the demand was a little better, and no doubt in future it may pay fruit growers to cultivate this fruit on a moderate scale.

In planting quinces for profit care must be taken to secure the Orange or one of its sub-varieties, such as Fuller, Meech's Prolific or Champion. These are all satisfactory, both as to beauty of fruit and productiveness of tree. The Angers, or common quince, is useful as stock on which to dwarf the pear tree, but the fruit is small and unsalable, and the tree often unproductive.

The propagation of the quince is very simple, and if one has a few trees the number may easily be increased, either by encouraging the growth of suckers or by cuttings, which take root very readily.

The quince orchard should be planted on good rich soil, not too dry. If the land will produce 100 bushels of potatoes to the acre, or 50 bushels of corn, it will do for quinces; otherwise the best results need not be expected. Pruning must not be neglected or the heads will become a tangled mass, and the crop will be most disappointing; but, generally speaking, no fruit tree receives less attention in regard to the details of cultivation and pruning than the Quince. Fig.

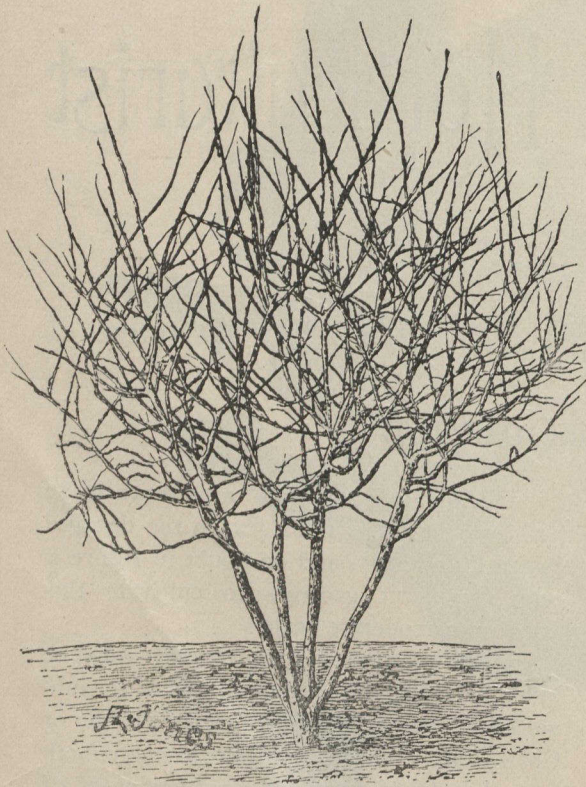


FIG. 2711. QUINCE TREE, UNPRUNED.

2711 shows a quince tree as it is usually permitted to grow, without much pruning; while Fig. 2712 shows the same tree pruned out as it should be sometime before spring growth begins.

A mistake is often made in planting quince trees too close together. One orchard we have visited was set about ten feet apart each way, and in consequence cultiva-

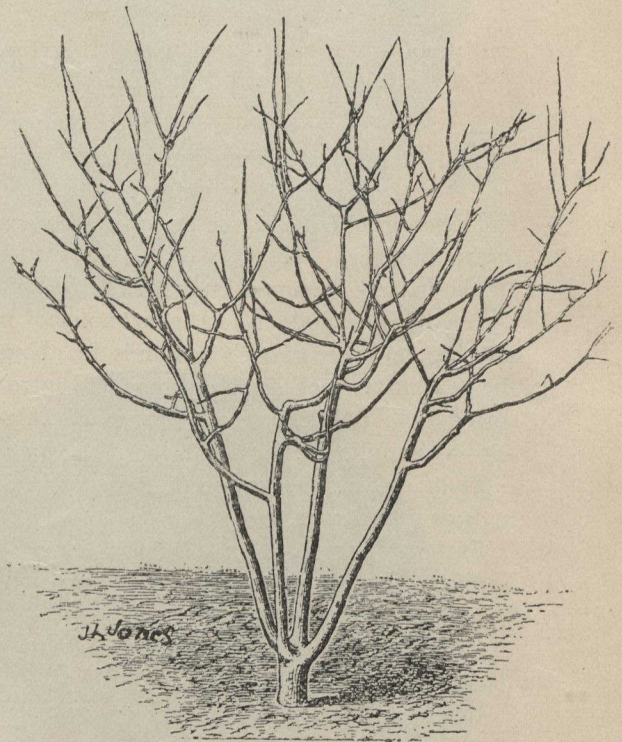


FIG. 2712. QUINCE TREE, PRUNED.

tion ceased after a few years, and a more disreputable plot could not be imagined. It is better to plant quince at least 12 feet apart each way, and then give them first-class cultivation, going two ways with disk and an Acme harrow. A plow should not be used in a quince or in a dwarf pear orchard, because the quince roots are surface feeders, and if cut closely the trees will be stunted in growth and perhaps be blown over with the first heavy wind storm.

THE GARDEN

(From *Country Life in America*.)

Have you thought how, cheerily, day to day,
 The thankless air perfuming,
 Tho' often stripped of its blossoms gay
 The garden keeps on blooming?
 How never it stops when its choicest rose
 From its very heart is ravish'd,
 But richer and fuller its buds unclose,
 And its incense sweet is lavish'd.

Editorial Notes and Comments

A HAPPY AND PROSPEROUS NEW YEAR to all the readers of the Canadian Horticulturist.

* * *

A CONTENTED MIND may conduce to happiness, but both enterprise and industry are essential to prosperity.

* * *

COLD STORAGE of some kind is almost a necessity both on the farm and in the orchard, and no enterprising farmer or fruit grower will neglect to provide this convenience if he can at all afford the expense.

* * *

ICE SHOULD be cut and stored early in the winter when at its best. Only ice from pure water should be stored for house uses; but for producing cold air of course this point is less important.

* * *

AN ICE HOUSE may be built of old lumber and at a trifling cost, according to directions given elsewhere in this number.

* * *

PRUNING of the apple, pear and plum trees may be done in mild days through the winter, and is labor well applied. The fruit grower is too busy in spring to give the work the time needed to make a good job.

* * *

AVOID LARGE CUTS in pruning the apple if possible, and then thin out the young wood from the outside instead of beginning at the trunk.

PACKAGES FOR NEXT SEASON.

WINTER is a good season for laying in baskets, barrels, boxes, etc., for next season's crop. Boxes can often be purchased in knock down shape at a low

rate, and carried for very little freight in car lots; the nailing up can be quickly done in a shop or cellar during the winter if a form is provided for holding the ends upright.

WINTER TREATMENT OF PEAR BLIGHT.

EVERY pear grower should be on the alert against this terrible destroyer of his finest trees, and now is the time to prevent its ravages. The blight does not spread in winter, but the tiny organisms which cause this fatal disease lie dormant but alive in the blighted branches until spring. Then, as soon as the sap begins to move, these bacilli become active and find their way to the exterior of the infected branches either through the exuding sap, or, later, through the opening blossoms and are carried to other trees by wind or bees.

Clearly then the only safe thing to do is carefully to cut off in winter every branch which shows indications of the presence of blight.

BITTER ROT AND APPLE CANKER.

THE Bitter Rot, which a short time ago was unknown in Ontario, has now become widely spread among our apple orchards, and every year the damage seems to be greater than it was the previous year. Fine apples, which show very faint spots under the skin when harvested, after being stored sometimes become pitted as if attacked by smallpox and become unsalable. Bul. 44, U. S. Plant Industry, estimates the loss to the apple crop of the United States in 1900 at \$10,000,000! It has been shown that this fungus is related to the apple canker, the spores of which will produce it, and vice versa, the spores of the bitter rot will pro-

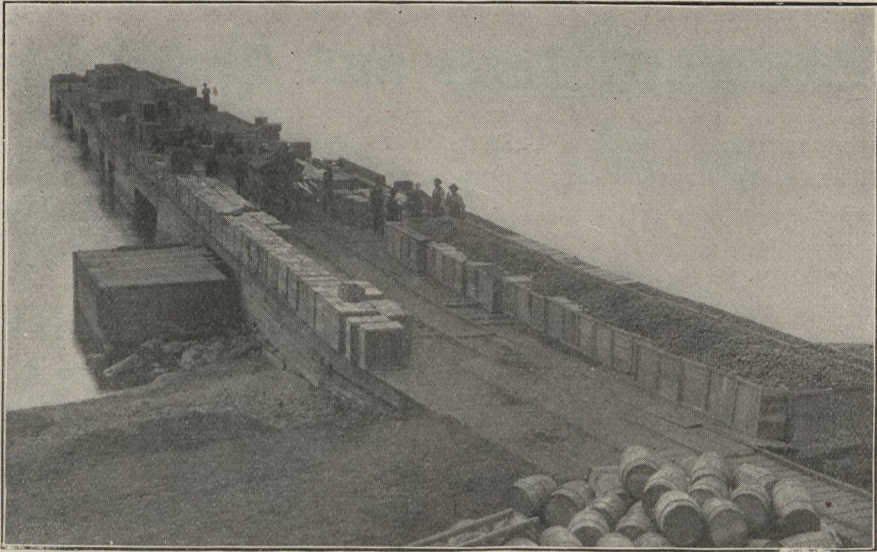


FIG. 2713. THE EXPORT OF CIDER APPLES FROM ONTARIO TO FRANCE IN 1903. THE BURLINGTON WHARF AS IT APPEARED PREVIOUS TO THE ARRIVAL OF THE STEAM BARGE. THE BOXES CONTAINED ABOUT SIX BUSHELS OF APPLES EACH. PHOTO BY G. E. FISHER.

duce cankers on the diseased branches. The bitter rot attacks apples in July and August, and is most destructive in moist hot summers.

The remedy proposed is the cutting out of the canker-like areas wherever and whenever discovered; and a frequent spraying with Bordeaux until the fruit is nearly ripe.

THE RIGHT TEMPERATURE FOR STORING FRUIT

THERE is such a difference of opinion among growers, shippers, steamship men and our consignees as to the proper temperature at which fruit ought to be stored, that it is no wonder we still have trouble in shipping tender fruits to Europe. Given a steady temperature from shipping point to consignee of 33 deg. Fahr., and we could ship even our peaches with confidence.

Experiments conducted by Prof. Hutt at Guelph, and by Mr. Alex. McNeill at Ottawa, go to prove that the lower the temperature, to the point of safety, in the storage of fruit, the greater are its life processes retarded.

STORAGE OF PEARS AT 32 DEG. FAHR.

POWELL, Dept. of Agriculture, Washington, has been making an extended series of experiments with regard to the best temperature at which to keep fruit. He found Bartlett pears packed in boxes could be kept six weeks in prime condition at a temperature of 32 deg. Fahr., when stored within 48 hours after picking. Indeed, at this temperature they were found to keep in prime condition four or five weeks longer than when stored at 36 deg. F. Kieffers stored at 32 deg. F. kept three months longer at 32 deg than at 36 deg.

How does this sound in the ears of those officials who have been claiming that 40 deg. F. is a proper temperature at which to store our tender fruits for a transatlantic voyage?

WRAPPING PEARS FOR EXPORT.

FOR the export of Bartletts and Kieffers we are now fully convinced that wrapping with paper is a necessity. if we would have the best results. During the past season we have put up thousands of

boxes of Bartletts for export without wrapping, because of the scarcity of labor, and because we hoped their green and firm condition would make the expense unnecessary. But we found that the chafing of pear against pear and against the wood caused slight skin blemishes, which lowered their grade from XXX to XX, and that, in this way, alone, we lost more money than we saved in wrappers. Powell's experiments showed the same result, and he says in his report :

"The chief advantage derived from wrapping Bartlett pears seems to be in the mechanical protection to the fruit rather than its efficiency in prolonging its season. Wrapping is advised for superior fruit designed for first-class trade."

For Kieffers the wrapper seems still more important than for Bartletts, because the skin blackens with the slightest bruise and decay sets in beneath it, so that this pear will keep longer from decay if wrapped than if packed without. Wrappers also serve a good purpose in preserving the bright color of the fruit, and in keeping it from wilting. Altogether, therefore, we must make up our minds that in future pears intended for export must be wrapped, even if it does increase the cost of packing.

SODA-BORDEAUX.

TO make and apply the Bordeaux, as commonly prepared, is very troublesome, and this mixture has been proved to be equally efficient and without the objectionable mechanical features of the former. At the New Jersey Station it has been prepared according to the following formula: Soda (Lewis' Lye), 1 pound can.; copper sulphate, 3 lbs.; lime, 5 ounces, and water, 30 gallons.

THE CODLING MOTH.

SANDERSON (Del. Sta.) reports good results in lessening codling moth by spraying with arsenites. He tried mixtures of varying strength and found no advantage in using more than 1 lb. to 200 gals. of water. The best results were obtained

with Disparene, one application of which gave 60 per cent. of benefit and two applications 87 per cent. Next came the ordinary form, known as Paris green, which, with two sprayings gave 60 per cent. of benefit; and last, arsenite of lime, which gave only 20 per cent.

SULPHUR FOR MILDEW.

FOR the ordinary, or powdery, mildew of the grape in Ontario, dusting with flour of sulphur is the remedy usually employed by our grape growers. Sometimes, however, the results seem unsatisfactory, and it is often a problem to know the reason of the failure. It may be that the sulphur was not applied in sufficient quantity, or not repeated often enough. Degruilly (Exper. Sta. Record, 92, p. 53) advises "3 treatments, in which either 130 kilograms per hectare of trituted sulphur, or 90 kg. of sublimated sulphur should be used. These figures are given as a maxima, which it is not always necessary to attain." It may be explained that a hectare is a measure of area, containing nearly $2\frac{1}{2}$ acres; and that a kilogram is a measure of weight equal to nearly $2\frac{1}{4}$ pounds avoirdupois.

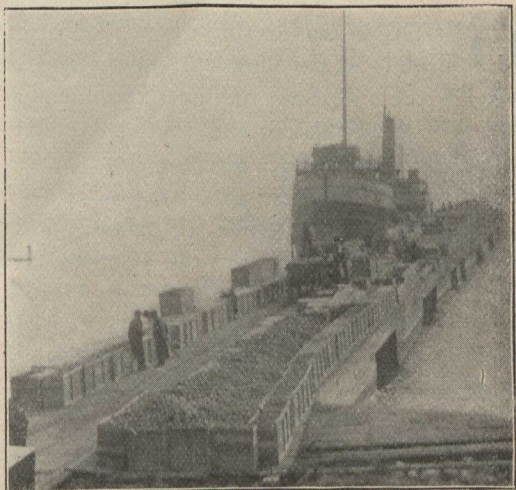


FIG. 2714. THE STEAMSHIP EN ROUTE FOR FRANCE LOADING WITH APPLES FOR CHAMPAGNE PURPOSES AT ONE OF THE BURLINGTON DOCKS. PHOTO BY G. E. FISHER.

OUR ANNUAL MEETING

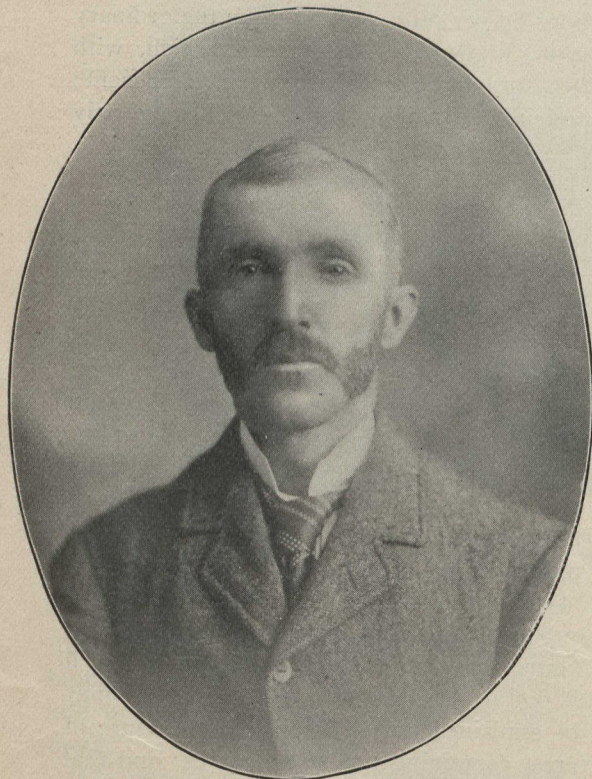


FIG. 2715. W. H. BUNTING, ST. CATHARINES, ONT.
PRESIDENT OF THE ONTARIO FRUIT GROWERS'
ASSOCIATION FOR 1904.

OWING in part to the urgent request of the local horticultural society, and in part to the influence of our experimenter, Mr. W. W. Hillborn, and his brother Mr. J. L. Hillborn, our director for Essex, our annual meeting for 1903 was held at Leamington, a town of about 3,000 inhabitants, situated in the County of Essex, and within about a mile of Lake Erie. Much of the land east is rather too level for good drainage, and consequently ill suited for fruit growing, but a short distance west the ground is more elevated and of a sandy loam, well adapted for peach growing.

The attendance was excellent, and the deepest interest manifest, but it was difficult

to secure good hotel accommodation and the general feeling was in favor of some permanent meeting place in future in a city, where a suitable hall could be secured for our meetings and first-class accommodation for our guests. It was therefore resolved that the meeting in 1904 be held in the city of Toronto in conjunction with the annual chrysanthemum show of the Toronto Horticultural Society, which would greatly increase the interest in the floricultural section of our meetings and largely increase the number of delegates from our horticultural societies. An apple fair on a large scale will be held at the next meeting, which, if annual, will become a most important feature and a special attraction to apple growers. If, in extension of the idea, samples of apples of XXX and Fancy XXX grades could be shown representing stock held in cold storage by growers, buyers might be induced to come, and large winter sales of fruit f. o. b. might be effected.

THE OFFICERS FOR 1904.

THE following is the complete list of officers for the new year, as finally adopted at Leamington:

President, W. H. Bunting, St. Catharines; Vice-President, Alexander McNeill, Walkerville; Secretary, G. C. Creelman, Toronto; Editor of Canadian Horticulturist, L. Woolverton, Grimsby. Directors—A. D. Harkness, Irena; R. B. Whyte, Ottawa; Harold Jones, Maitland; W. H. Dempsey, Trenton; Wm. Rickard, Newcastle; Elmer Lick, Oshawa; M. Pettit, Winona; E. Morris, Fonthill; J. S. Scarff, Woodstock; A. E. Sherrington, Walkerton; T. H. Race, Mitchell; J. L. Hillborn, Leamington; G. C. Caston, Craighurst.

Honorary: Prof. H. L. Hutt, O.A.C., Guelph; W. T. Macoun, C.E.F., Ottawa; A. M. Smith, St. Catharines; Thos. Beall, Lindsay.

Representatives on the Board of Control of the Ontario Fruit Stations: Prof. H. L. Hutt, W. T. Macoun and A. M. Smith.

OUR PRESIDENT.

AT the election of officers for 1904 it was with general consent that our worthy president, Mr. W. H. Bunting, of

St. Catharines, was re-elected to serve a second term. His self-denying faithfulness to his duties, both as president and as ex officio member of various important committees, makes his services of the highest value to the fruit growers of Ontario. No one has done more solid work on our Transportation Committee, and to him we are indebted for much of the detail which brought about the appointment of a railway commission, with power to correct much of the injustice done the fruit grower by the railway companies.

Mr. Bunting is a fruit grower of no ordinary importance, having a farm in the township of Grantham, about one mile from St. Catharines, of 140 acres in extent, of which 85 are in fruit. In grapes he has at least 9,000 vines, making nearly 30 acres of vineyard; 5,000 peach trees, a part planted 15 x 18 and a part 18 x 20; 15 acres of apple trees; five acres of strawberries, and quite large plantations of various other fruits. In addition he is extensively engaged in market gardening, vegetable growing and mixed farming.

It is no wonder that such a man should be a leading spirit in his own neighborhood, and should be called upon to assist in all movements for the betterment of fruit growing and general agriculture. He has been instrumental in the organization of the Grantham Fruit Growers' Association and of the St. Catharines Cold Storage and Forwarding Company, and for a number of years held the position of president of both these associations in an acceptable manner. No one could visit a fruit growers' or farmers' meeting at the Grantham public hall without seeing traces of his enterprise on every side; as for example the splendid fruit growers' library of some 3,000 volumes, which has recently become recognized as the Grantham public library. Just now there is an agitation for a special library hall, and no doubt with such generous spirited leaders as Mr. Bunting

such a hall will soon be realized.

To Mr. Bunting's energy is also largely owing the existence of the Niagara Peninsula United Fruit Growers' Association, which was organized in 1897, and which has been of signal service in stirring up energetic measures for checking the spread of the San Jose scale, and which is one of the most active and useful agricultural societies in the province.

He was appointed by the Provincial Government, in 1899, along with Dr. James Mills, president of the O. A. C., Guelph, and Mr. John Dearness, vice-principal of the London Normal School, on the San Jose Scale Commission, the work of which resulted in directing attention to the best methods of destroying this insect by treatment of the trees. And in 1901, when a Provincial Superintendent of Horticulture was needed for Ontario's exhibit at the Pan-American, who could have been appointed better qualified to gather excellent exhibits and dispose of them to the best advantage than Mr. Bunting, whose signal service won for us the greatest credit and placed us in the front rank of the fruit producing countries of North America.

Combined with his excellent business ability, and his untiring zeal in the public interest, we find in Mr. Bunting that genuine modesty which often accompanies the truest merit. Often we have solicited him for his photograph for these pages, and for some notes of his life, but as often denied. "I have no desire after publicity," he will reply, "and hate above all things to be advertised before the public." So it happens that the photograph which we present our readers of Mr. Bunting was obtained without his consent, and so it is that these notes are so incomplete.

THE PRESIDENT'S ANNUAL ADDRESS

Officers and Members of the Fruit Growers' Association of Ontario:

Ladies and Gentlemen: In presenting to you a few thoughts in connection with the usual ac

dress by the presiding officer at the annual meeting of the Fruit Growers' Association of Ontario, I desire first of all to express my appreciation of the honor conferred on me last December in my election to this responsible position, and to tender my hearty thanks to the officers and directors, and more especially to our energetic secretary-treasurer, for their hearty co-operation with me in the affairs of the association during the year.

In reviewing the course of events of the year just closing, I am free to confess that it would have been quite easy to have entrusted this office to hands far better qualified and more competent than my own to discharge the duties creditably and in a satisfactory manner. However, as I was not responsible for the error in judgment in the selection made, and am not conscious of any culpable neglect of duty, I can now restore the trust without any vain regrets as to wasted opportunities or a wilful disregard of the interests of the Association.

I am very glad to state to you in a general way what has been brought out more fully and in greater detail by the secretary in his report, that the year has been one of progress and advancement upon lines of work laid out by the executive and directorate of the Association in connection with the educational campaign carried on throughout the various fruit growing districts of the province.

I trust at this annual meeting some action of importance with reference to the general policy of the Association may be taken that will tend to maintain our position in the front rank of the agricultural interests of this magnificent heritage of ours, the Province of Ontario.

In the years that have gone by it has been customary in this address, at times, to indulge in some reminiscences regarding the early struggles and triumphs of the Association. We are approaching the half century mark of our existence as an association, and have passed the quarter century mark in the history of our magazine, and I believe that I am right in stating that there is only one gentleman that can claim to have taken an active part in the organization of this Association away back in the early sixties, who is with us to-night. I refer to our respected friend and enthusiastic horticulturist, Honorary Director A. M. Smith.

While our Association has had its vicissitudes and its struggles, its progress has been ever onward and upward, and it has stood during all these years for what ever was for the greatest good of the fruitgrower, whether his acres be many, or only the modest town lot; and throughout our broad Dominion there is not a tiller of the soil, there is not an artisan or mechanic, there is not a merchant or manufacturer, there is not a single individual, no matter what his position in life, but to a greater or less extent is under obligation to this Association for much that adds to the beauty of his home surroundings and to the comfort and health of his family life. The immense strides that have been made in the beautifying of town and country places, and in the vast increase in the production of the

many and varied fruits throughout the country are largely due to the earnest men and women who have been connected with this Association, and who have drawn inspiration from the annual meetings held in the various parts of the province from time to time, and who have gathered knowledge from a perusal of the reports of the addresses delivered at these meetings; from the work of our experiments; and last, but not least, from the columns of the Canadian Horticulturist, so ably conducted by our editor, Mr. Linus Woolverton.

These facts are, however, known to most of you, and it is quite unnecessary that I should enlarge upon them at this time. Permit me, however, to express the hope that we may not rest on the laurels and traditions of the past, but that, enthused by what has been accomplished by those who have guided our Association so wisely and so well, we may be able to take higher vantage ground in the future and make our influence felt not only in legislative halls but also in the councils of the great transportation companies, and, with the powerful consolidations of capital that are absorbing so many of the avenues for the disposition of the products of our orchards and vineyards, in such a way as will secure even-handed justice to each and every member of this Association in his business relations with the public.

It will not be out of place here, on behalf of the Association, to tender to the Minister of Agriculture our appreciation of the kindly interest he and the officials of his department have continually taken in every movement that has had for its object the advancement of horticulture in this province, and the substantial manner in which that interest has been manifested from year to year as circumstances have warranted. We believe that we have in the Hon. Mr. Dryden, a gentleman who is thoroughly in sympathy with the agriculture of the province and is eminently well qualified for the position which he so ably fills.

Gov. Odell, of the State of New York, observed in his address at Niagara Falls before the Farmers' National Congress a few weeks ago, that government financial assistance to the agricultural interests of the country was not paternalism, but tended to develop and encourage good citizenship in the broadest sense of the term and was a proper and legitimate use of the public funds. Our Provincial Department of Agriculture has fully realized this principle in the past, and it remains for us to provide proper channels for development and progress and to lay our plans before the department in a businesslike way, when I have no doubt our requests for further financial aid will receive careful consideration.

During the past year a new horticultural organization has been formed called the Canadian League for Civic Improvement. While this is a separate and distinct organization, arrangements have been effected whereby our association is represented on its board of management; the Canadian Horticulturist has been selected as the official organ of the League, and a special

department has been set aside for its use. We will be glad to welcome their hon. field secretary, Mr. G. R. Patullo, to this annual meeting, and will no doubt listen with a great deal of pleasure to his address on the aim and work of the league.

The time has come in the history of the province when a great deal more attention is being paid to the improvement and beautifying of our home surroundings and the public places in our towns and cities than heretofore, and in this good work every member of our association is called upon to take a part.

We have spent years in learning how to grow good fruit and to produce plenty of it, in securing and disseminating the best and most profitable varieties of all kinds of fruit, and that we have succeeded in so doing goes without saying. Notwithstanding the many and varied obstacles that have stood in the way, and the many unforeseen discouragements that have encompassed the path of the fruit grower, the past season has again conclusively proven that we are able to produce, under ordinary circumstances, an abundance of fruit for all the demands of our broad Dominion.

The question of production is not now one that confronts us, but prompt and efficient distribution to the various parts of the Dominion where needed, at a reasonable cost and in a careful manner. To this problem our transportation committee in the past two or three years has given considerable attention and thought. The result of their efforts has been of considerable benefit to the large commercial grower, but not so much to the smaller producer. It is hoped however that, with the appointment of a railway commission, a step that this association has strongly urged for several years and through its transportation committee forcibly brought to the attention of the Government last winter, that such representations may be made to the commission as will lead to a very great improvement in the carriage of fruit, both as to rates charged and service rendered, and as will result in Ontario fruits going in ever increasing quantities to the important markets which are opening up in Manitoba and the Northwest, as well as to the more northerly parts of our own province, to say nothing of the large and important export trade over the sea.

There is perhaps no question of such interest to our readers to-day as the great problem of distribution. How to organize and co-operate to accomplish this object is a live and burning question in the minds of hundreds of earnest practical growers at the present time. When, during the past season, thousands of baskets of beautiful fruit have been left to hang and rot on the trees from lack of proper facilities to place them in the hands of those who would gladly have purchased them at a fair price, and when thousands of barrels of apples have also been wasted or disposed of at a fraction of their real value, for lack of suitable packages, while at the same time a Macedonian cry was heard from the Mother Country for all the fruit we could possibly send her, it is certainly time for this Asso-



FIG. 2716. G. C. CREELMAN, B. S. A., TORONTO ONT., SECRETARY OF THE ONTARIO FRUIT GROWERS' ASSOCIATION.

ciation to be up and doing and to endeavor in some way to elaborate a plan whereby those unfortunate conditions may not continually occur. I am glad to say that the germs of co-operation have gained a foothold, and a good beginning has been made in some sections. We have also with us to-night a gentleman from our cousins to the south who has had considerable experience in co-operative organization, and who will no doubt be able to give us much valuable information in this respect.

A word or two with reference to general conditions during the past year. We have cause to congratulate ourselves that we have experienced a year, when the promise of the spring has been abundantly fulfilled in the harvest of the summer months. All kinds of fruit have been produced in abundance and of good quality, and even our standard fruit, the apple, which gave us such a production in 1902, has surprised us with a generous supply again this year. While prices have in some cases been very low, and cost of handling and transporting correspondingly high, still on the whole the average grower has cause to express his gratitude to Him who gives the early and latter rain and who brings to perfection the beautiful products of our orchards and gardens.

It has also been fully demonstrated again this year that it is quite possible to cope, in a scientific way, with the insects and fungus pests that cause the fruit grower so much annoyance and loss. Our members will do well to inform themselves thoroughly on the best appliances and the most up-to-date methods of dealing with these troubles, and having gained the information attend diligently to putting it into practice, a work for which they will be well repaid.

I thank you, ladies and gentlemen, for the hearing you have given me, and I trust that our meeting here in Leamington may not be without its value to the residents of the town and surrounding country, and also may result in great good to fruit growers generally throughout the province.

OUR SECRETARY.

A MAN, to be successful in public life, must be tactful, obliging, good-natured, and energetic. These attributes are possessed in a large degree by Mr. G. C. Creelman, Secretary of the Ontario Fruit Growers' Association.

Mr. Creelman was born in the town of Collingwood, Ontario, in May 9th, 1869. His parents were both Nova Scotians, his mother being descended from Scotch ancestry, while his father's forebears came from the north of Ireland.

When he was nine years of age his parents moved to a fruit farm in Collingwood Township, in the county of Grey, and there Mr. Creelman spent his youth. He attended the country school until passing the entrance to the high school. For two years he attended the Collingwood Collegiate Institute, and from there went to the Ontario Agricultural College, where he took the degree of B. S. A., in 1888, in the first class that graduated from that institution.

Immediately after graduation Mr. Creelman was appointed Assistant Professor of Biology in the State Agricultural and Mechanical College, of Mississippi, U. S. A. Three years later he was promoted to a full professorship, and he remained in that institution until he returned to Canada to take up his present work.

During the summer vacations in his col-

lege work in Mississippi, Mr. Creelman took special courses in botany and horticulture at the Michigan Agricultural College, the State University of Minnesota, and Cornell University, New York. He was granted the degree of Master of Science by the Mississippi Agricultural and Mechanical College.

In 1892 Mr. Creelman married Miss Ada, the eldest daughter of Dr. James Mills, President of the Ontario Agricultural College.

Since the appointment of Mr. Creelman to the secretaryship of the Ontario Fruit Growers' Association he has put new life into the work. Orchard meetings have been held throughout the Province. Speakers have been sent out to address farmers in the orchards on the best methods of pruning, grafting, budding and spraying fruit trees; and the demand for these meetings has increased to such an extent that applications are coming in from all parts of the province for an extension and repetition of the work.

By wise planning Mr. Creelman is bringing the work of the Fruit Experiment Stations of the Province into close touch with the farmers. Farmers' Institute excursions to these stations have been arranged during the last two seasons, and the farmers in the counties in which the fruit stations are located are thereby enabled to inspect personally the work that is being done.

Mr. Creelman also has charge of the business end of the Canadian Horticulturist, and with the assistance of the editor, Mr. Linus Woolverton, is making this journal an up-to-date horticultural publication. He likewise has charge of the lecture course of the Horticultural Societies, and each year better work is being done and better results obtained by these societies under his guidance.

In addition to his horticultural work Mr. Creelman carries a very considerable burden as Superintendent of the Farmers' Institutes for the Province of Ontario, an office which

takes the full time of a man in most of the States across the line. For the year ending June 30th, 1903, the paid-up membership of this organization in Ontario was 23,754. Eight hundred and thirty-seven meetings were held during the year, and 3,337 addresses were delivered before audiences aggregating 126,459 persons. The arranging of the details of all this work involves a large amount of patience and painstaking work.

Mr. Creelman has associated with him in the Farmers' Institute work fifty practical farmers, who attend the meetings as arranged in circuits by the superintendent.

Three years ago Mr. Creelman decided to do what he could to encourage the formation of Women's Institutes, and as a result of his decision there are now in the Province of Ontario fifty-three Women's Institutes, with a paid-up membership of over 6,000. The usefulness of these organizations is unquestioned, and their rapid development indicates the great need of better methods and better appliances in farm homes.

The agricultural societies have also had the benefit of Mr. Creelman's oversight during the past two years, and the most noticeable development under that head has been the sending of expert judges to place the awards in the different classes of live stock, giving reasons, at the fall fairs. This year 152 agricultural societies availed themselves of the offer of the Ontario Department of Agriculture, and through Mr. Creelman they were supplied with competent judges in the different classes of live stock. The good effect of this work has already been felt, and its importance cannot be questioned when we remember that 80 per cent. of the farm produce of Ontario is fed to live stock.

In a word we may say that Mr. Creelman is in close touch with all phases of Ontario agriculture, and probably no other man in the country has a more intimate knowledge of the needs of the farming community in

every county and township of the province.

THE SECRETARY'S REPORT.

IN Mr. G. C. Creelman the Association has an excellent executive officer, whose command of details and excellent judgment in the conduct of affairs has gained for him the confidence of the Board of Directors to such an extent that he was unanimously re-elected as secretary for 1904 at an advance in salary. His report of work done and work in prospect was most exhaustive, and, if carried out, means much for the development of the commercial side of the fruit industry of the province. The following is a brief summary :

1. Orchard Meetings.

Meetings of farmers in their orchards having proven most successful in 1902, the work was continued during this year. Messrs. McNeill, Carey and Lick of the Dominion Fruit Department helped us very materially in this work. The meetings were held mostly during the month of March, when practical demonstrations were given in pruning and grafting, which led to a general discussion on orchard management and matters generally pertaining to the fruit business. In all, 49 such meetings were held, and the amount of good done cannot be estimated.

2. Fruit Experiment Stations.

Last year a copy of the report of this most important branch of our work was sent to 1047 members of our Local Fruit Growers' Associations. Besides this, it was arranged with the Farmers' Institutes for farmers in the vicinity of these stations to visit them at certain periods and receive instructions from the experimenters, especially in reference to matters pertaining to fruit culture, and in regard to the best varieties to grow in that particular district.

Of course it is impossible to determine the good this educational work is doing. Farmers are reticent about their business. It is an undisputed fact that at agricultural dinners held in our towns and villages most of the speech making is done by lawyers, doctors and other professional men present. The same is true in meetings of Farmers' Institutes. Very often our speakers are almost discouraged, and say on returning from an institute campaign that they do not believe they accomplished any good in certain districts. Later on, however, come letters from farmers who were present at our meetings, asking for fuller information in reference to certain things that were discussed at these meetings. We realize therefore, that many farmers get information at our fruit stations, in our orchard meetings, through our reports, and at our Annual Meetings which they never acknowledge. But what matters

it so long as they put into practice the better methods?

3. Fruit at Fall Fairs.

Arrangements were made whereby Mr. T. H. Race of Mitchell one of our Directors, addressed a meeting of the Canadian Association of Fairs and Exhibitions. Mr. Race implored the Fair management to take away the barriers from in front of the exhibits, and allow the people to see and examine the fruit. He also requested that some one be present at the Fruit Department during the Fair, to answer questions about the fruit exhibited, and the adaptability of certain varieties to that particular district etc. This has had a good effect, as I have noticed already that many of the prize lists have improved as a result of these suggestions and of the work of your select committee who last year prepared a list of fruits for the different Fair Boards of Ontario.

4. Fruit Packages.

We have received many inquiries during the year in regard to the best kind of package to use for the shipment of apples and pears. Mr. McKinnon, chief of the Fruit Division, Ottawa, also received an enormous amount of correspondence on this important subject. We have boxes of all sizes, from $\frac{3}{4}$ of a bushel to $2\frac{1}{2}$ bushels in use in Ontario. I trust at this meeting this matter will be thoroughly discussed, and some conclusion come to in regard to a uniform package for the shipment of apples, throughout the entire country.

5. Our Annual Report.

This was late in coming out this year, but I think you will agree with me that the subject matter contained therein was most satisfactory. Bound copies containing not only the report of this Association, but also of Fruit Experiment Stations, Fruits of Ontario, and the proceedings of the Ontario Entomological Society were sent to each member of the Fruit Growers' Associations.

6. Horticultural Societies.

The work of this Society I consider to be of the

greatest importance to the Province. This Association has been severely criticised by some of the Societies for not giving them more assistance, and in some cases the complaint may have been justified, but on the whole I am pleased to state that as far as possible, this Association and the different Horticultural Societies are working together for the up-building of our fruit and flower interests. Lecturers were sent out to address meetings in thirty-three different towns.

7. Canadian Horticulturist

This publication has probably done more than any one factor to improve the orchards and home grounds of our people. It has also been steadily improving in subject matter and appearance. But there is a growing demand for a larger periodical. Whether this should be by the addition of more pages, or by a change of form, it is for you to discuss. Your Executive believe that the work of the Experiment Stations should be more thoroughly written up, and that there should be a department added on the work of co-operative buying and selling. We believe that the work of Forestry, which is embraced in our constitution, should be given a special department in our Journal, and we suggest that the Dominion and Ontario Department of Forestry be asked to co-operate with us for the further development of such a department.

8. Toronto Industrial.

While this show is held too early for the best display of our fall and winter varieties, yet a large number of people in attendance from all parts of Ontario impels the fruit men to make the best of the occasion, and do what they can toward showing the improvements of the fruit industry. At present, however, the building devoted to fruit is entirely inadequate to our needs, and we are pleased to say that steps are now being taken to secure a better building before next year's Exhibition. This Association has been asked by the Exhibition Board to appoint a committee to meet with their board for consultation in regard to plans and specifications for such an Exhibition building.

CO-OPERATION AMONG FRUIT GROWERS

CO-OPERATIVE CLUBS.

THE time has come when fruit growers must combine if they would achieve the best success. At every shipping point a half dozen or more growers should form a co-operative club, with a competent business manager. The work would cover (1) buying or manufacturing packages, (2) power

spraying of the orchards of the members, (3) a central cold storage and packing house, where each member could either pack under the superintendence of the manager, or leave his fruit to be packed and shipped by hired labor; (4) the study of market conditions and the sale of the fruit just where it would bring the most money, f. o. b., if possible.

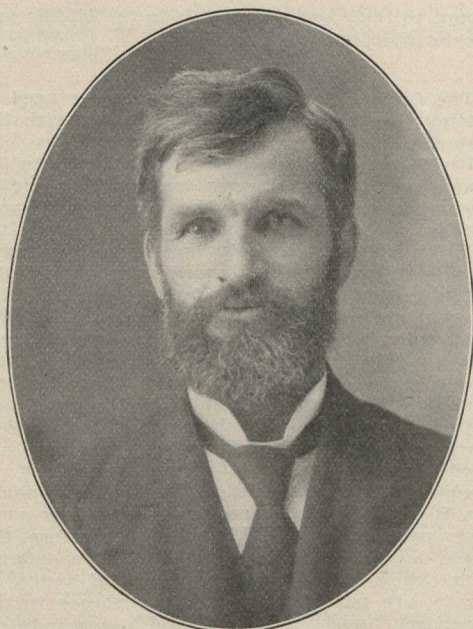


FIG. 2717. MR. ALEX. MCNEILL.

Vice-President of the Ontario Fruit Growers' Association; Chief Fruit Inspector for the Dominion, an excellent public speaker, and always listened to with close interest, whether at the Agricultural Fair, the Farmers' Institute, the Horticultural Society or the Ontario Fruit Growers' Association. At our Leamington Meeting he gave an address on "Fruit Packages," which led up to the adoption of a uniform apple and pear box for the Dominion.

CO-OPERATIVE PACKING AND SELLING.

AS an example of what is already being done in Ontario in this direction, we give the report by A. E. Sherrington, of Walkerton, of the success of the co-operative work done during the past two years by the Lake Huron Fruit Growers' Association. He says:

This association was organized in the month of March, 1902, with a membership of twenty-four under the auspices of the Fruit Growers' Association and by direction of the secretary, Mr. G. C. Creelman. The rules as laid down by the association as a guide for local associations were adopted and have been carried out as closely as it was possible to do so. The association met monthly and at these meetings the different subjects regarding fruit growing and co-operative work in connection with it were discussed.

A new set of rules and by-laws are now being prepared and incorporation applied for. I should

like to mention the one governing packing. Each member must pack and grade his own fruit, placing his name on each package with either stencil or rubber stamp, and stating the variety and grade of fruit. In this way every member becomes responsible for his pack. In 1902 the association made its first trial in co-operative work by putting up two cars of Duchess apples, made up of 1,000 boxes and 100 barrels. These were sold f. o. b., but forwarded to Manchester, England, and arrived in good condition. In addition to these, three cars of winter apples were packed and sold. This year the association has prospered beyond all expectations. We have now between fifty and sixty members and all go in for co-operation in the shipping of apples. Up to the present time the association has shipped fourteen carloads.

Advantages of Co-Operation.

(1) We believe that the grower is the proper party to grade and pack his own fruit. By so doing he receives better prices, and better prices mean more money, and more money means more interest being taken in the care of the orchard and fruit.

(2) By co-operation apples are not left lying on the ground waiting on the packers to come and scramble over the piles for a few of the best specimens, and wasting the rest, but are packed as gathered from the trees, thereby saving a larger percentage of the fruit.

(3) Another advantage in co-operation is in the handling of early apples, as all the members can commence picking and packing the same day. In this way only two or three days will be required to make up a car, and the fruit will be gotten away in a fresher and better condition than by the other way of selling to buyers.

(4) By co-operation, better shipping facilities and lower rates may be obtained.

As to the possibilities of co-operation, it is impossible to tell what the outcome will be, but it seems bound to grow and become a power with the Lake Huron Fruit Growers' Association. The next move will be to build a storehouse where packages may be stored ready for use, and where they may be returned when filled, and kept until the cars are made up. I have no doubt that in a short time other farm products will be added to the list of co-operative shipments, such as butter, eggs and poultry. These products can all be handled by co-operation.

THE address by W. H. Owen, of Catawba Island, Ohio, who is manager of a large fruit packing house for a syndicate of some thirty-four fruit growers in that state, was so opportune and suggestive that we give it in full in this connection, as follows:

CO-OPERATIVE FRUIT PACKING AND MARKETING.

WHEN the stockholders of an industry are meeting with successful results in the disposal of their products, little thought or attention is given to competitors along the same line, until competition, over-production or under-consumption depreciates the value of their product to little more than the actual cost price of same; they then give their attention to methods that will better their conditions and devise ways and means by which they may reduce the cost price and competition.

How is this change for the betterment of their conditions usually brought about? Invariably through the same channel, by organization, by trusts and by co-operative associations. What is true of the manufacturer in this direction is also true with the farmer and horticulturist in the disposal of their products.

The Californians were probably the first to co-operate in marketing their vast product of fruit, which was really the result of necessity, for their industry rapidly expanded, until their local markets could not consume the enormous production, and they were obliged to seek other and more distant markets. This they found could not be accomplished individually, but through powerful corporations they have succeeded in gaining low rates and improved methods in handling and shipping. How well they have succeeded we are all familiar, and now we find their fruits in nearly every market of the country—even competing with our own products in our local markets. Organizations, judiciously managed, have placed the Californians in the lead, in the way of distributing and marketing their fruits. Through their efforts is due the credit of perfecting the present refrigerator service, by which they are enabled to ship their more perishable fruits, even to the great markets on the Atlantic seaboard.

Missouri is fast accepting the profitable teachings and examples of the Californians, and her vast fruit products are now largely handled through companies and shipping associations.

Michigan, having the greatest market in the world at her very doors, had no occasion to look elsewhere than Chicago or Milwaukee for her markets. However, the Wolverines have discovered in recent years that the enormous contributions of fruit from Missouri, Southern Illinois and Indiana to these markets has in a measure forced them to look elsewhere for a portion of their markets. They now ship hundreds of carloads of peaches annually to eastern markets and the Western and Northwestern States. This was not brought about, however, until co-operation among the growers in different localities was instituted.

The extreme eastern peach growing States—New Jersey, Maryland, Delaware, Pennsylvania and New York, are so favorably located in reference to so many large consuming markets that organization to them has not been so para-

mount to their success as it is to the Middle and Western States.

Handling Peaches.

The further from market the greater need of getting together, as the risk increases with the distance.

I will confine my discussion principally to the advantages in organization for handling one of the most perishable of the tree fruits, viz., peaches.

Peach shipping associations have been operated with more or less success throughout the peach belt of Michigan and Ohio, but in shipping in carload lots, although complying with rigid rules laid down by the association, there was an objectionable feature to the trade, and that was the lack of uniformity of grades and packing. To be more explicit on this point, you have all probably visited some of the various markets during the peach season, and have noticed the very great difference prevailing in grades of different packs. That is, some packers, B or XX grades were just as good as some other packers, A or XXX grade. Therefore, the grade marks of the general run of consigned fruit, where not put up by one set of hands, as a rule, are not of very great assistance to the purchaser, and he still is obliged to resort to his own judgment and eyesight in his selections. Now for a shipper to make up a carload of this indiscriminate packing of fruit, where it is packed by many growers, each contributor having a different way and idea of how peaches should be packed and kind of packages used—conceding that they are all honestly packed—how is the shipper going to bill that indiscriminate lot of fruit, and can he warrant the packing? This serious objection of lack of uniformity confronted the Michigan fruit growers and has resulted in the adoption of the Central Packing-house system by their principal associations. This system was originated and established in the peach industry at Catawba Island, Ohio, in 1891, and it has resulted in untold savings and benefits to the peach grower wherever the system has been adopted.

A Central Packing House.

The mere shipping association, where each grower prepares his own fruit and delivers it to the association, by which it is shipped with other packs and packages, either in carload lots or local shipments, is a step in advance over the old or individual method of shipment; but the Central Packing-house System is a much greater step in advance over the mere shipping association.

The old adage of "In union there is strength," is most aptly exemplified through the many advantages that may be attained through an organization of fruit growers, organized for the purpose of bettering their conditions in shipping and marketing their fruit. The many discouraging problems that confront the grower in the satisfactory marketing of his product, I believe are satisfactorily solved through the adoption of the Central Packing-house System. At

least, such has been my observation through the management of such a company for the past twelve years.

Advantages.

Let us for a moment review further a few of the advantages to be attained through such an organization. First, the grower can place his undivided attention to the proper picking of his fruit, which is a very important factor; whereas, it is known that if peaches are picked green or immature, or over-ripe, and delivered to the packing house in such condition, no amount of work that may be put upon it can make good prime fruit of it. The great advantage of the Central packing-house is the superior advantages and inducements it offers to purchasers of fruit in securing a uniform grade and pack. It affords a place where the buyer can select just the grade and kind of fruit that best suits his trade. When the fact is known to the trade that they can procure their supply direct and in any quantity desired, and every package guaranteed to contain freshly-picked and uniformly-packed fruit, even the commission men will then come to your doors and buy. Buyers are looking for carloads of uniform fruit and not for carloads that are not uniform.

This system entirely eliminates the practice of deceptive packing and gives buyers confidence that they are getting honestly packed fruit. Even were you obliged to consign largely, it will bring better prices on the market, and the commission firms are bound to take better care of your interests than of the individual shippers, because there is more at stake, and the merchant realizes that if he makes a mistake or misleads you in his advices, he will probably not have the opportunity of handling your account again. The labor saved at both ends, by dealing with one man or corporation instead of ten or fifty, becomes apparent, and the commission man can afford to handle a corporation account on a less percentage, and it really pays him better because of work and time saved. And again, buyers after becoming acquainted with your grades, pack and manner of doing business, can order their supply of fruit intelligently and without the necessity of retaining a representative at the shipping point.

Another great and beneficial effect of such an organization is that, through its influence in broadening the field of distribution, it does to that extent disprove the "over-production" policy.

We have found that in our own dealings with transportation companies, basket manufacturers, and even the commission man, they lend a more willing ear and correct errors and abuses with greater promptitude when presented by the authorized representative of a company, than they will for any individual or small grower presenting a case possessing equally as much merit.

Transportation companies consider a well-organized fruit company, working upon sound business principles, in the same light as any other well established business which contributes to their receipts.

We as a company have found them disposed to grant favors and investigate complaints fairly, while the lone individual, under the old plan of "every fellow for himself," would perhaps have remained unnoticed.

Lastly, a recommendation that is appreciated by those who have had the experience in the Central Packing-house system, is the fact that it relieves the home and good housewife of that burden which is attendant through the care of the extra help that will now be dispensed with.

Expenses.

Now as to the expense of organization under this system. Some may raise the objection that it will cost too much to establish a plant, but you will find after careful investigation it will be far cheaper for each to contribute toward a general plant than for each individual to supply himself with a packing house, a grader, and other necessary equipments. In the establishment of a central packing-house, make sure of one point, and that is, provide a building with ample room for receiving, grading and expeditious handling of the fruit. If the requisite amount of floor space is not provided, it will necessitate vexatious waiting of the members in taking their turn at unloading their fruit.

Do not think that a room with no more space than would ordinarily be used by three or four of the larger growers of the company and equipped with insufficient number of graders, will properly take care of the fruit of twenty or thirty orchards, for it will not, and such conditions will only result in loss, through failure in being able to get the fruit through promptly.

As for laying down defined rules for organizing, that is a matter which each locality will best work out for itself, as local requirements and conditions vary.

Now what is wrong with the present system, or, more properly, lack of system, outside of the already established organizations? Can you name any industry wherein so many hundred thousands of dollars are invested that is conducted so carelessly as the fruit business of this great fruit producing country? It is a great wonder to me that the average peach grower should even get the price of his packages in return for his labor. To make it plain, the average orchardist can not afford himself the facilities for keeping in touch with the trade and keep posted daily on the changing conditions of the various markets. He is too busy harvesting his crop to study out the best plans and inform himself of the best places to ship in which he will meet the least competition. And right here I wish to emphasize the word "competition," for are we not each and every one of us placing our fruit in direct competition with each other? Again, the orchardist individually, is placed to a disadvantage through his inability to properly distribute his fruit. I say inability, because he has no control over other shippers, and has no means of knowing but that 90 per cent. of the other shippers throughout his vicinity are shipping to the very market in which he expects to avoid a glut.

There is surely a way out of all this dilemma,

and a practical and time-tried way, that I am confident if universally adopted, would place the product of the orchard on a more profitable basis than is now being realized. As long as the present careless methods are continued we may expect to be the victims of our own failure to protect our interests by the positive means within our reach.

Handsome Dividends.

If we will carefully investigate the hundreds of unions and co-operative plans that are now in existence in nearly every branch of business, you will find they are all declaring handsome dividends to their stockholders, while prior to their consolidation in many cases they were actually running at a loss.

What has been true in other branches of business through the result of co-operation to avoid competition and reduce the cost of placing their products on the markets can be made true of the fruit industry in the different fruit growing sections of the country. It is not a visionary and undemonstrated theory. It is the furtherance of a co-operative plan that is now in actual, practical and successful operation in several of the States, and the more universal this system may become adopted, in like proportion, better results will follow.

If some of the fruit organizations have not proven entirely satisfactory to their members, due to mismanagement, that should not prejudice or deter those interested from investigation of the plan, for there are fruit companies that are thoroughly successful and making money for their members. The co-operative fruit company will succeed if organized and managed upon a business basis, just the same as any other business enterprise requiring co-operation. It is surely the best means in which to conserve the interests of the producer, and we know that the grower's interests can best be served through facilities which they may own and control.

After thorough local organization has been effected throughout the various fruit producing sections, let us for a moment see what further advantages might be attained in the way of uniting all these companies in each county or section into one powerful corporation.

County consolidation could be successfully accomplished only through the Central Packing-house System, and then not until local organizations had been established and perfected at the shipping points throughout the county. After the establishment of companies at the different shipping points, then the consolidation of all into one powerful union under one management would place the fruit growers in possession of the key to the situation of the avoidance of fruit gluts, competition and distribution. To accomplish such an end of thorough organization it would mean for each locality to enter the work with a spirit of determination.

We must be prepared to join our neighbors in correcting the existing wrongs and surmounting the obstacles and objections that may confront us.

Organization.

We have the power, and we can do it if we see fit. As one of our western horticulturists very aptly stated: "If I were compelled to use but one word in designating the remedy for the many evils and disadvantages with which we have to contend, it would be "organization."

Organization leads to co-operation, and organized co-operative effort is the power and influence that is shaping and moulding the financial and commercial interests of the present time. Look where will at any business worthy of the name, and we find it compactly united in some form of union that seeks to make the interests of one the care of all, and the prosperity of all, the prime object of each individual.

MR. OWEN'S SYSTEM has not been applied to apple packing and selling, but he thinks there is no reason why it should not be so applied. His grades, AA, A, B, C, correspond with our Fancy XXX, XXX, XX and X, the latter being culls; and every man's fruit is graded separately and given a receipt for just what he puts in of each grade. "We have," said Mr. Owen, "a demand for our culls as well as for our higher grades, and sell nearly all our stock, seldom making a consignment."

The current expenses are cut down to a minimum on every hand by Mr. Owen's system of co-operative packing and shipping; baskets are purchased wholesale; labor is economised; goods shipped mostly by freight in car lots, and sales made f. o. b. to large jobbers. They could pack and ship from 3,000 to 5,000 bushels of peaches per day, and the total cost to each member was about 18 cents per bushel.

OUR ASSOCIATION TO ENCOURAGE LOCAL UNIONS.

AT this point in the proceedings of the meeting the committee on resolutions reported as follows:

That in the opinion of this Association the future development and continued prosperity of the fruit growers of Ontario depends on the formation, in every district, where such does not now exist, of a growers' co-operative organization for the pur-

pose of handling fruit and buying supplies in a co-operative way, and for the further purpose of bringing the united influence of all to bear with a view of securing better transportation facilities in the interest of all.

That, for the purpose of developing such organizations, a committee be formed, charged with the duty, acting in unison with the local directors in promoting the work of the organization during the coming winter, and that the president be charged with the special duty of attending meetings called by the local organizations for the purpose of assisting and completing the work of organizing.

That the Organization Committee shall consist of G. W. Cady, Leamington, for the western district; Robt. Thompson, St. Catharines, for the Niagara district; A. W. Peart, for the Burlington district; A. E. Sherrington, for the northern district; and Wm. Rickard, M.P.P., for the eastern district.

And further, that the Executive be instructed to provide funds to meet the necessary expenses of those named while carrying on the work assigned them.

At a subsequent meeting of this committee the secretary, Mr. G. C. Creelman, was instructed to correspond with the various local fruit growers organizations offering aid in the formation of co-operative associations or unions, and inviting further conference upon questions of detail.

FRUIT DEALERS WOULD BUY FROM A UNION.

“THE views expressed by Mr. Owen,” said H. W. Dawson, of Toronto, “are the views I have entertained for a long time. I have always contended that co-operation, with central packing houses, is the proper system of handling our fruit trade. By this means, even when unusual production occurs, and a glut is inevitable, that glut can be confined to one particular locality and general market demoralization

avoided. The best exemplification of the working out of the co-operative system is seen in the handling of the Texas tomato crop. That is handled by one man stationed at St. Louis, and the system is so thorough that congestion is absolutely avoided. The grading is also so perfect that you can order a car of Texas tomatoes by grade and feel perfectly secured you will get just what you order. Despite our large production of peaches in Canada, you can not do that with peaches in this country. I am a commission merchant, but I would sooner be an outright buyer if I could deal with organizations formed on the plan outlined by Mr. Owen.”

ENCOURAGEMENT TO THE CANNING INDUSTRY

MUCH has already been written in these pages about the importance to fruit growers of encouraging the canning and evaporating of our fruits, in order that we may thus dispose of the No. 2 grades at home. If this were done there is no doubt that far higher prices could be obtained for our No. 1 goods. The high tariff, however, in refined sugar imported from abroad has been a serious obstacle in the way of the development of this industry in Canada, making it difficult to compete with foreign canners, notwithstanding the abundance of cheap fruit in our province.

In view of this evident hindrance to the development of fruit growing in Ontario, the following resolution was unanimously passed by the Association:

That, whereas, during the season just passed, thousands upon thousands of baskets of tender fruits rotted upon the ground, while in Great Britain and even in our own country, an apple outlet, at profitable prices, could have been obtained for the same had sufficient means existed for the bringing together more closely, producers and consumers:

That, whereas, to provide for this bringing together, it is necessary that the bulk of these tender fruits be reduced to a preserved form as near the point of production as possible:

That, whereas, one of the main difficulties in the way of securing complete development of this canning and preserving industry lies in the

cost of the raw materials, other than fruit, the chief of these other raw materials being sugar and packages for holding the preserved article :

Therefore, be it resolved, that this association respectively, but most strongly, urges the Dominion Government to extend to the canning industry of this country the same system of aid already extended to other industries, by enabling them to buy their raw materials at the lowest possible cost, and that to this end the duty on sugar used in canning, and on packages used for holding canned fruit, be remitted :

And, further, that the Dominion Government be petitioned to secure the enactments of legislation compelling the labelling of all canned preserves in such a way as to show what the canned goods actually consist of as demonstrated by official analysis; and, further, that such goods be distinctly labelled, "Made in Canada."

FRUIT TRANSPORTATION.

THE carrying of their fruits has been for years most unsatisfactory to fruit growers. The present express and freight rates were made up when fruit was a luxury in Ontario, and very high priced in our markets. In those days when peaches and pears often brought the grower \$1.00 a basket, he could well afford fifteen cents express charges; but now that these fruits often sell at 25 and 30 cents a basket, he cannot afford it. Besides, in those days there was not one basket carried by the companies to one hundred these days, so that they are unfair in persisting in their high rates. The question was brought up by G. C. Caston, chairman of the committee, and during the discussion many well grounded complaints were plainly set forth.

COMPLAINTS OF FRUIT SHIPPERS.

Such a heavy carrying charge as fruit, nary commodity which is subjected to HERE is," said Mr. Dawson, "no ordinary and there is no commodity in which the volume of traffic offered is increasing so rapidly. We must have a rate which will bear some comparison to rates imposed on other commodities, and to this end we must not only present our demand for relief, but we must, like the Millers' Association, keep on pressing until we secure relief."

"The foundation grievance," said President Bunting, "is that the railway people have placed fruit in the category of luxuries, and

have listed it as an article which should bear the maximum rate. We must convince them that fruit is not the luxury of the rich, but the necessity of all. It is true that fruit requires prompt handling by the railway people, but there is the compensating advantage which comes from equally prompt return of rolling stock. Fruit growers themselves must also assist in improving the present conditions by joining together and shipping car lots at one time, instead of shipping a number of small lots as individuals."

"There is," said Mr. McNeill, "no lack of definiteness so far as our grievances are concerned. Hundreds might be mentioned. Let a few suffice. Apples are in class 5, and bear the high rate imposed on goods shipped under that class. They should be reduced to class 3, and carried at the lower rate imposed on all goods transported under such class. We also demand a change in regard to the rate on cars consisting of mixed lots of fruits. Why, for instance, when we put a few baskets of peaches in a car of cheap pears, or still cheaper tomatoes, should the rate on the whole car be jumped up from the comparatively low rate imposed on pears and tomatoes to the very high rate imposed on peaches? Why, again, should the charge for a short haul be so utterly out of harmony with the charge for a long haul? Why should cull apples, shipped from Creemore to Collingwood, a distance of ten miles, be charged 15 cents per cwt., while sugar beets can be shipped a much greater distance for 40 cents per ton? We should, furthermore, have a better refrigerator car service, improved accommodation at freight stations, and our express rates should be cut in half."

"I have," said E. D. Smith, M. P., "been charged 70 cents per barrel for ten barrels of apples shipped from Port Perry to Almon's, while the rate on car lots from any point in Ontario to Manchester in England is only 39 cents. Delays in shipments constitute an even more serious grievance than the overcharge in rates. I have had shipments twenty-nine days on the way from Winona to Collingwood, thirty days on the way from Owen Sound to Winona, from seven to eight days to two weeks in covering a distance of 100 miles, and to have a shipment two weeks on the way to Nova Scotia is a common experience. Compare this with the despatch which characterizes the handling of freight in England. There is a daily freight train to Manchester which, during a whole year, has not varied thirty minutes in time of arrival at destination. Compare even with our own country on roads which have not an express department as part of their service, and where there is no temptation to delay the freight service where charges are comparatively low in order to divert traffic to the express department, where charges are most unreasonably high. I can send goods to Petrolia by the M. C. R., on which there is no express service, and where efforts are made to provide a satisfactory freight service, and ensure delivery next morning of goods shipped in the afternoon."

THE ONLY HOPE OF REMEDY.

AS Mr. Caston stated in his report, strong representations have been made by the committee to the officials of the railways asking for a redress of the grievances complained of, but so far with little or no success. Our only hope seems to be in the appointment of the promised Railway Commission, whose powers will enable it to rectify such abuses; and to this commission we will appeal as soon as it is appointed. Our committee on this work for 1904 consists of R. J. Graham, Belleville; H. W. Dawson, Toronto; D. D. Wilson, Seaforth; W. L. Smith, Toronto; D. J. McKinnon, Toronto, and J. M. Shuttleworth, Brantford.

A STANDARD CANADIAN APPLE BOX.

THE great scarcity of apple barrels during this season has emphasized the importance of the provinces agreeing upon a standard box for use in shipping apples and pears. Mr. Alex. McNeill, chief fruit inspector, Ottawa, gave a chart showing the various sizes of apple boxes in use in various apple producing countries, and showed that the one already most in favor had an inside measurement of 10 x 11 x 20, or 2,200 cubic inches. Mr. Wilson, of London, who has given much time to uniformity in packing boxes for all fruits, proposed a box measuring inside $10\frac{1}{8}$ x $10\frac{5}{8}$ x $20\frac{5}{8}$, or 2,218 cubic inches, an exact bushel. He advocated this because it could also be used as a crate for twenty-four standard strawberry baskets, or eight standard grape baskets. By adopting it there would be a possibility of putting up all kinds of fruits grown in Ontario in a uniform exterior case. The committee favored the adoption of the 10 x 11 x 20 without the fractions, as the slight difference in size would be no hindrance to the use of the Wilson case, should growers wish it for making shipments of all fruits in a uniform outside package. A box 9 x 12 x 18,

which was about $\frac{1}{4}$ of a barrel, was advocated by some, because women packers could more easily handle it; but on the other hand it was urged that in exporting apples to the United States the duty was 25 cents a box supposed to be a bushel, and if it held less the duty would still be the same. For cold storage the charges are on the same basis. The resolution presented by the committee was therefore finally adopted, reading as follows:

"Your committee would recommend that the Canadian apple box be one of which the cubic contents is about one-third of the Canadian commercial apple barrel, with inside dimensions as follows, 10 inches deep x 11 inches wide x 20 inches long; and that the Canadian pear box be one-half the capacity and half the depth of the apple box; and that the Secretary of this Association communicate with the secretaries of the Fruit Growers' Associations of other provinces in reference to uniformity in this matter."

NEW OR VALUABLE FRUITS.

MORE WORK FOR THE FRUIT STATIONS.

"I THINK," said Mr. E. D. Smith, of Winona, "that the stations would do us a great favor if they could discover new fruits of real value and introduce them. The new varieties should be carefully tested, and when one is found better than an existing variety, and of the same season, they should introduce it to our notice. Just now, for example, in peaches we need at least two good shipping peaches. We have one in the Elberta, but we need one of similar carrying quality, to come in earlier and one later than that variety."

"I think," said Mr. Alex. McNeill, of Ottawa, "the stations should study to decrease the number of varieties. We have already too many kinds—many of them very inferior, and planters should be warned against

them and advised as to the most desirable for the various sections to cover the whole fruit season."

"We have," said Mr. Smith, "not a single good all-round grape yet. What we want is Concord quality in Agawam skin. We should have a wholesale planting of seed with a view of securing something that may meet our needs. For all time we shall be compelled to ship large quantities of our tender fruits to distant markets—to the West and the Maritime Provinces—and we must have the carrying quality."

NEW FRUITS OF THE YEAR.

THE committee consisting of Messrs. Hutt, Macoun and Woolverton, reported on several new fruits worthy of further trial, as, for example, Waller's Seedling apple from Napanee, more showy than Wealthy and of about the same season; a seedling plum from Orillia, handsome and excellent quality; Lindsay's Seedling plum, from Guelph, large and of good quality; Smith's Giant blackcap, large and productive, one of the most promising, a seedling of Gregg; the Emerald plum, the earliest really good plum we have; Lack's seedling, from Lindsay, an apple resembling in beauty the Louise, but earlier; Herbert raspberry, the best red variety for the amateur; Manitoba Grape, one of the most promising for the north, as early as Champion, of as good quality as Moore.

VALUABLE APPLES FOR THE NORTH.

MR. W. F. MACOUN, of Ottawa, gave the following list of winter apples worthy of a place in orchards north of latitude 46 degrees, viz.: Wealthy, Hibernial, Longfield, Patten's Greening, Whitney, Hyslop, and, where not too severe, Northwest Greening, Dempsey No. 80, and Windsor Chief.

For summer and fall he named Yellow Transparent, Charlemov and Duchess, which

without doubt are the best on the list for their season.

THE MOST VALUABLE COMMERCIAL APPLE.

IN accord with the suggestions made at the meeting concerning the many inferior varieties cultivated in Ontario and being offered for sale to planters, the Board of Control of our fruit stations has made out the following valuable list of commercial varieties to be published in our next report: *Summer*, Astrachan, Duchess: *Fall*, Gravenstein (tender in St. Lawrence district and northward); Wealthy (valuable for the north); Alexander (valuable for the north); McIntosh (especially for St. Lawrence district, but can be grown over a wide area); Fameuse (also especially adapted to St. Lawrence district); Blenheim (tender in St. Lawrence and other northerly portions of the province); *Winter*, King (for best apple sections, succeeds best top grafted on hardy stocks); Hubbardston; Greening (both for best apple sections); Cranberry (requires good soil and is adapted to the best apple districts, but especially to Southern Ontario); Baldwin (best on clay and in best apple districts); Spy (for best districts, but succeeds farther north on hardy stocks, this top working also tends to bring it into earlier bearing); Ontario (an early and abundant bearer, but short lived, recommended as a filler among longer lived trees, adaptation similar to that of Spy); Stark (for best apple districts).

UNIONS OF FRUIT GROWERS.

NOW that we are planning for unions of fruit growers in every section of Ontario, we want to gather information from every source, the following account of the working of such a scheme will be helpful:

At the annual meeting of the Massachusetts Fruit Growers' Association Dr. Grigham cited a fruit growers' association near the great lakes which is incorporated and now has 150 members.

It organized five years ago with only 15 members, but now controls 500 acres of small fruits. The first year the sales of \$1,000 were made at a cost of 7 per cent. of gross receipts; 1902, sales of \$45,500 were made at a cost of 2.8 per cent. The able secretary of this association says:

"Much depends on your

General Manager.

He must be a man that knows good fruit, a good bookkeeper, understand law, hustler, and in the busy season work from 5 a. m. to 9 or 12 at night. We have three helpers in office as salesmen, besides two or three helpers two or three hours every evening and handle 200 to 1,000 cases at evening, besides work in the daytime. The manager has full charge of fruit, filling all orders and shipping to best merchants. We get orders from 75 to 100 different parties daily in the rush. General manager collects all money and turns it over to the bank. General manager writes checks, and not the treasurer.

Payments are made once a week to growers, less 10 per cent of money collected and less charges on express account. Two years ago we did not lose a dollar out of \$25,000, but last year lost \$60 by one consignment, and may get 20 per cent. of that yet. We get special low rates on express by railroads. Stock is \$200 per share for a life member. A fruit growers' association at San Jose, Cal., like ours, sells hundreds of thousands of dollars' worth every year of prunes and dried fruit. Trainloads are sometimes shipped direct to New York, Boston and Europe. They get 3 cents per pound for prunes, when before they organized they got 1 to 1½ cents. One grower sold \$10,000 worth of prunes on the trees last year.

"Such an organization, if a success, makes a great saving. The first two years we sent out our general manager, who was out two or three weeks before the berry season to solicit orders and to introduce the association to the trade. Since that our business increased so there is no need to send him out. The fruit advertised itself. We are well located, 18 or 20 miles from Minneapolis and St. Paul, with over 400,000 population. Dispose of surplus fruit if some is too soft to ship.

In general peach growers in the eastern states are very careless, almost indifferent as to the manner of shipping fruit to market, and the result is that very often a superior quality of fruit does not bring as good prices as inferior fruit put up with special pains to make it attractive. The baskets in general use in the eastern states are too large for retail trade. The best grades

of peaches should never be sent to market in large baskets, but each peach should be wrapped separately and sent with as much care as eggs, if the best prices are desired. For the canning size and the wholesale trade, the Delaware basket is undoubtedly one of the most convenient forms for shipment. Inferior fruit should be kept at home and dried or fed to the pigs. The unprofitable handling of a large part of such fruit might be avoided by thinning.

In years of abundance slumps in the market are caused not so much by over production as to inferior distribution.

The Coming Need

in the eastern states is for a system of distribution which will prevent gluts in the market. At the very time when these slumps occur in New York and other large centers, hundreds of smaller towns in the interior cannot procure peaches at any price. Dr. Brigham stated that he had often paid 5 cents each for quite ordinary peaches in interior towns in New York and Pennsylvania and further west when the finest peaches could scarcely be given away in New York and Philadelphia. A well organized system of distribution is a problem which pomological societies, boards of agriculture and other associations should carefully consider.

Co-operation is the

Keynote of Success.

Indeed, without hearty co-operation and compact organization little or nothing can be accomplished, and yet to secure and maintain such organization presents the chief difficulty. Home consumption is another way to avoid gluts in the market; also the judicious use of canning and drying houses. Without co-operation and organization the marketing of fruit is largely a gamble dependent upon luck.

To form a successful organization for marketing, all that is needed is for the fruit growers to agree upon the essential principles. Make an agreement and stick to it. If you must quarrel, select someone outside of the organization to quarrel with. Be sure to pick out the

Right Man for Manager,

and do not make a man manager just because he wants a job. Get some one you know and have confidence in, a man who has made a success in business, and pay him his price. Fruit growers and farmers will eventually find that they must organize, or be driven to the wall; for single handed, they cannot hope to cope with the powerful business and financial combinations which they encounter to-day on all sides.

BUILDING ICE HOUSES

SELECTION OF SITE AND GENERAL RULES OF CONSTRUCTION.

It is not too early to think of the ice crop to be stored next February, and to plan for a proper house in which to keep it. A correspondent of the Michigan Farmer gives some good plans for the building of a house to hold fifty tons.

It is built as near the water's edge as se-

bank. Air cannot enter so readily at the base on the bank side as on the other.

As the ice melts in warm weather, which it surely will to some extent, the packing is loosened, and, unless the base is very snug, air will enter and find its way upward, carrying heat to the ice. Cheaply constructed

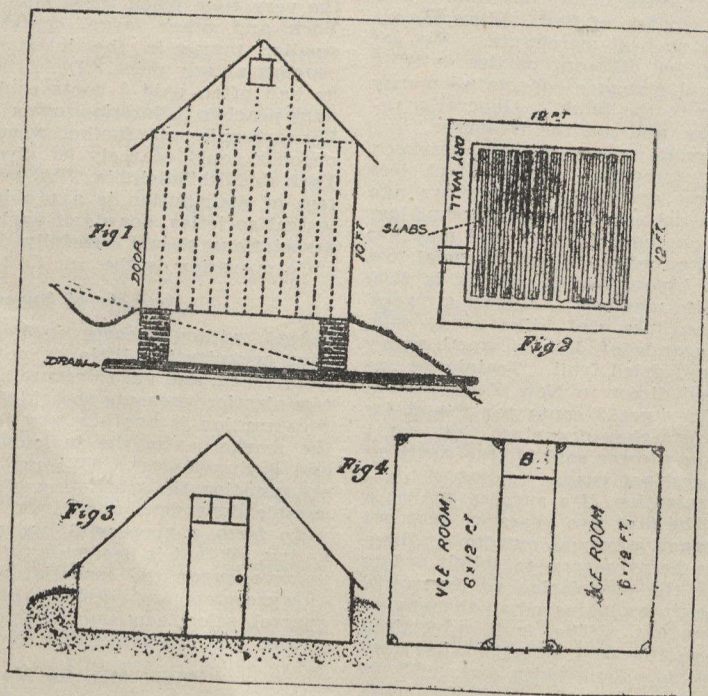


FIG. 2718. ICE HOUSES. (1) BANK ICE HOUSE; (2) GROUND PLAN; (3) A CHEAP ICE HOUSE; (4) GROUND PLAN OF SAME.

curity from flooding will permit. The site chosen is a bank of moderate slant, and it has been found to have at least two advantages over a level location. Unloading from the upper side, much hand labor is avoided in elevating the ice; it has also been found that ice keeps much better on the side next the bank. Sometimes, in preparing the building for refilling, several cakes of old ice are found—always on the side next the

as are most ice houses, the base generally is not air-tight. An effort to make it so is made by tramping sawdust tightly inside, but this does not exclude air so well or so surely as the setting of the building a few feet in the earth.

This requires that the foundation be either naturally or artificially drained. A coarse gravel bottom will drain water off, but a tight subsoil requires artificial drain-

ing. Most buildings of this kind are so hurriedly constructed that no attempt at a good foundation is made. A wall of loose stones is quite good, providing earth is well tramped about it outside, and no burrowing animal is allowed to open the air passage. A mortared foundation is much better and will repay extra expense by longer and better service.

To store ice for family use a building 12 feet square is sufficient, and from such a lot of ice one may spare an occasional cake to his less fortunate or less provident neighbor. A square building is better than a long one in that less outside surface is exposed to the sun's heat compared to the inner space. This means that less material is required also. The height of the building ought to be sufficient to enable one to work when standing upright. A roof close to the sawdust imparts to it more heat than one a little farther away.

A bank ice house should be on ground having a northern or northwestern slant, and a building longer than wide should have the end to the south or southwest. These buildings are necessarily boarded inside the frame, but often the outside boarding is neglected, leaving the bare studding outside. Where thus incomplete it is found that the sun's heat is imparted to the contents much more than when there is an outside boarding. It is preferable that all sides have outside boarding and at least all except the north.

In making excavation for an ice house on slanting ground it is well to pile up the earth removed so as to have it near at hand for banking up against the wall on the lower side of building. Constructed in this way, a wall of loose stones ought to be sufficiently tight to exclude outside air, providing it is banked to the sill, and made tight about the sill with mortar. It is true that such buildings are often banked against the

boards, but this is a poor way if one would have a long term of service from such a building.

Fig. 1 shows the foundation and superstructure of a bank ice house for family convenience. The dotted line shows the natural lay of the ground, while the drain underneath and the banking of earth against the walls are indicated. The walls are $1\frac{1}{2}$ feet thick and 3 feet high laid of loose stones. Sills are 8 x 8 in.; studding are 2 x 4 in., set 1 foot apart, except in gables, where they are twice that distance apart. It is sheathed inside the studding with cheap lumber and the outside boarding may correspond to one's taste and means. The roof is one-half pitch, covered with good shingles. There is room to work under this roof when the building is filled to the plates.

The ground plan of this structure is shown in Fig. 2. In the bottom is thrown a double course of old slabs, or any other material to keep the sawdust from the ground. The ice is laid in so as to have 10 inches of sawdust around the outside. Two small gable windows afford the necessary ventilation above the contents.

Fig. 3 shows a cheap building, but convenient and serviceable. It is 12 x 15 feet, with an alley in the centre. The plates are 3 or 4 feet from the ground level, and the alley is in the centre, where there is height. The roof may be shingled or made of boards or slabs. A door 3 x 6 feet in the north end opens into the alley, on other side of which are bins for the ice. A 3-light window over the door affords light when the door is closed. The ground plan is shown in Fig. 4 and indicated by B, in the far end of the alley, may be shelves or a cupboard for keeping fresh meat, fruits etc., in warm weather. This is a decidedly cheap and convenient building.

FRUIT DISPLAY AT STRATHROY

BY

T. H. RACE, MITCHELL.

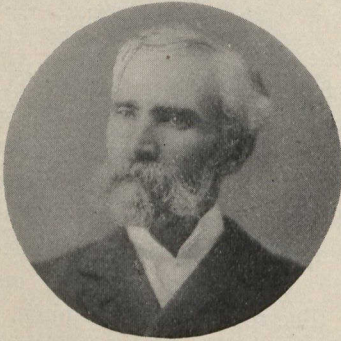


FIG. 2719. MR. T. H. RACE, MITCHELL.
A Director of the O. F. G. A.; Chairman of
the Floricultural Section of our Annual
Meeting at Leamington, Ont.

FOLLOWING up our notes on the fall fairs, I want to say a few words about the fruit at Strathroy. The Strathroy fall fair gave every evidence of being a well managed and well patronized institution. The town of Strathroy is centered in a very fine agricultural district, and is itself a pretty and progressive place. But I saw no evidences of a live and active horticultural society there, though they have one, I believe. Like too many of our horticultural societies, they are combining their means and their energies with the agricultural society and devoting their attention to the fall show rather than to the beautifying of their home surroundings, parks and streets. They need some stirring up in civic improvement and horticultural effort.

The display of fruit at the fall exhibition, in some respects, pleased me very much. They have, without doubt, the soil and con-

ditions about Strathroy for a very profitable fruit section. The Baldwin does exceedingly well there, and some of the finest Kings that I came across during the fall were in the Strathroy exhibit. Among the many varieties especially adapted to the district, besides those already mentioned, were Russets, Ribston Pippin, Talman Sweet, Cayuga Redstreak, Greening, Fall Pippin, and a very fine apple which they call Western Newton Pippin. I might add, by way of emphasis, that the Russets shown were particularly fine.

But the fruit display was not without its defects, and some of those I want to point out as a lesson to future exhibitors. Too little care was exercised in selection. Four fair sized apples with a large one on top does not make an ideal plate of fruit. The one large apple lessens the value of the plate by two points in uniformity of size. Because an apple is large, its size will not atone for the warts, spots, or other blemishes upon it. Every specimen should be free from blemishes of all kinds, fair size, and as nicely colored as possible. Above all, every specimen should be free from worms. This was the greatest defect in the Strathroy display. No matter how large or fine a specimen apple may be, a worm will destroy its value as a show apple. There is no demand for worms in the British market, and a wormy apple will not keep at home. With a little more care in selection, observing these points, the fruit growers about Strathroy can set up as fine a display of apples as one may find anywhere in the province.

*THE CHRISTMAS FRUIT TRADE

THE CANADIAN APPLE IN BRITAIN.

BY

SAMPSON MORGAN.

DURING one week recently the imports of Canadian apples into British ports exceeded 70,000 packages, against 50,000 sent from the United States during a similar period. Out of these totals there were more barrels in the Canadian shipments than in those from the United States. These facts prove that, as far as quantity is concerned, our great apple producing colony maintains the premier position in the British apple markets, especially at Christmas time. From the direct and exclusive reports I receive from the apple growing centres of the world, I am in a position, authoritatively, to say that Canada will send the largest supplies of the highest quality apples that will be on sale in the public markets of the United Kingdom during the festive season.

In recent years the fruit export trade of the colony has been developed in the most remarkable manner. The increasing popularity of the magnificent Canadian apple is due, to a very great extent, to the admirable manner in which the Department of Agriculture at Ottawa, under the able supervision of Prof. J. W. Robertson, has worked on both sides of the Atlantic.

Then the fruit growers of Canada are to be congratulated upon the possession of a paper, I mean, of course, the Canadian Horticulturist, which furnishes such sound advice to growers, packers and shippers on

the commercial aspect of fruit growing. It gets into the hands of the producers on the one side, and of the best distributors on this side, and is doing a good work.

For twenty years I have written in praise of the Canadian apple. In my column series on "Popular Fruits" in the London Echo, I dealt elaborately with this toothsome and sugary dainty. In such influential daily newspapers as the Times, Standard, Globe, Daily Mail, Westminster Gazette, Birmingham Daily Post, Sheffield Daily Telegraph, Newcastle Daily Chronicle and Glasgow Herald I have written again and again on behalf of this fancy product of the glowing Canadian summers.

The petty trade magazines in England carp at the efforts of the agricultural officials, who, through their splendid depot in Parliament street, show the people here the secured despite the opposition of parties who, without any actual experience of the of the foreign producer and shipper. The independent position maintained by the de-the British fruit markets this Christmas time, for which packers, shippers and all true friends of the industry may feel justly proud.

*The article in November number of this journal, from the Scottish Trader on The British Jam Trade, was written by this same author.—Ed.

LOW HEADED FRUIT TREES

A SAVING OF EXPENSE IN THE GATHERING OF THE CROP.

SOME forty years ago I helped to gather the apples from trees that were so tall that it took two men to put up a ladder long enough to reach the top of the trees, writes N. B. White to *American Gardening*, and this slow and expensive process led me to the conclusion that the top of an apple tree should be grown nearer to the ground, and, having some young stocks in my garden of suitable size to graft, the next spring I commenced my experiment of low head for apple trees.

I grafted fifty trees. The scions all formed a union and made a good growth, and the following spring I cut them back to about 6 inches from the ground, leaving 4 to 6 buds, and from those buds the branches for the future top, or head, were produced.

With a great deal of interest I watched them, as from year to year they advanced toward fruiting. When they were three years old I offered some of them for sale, as I had not room for all of them, but no one would buy. "Too low," they said. They wanted trees that they could plow under. In vain I stated the advantage of having them low down, but it was of no use. The peo-

ple wanted apple trees up out of the way, so I planted out most of them myself.

The trees made fine growth, and are in bearing condition now, and seem good for forty years more. Those trees, I think, were the first ever grown especially for the low heads in this country. Orchardists are now, and have been for several years, drifting towards that medium of training. Still there are many who object to it, and it is for these doubting Thomases that I am prompted to pen this article.

It might be difficult to state just which is the most important. The great saving of expense and the great ease and comfort in gathering the fruit is certainly an important one. Another is the greater convenience in spraying, pruning and thinning fruit.

Again, if an apple drops to the ground it is not ruined by the fall. Another great gain, and perhaps the greatest advantage of all when the life of the tree is considered, is the protection given to the roots from the hot sun in summer. Trees thus protected make a better growth, and seem more healthy and, as I believe, will endure much longer.

THE APPLE

CHEMICALLY the apple is composed of vegetable fibre, albumen, malic and gallic acids, sugar, gum, chlorophyll, lime and water. Many scientists and analysts say apples contain a larger percentage of phosphorus than any other fruit or vegetable. This phosphorus is admirably adapt-

ed to the brain and spinal cord, renewing the essential nervous matter, lethicin, imparting vigor to the whole constitution. Apples are laxative; and it is claimed that a good, ripe apple is thoroughly digested in 85 minutes.—*Southern Fruit Grower*.

APPLES FOR COWS

VALUABLE FOOD IF GIVEN IN PROPER QUANTITIES.

ONLY a few farmers fully appreciate the value of apples as a feed for cows. Some will even tell you they "dry cows up." This erroneous notion has probably been formed by their cows breaking into their orchards, and, being very fond of apples and hungry and not having the fear of dyspepsia and diarrhoea before their eyes, gorged themselves nearly to the bursting point, cloyed their appetites for a day or two, and brought on the scours. The fault was not in the apples but in the gormandizing. Should these same cows get at the meal box or the grain bin, they would injure themselves as badly as when foundered on apples. A writer in an exchange says he has always fed them to cows giving milk, and always with good results. They are worth more to feed to cows than when made into cider.

He proved the value of apples as food for cows by actual experiment. As soon as they begin to fall they were picked up and drawn to the barn and fed. About four quarts were given to each cow for the first few feeds, until the animals became accustomed to them; then the quantity was gradually increased to a peck twice a day. Previous to beginning the feeding of apples, the cows had been receiving a four-quart ration (four pounds three ounces) of mill feed, then selling at \$1.80 a hundred weight. With one-half of the mill feed taken away and a peck of apples substituted in its place, there was no falling off in quantity of milk produced, nor in the quantity of cream, as determined by the scale of the Cooley cans, and the color of the cream indicated that it was as rich in butter fat as formerly. The ration of mill feed was worth $7\frac{1}{2}$ cents, one-half saved by feeding a peck of apples— $3\frac{3}{4}$ cents. Call it $3\frac{1}{2}$ cents; then a bushel of

apples in the barn was worth 14 cents cash to feed to cows. He paid boys about a penny a bushel for picking them up.

B. F. Thorpe, in Hoard's Dairyman, says of a successful dairyman in New Jersey: "His windfalls and inferior apples and root trimmings from vegetable garden, that are valuable for relishes for his cows, find their way to their mangers, and figure to a greater extent in the year's total production than the novice would suppose." A bulletin recently issued from the Vermont Experiment Station says that the experience of four years of feeding apple pomace to twenty cows proves "that it is nearly equivalent in feeding value to corn silage," and "cows continuously and heartily fed have not shrunk, but, on the contrary, have held up their milk flows remarkably well. Fifteen pounds of pomace to a cow have been fed daily with entire satisfaction."

The value of apples was still greater when fed to hogs than when fed to cows. I fed a bushel of apples to a small lot of hogs in the morning, when their appetites were good, and they were all eaten before noon. At noon they were fed three pecks of mill feed, and when they had eaten it up clean they were given another bushel of apples, and at dark three pecks of mill feed. The two feeds of ground grain weighed fifty-one pounds, and were worth at that time 91 cents. It is not easy to fix the exact value of the apples, because it is not certain that the hogs fattened as fast when more than half their diet was apples as they would have done had their feed been all ground grain. Apparently, they fattened as fast as my hogs ever did when their ration was wholly ground grain, and when killed were found well fattened. I know by trial that without

the apples the hogs would have eaten rather more than sixty-eight pounds of ground grain each day, or would have required seventeen pounds more in place of the apples. Seventeen pounds of feed was worth 30½ cents. According to this calculation, which, I believe is correct, apples were worth about 15 cents a bushel to feed to hogs. With cheaper grain, of course, apples would be worth less; but grain will never be so cheap that apples will not be worth picking up to feed to cows and hogs. Young cattle and horses are just as fond of them as cows and hogs. One of our horses neighed and pawed to manifest his anxiety to be served with some when he saw me feeding the cows. Reason teaches that an article of

diet that animals are so crazy to get must be healthful and suitable food for them when fed in moderation.

The Country Gentleman says: "As the apple season progresses, we see more and more the need of some outlet for waste apples. They can be fed to pigs and cows; and that, perhaps, is as good a use as any. Careful tests show that apples fed regularly and in moderation produce no bad effects."

Dr. Groff, in the Tribune Farmer, says: "The present season this cow (his family cow) has had now for about twelve weeks a large basketful of apples, or of pomace, twice each day and she has never in the same time produced so much milk.

FRUIT FOR BREAKFAST

SAYS the Youths' Companion: "There are thousands of men and women who are within easy reach of orchards and fruit gardens, or of fruit stalls, who sit down each morning to a heavy, greasy, fried breakfast, which taxes their digestive organs to the utmost. Many of them never take fruit at all except in the form of pie. * * * * Even in the country, where there are no fruit markets, there are few families who do not have a barrel or two of apples in their cellar in the winter. No better use could be made of these apples than to serve them at breakfast. They are best raw; but for those who cannot easily digest uncooked fruit they might be baked, or made into apple-sauce. In my own individual practice I go still fur-

ther. I aim to have fruit, such as apples, pears, grapes, sometimes oranges and bananas, on the table at breakfast, dinner and supper. Bananas are simply delicious when served with acid-currant sauce as I have it; namely, without skins and seeds. At breakfast I may eat my fruit first, to be followed by a dish of some breakfast food. In the berry season I usually combine the fruit with the breakfast food. Mellow, juicy pears or a well-ripened Maiden Blush or Snow apple may be served in the same way in their season. At dinner the fruit is usually eaten the last thing, and possibly the same at supper, although none of my family seems to care so much for fruit thus late in the day.

THE PRACTICE OF UNDERDRAINING

TO secure satisfactory results careful study should first of all be given to the best manner of laying out a system of drains, the aim being to secure the greatest fall, the least outlay for tile, the least amount of digging, and the most perfect drainage.

TILE.—For underdraining there is nothing better than the ordinary round drain tile. The size to be used can only be decided by a study of the conditions under which the drain is to work. They should be large enough to carry off in twenty-four to forty-eight hours the surplus water from the heaviest rains, but it is important that they should not be too large, as the cost of underdraining is governed largely by the size of the tile used. It may be mentioned that the capacity of the round water pipes is in proportion to the squares of their diameters. That is, under the same conditions, a two-inch pipe will carry four times as much water and a three-inch pipe nine times as much water as a one-inch pipe. In fact, the larger pipe will carry even more than this proportion, because of the greater friction in the small pipe. In ordinary cases five or six inch tile are recommended for the lower part of a main drain and four-inch for the upper portion; for the branches 2½ to 3-inch are preferable.

DEPTH AND DISTANCE APART.—It is seldom necessary to lay drains more than four feet below the surface, and in most cases two and a half to three and a half feet will be found sufficient. The proper distance between branch drains depends on the quantity of water to be carried and the nature of the subsoil. In general practice the lines of tile are usually placed from fifty to one hundred feet apart. In a tenacious clay soil, however, thirty feet would not be too close.

DIGGING THE DRAIN.—The drain may be opened up in the first place by passing three or four times along the same track with an ordinary plow. Then the subsoil may be broken up with a good strong subsoil plow. In this way the earth may be loosened to a depth of two feet or more and thrown out with narrow shovels. The bottom of the drain should be dug with narrow draining spades made for the purpose. The ditch should be kept straight by means of a line stretched tightly near the ground and about four inches back from the edge. In ordinary cases the ditch need not be more than a foot wide at the top and four to six inches at the bottom, the width of course increasing in proportion to the depth of the drain and the size of the tile.

GRADING.—As a rule drains should be given as much fall as possible, and the grading should not be less than two inches in one hundred feet, if this can be secured. Careful leveling is necessary to ensure a uniform fall throughout the course of a drain. As a simple method for this purpose, one of our leading authorities recommends the ditcher to use several cross-heads made from strips of inch boards, three or four inches wide. The length of the standard varies according to the depth of the drain. A cross piece about two feet long is nailed on the top of the standard. These cross-heads are then placed along the line of the ditch so that the cross pieces are in line. The proper grade is ascertained by the use of the ordinary spirit level. When ready to lay the tile a standard should be set at the bottom of the drain and marked in line with the top of the cross heads; this will, by testing every few feet, give a true grade for the tiles.

LAYING THE TILE.—When the bottom of

the drain has been brought to the proper grade and shape the tile should be laid very carefully to secure perfectly close joints. With the aid of a tile hook they may be placed rapidly and accurately without getting into the ditch. Some prefer to place the tile with the hand, standing in the ditch and stepping carefully on each tile as laid. In covering it is preferable to put the surface soil next the tiles, for if properly packed it will prevent the subsoil from getting in at the joints. The laying should begin at the outlet of the main drain, and where connection is made with branch lines enough of the branch should be laid to permit the main to be partly filled in.

JUNCTION AND OUTLETS.—All junctions of branches with the main line should be made at an acute angle, or where the fall is sufficient, from above the axis of the main. This is necessary in order to prevent the de-

posit of silt and the consequent blocking of the tile at the junction. Specially made joint tile may be used, or the connection may be made by cutting a hole in the main tile with a tile pick. The outlet of the drain should be so placed that there will be a free flow of water. If protected with masonry and a grating to keep out animals, so much the better. In this country glazed sewer pipe or glazed drain tile may be used to advantage for the last ten or fifteen feet to prevent injury by frost. In closing it may be well to recall the fact that trees should not be allowed to grow near a line of tile, through which water flows during the greater part of the year, as the roots are apt to enter at the joints in search of water, and in course of time close the drain. Willows, poplars and elms are particularly objectionable in this respect.

THE NEGLECTED ORCHARD

KEFFER, in Univ. of Penn. Record, says: "The neglected orchard is usually neglected because the farmer does not depend on it for his living or his profits—his other acres provide these, and the orchard does all that is expected of it, produces enough apples for family use. Almost any old orchard will do that. It is only when it dawns on the farmer that his more progressive neighbor is making more money out of his orchard than out of any other equal acreage on his farm that he starts in to study the problem of fruit production. He knows he can not grow corn continuously without enriching the soil, and a yearly dressing of manure is given the corn fields. He knows that meadows become unproductive when left too long in

sod, and every few years the meadow land is given thorough tillage, and for the time being grass and corn change fields. Let him apply exactly the same cultural principles in his orchard that he does in his remaining fields. Manure the orchard. Plow it. Add to the soil every year or two something in the nature of vegetable matter—barnyard manure, or a good crop of cowpeas plowed under—something that, with the frequent use of the cultivator during the growing season, will make the soil in the orchard as light and friable as the soil in the corn fields. It means work, and lots of it. But nobody expects a corn plant to produce its fruit without manure and tillage; why should the apple tree be less lightly regarded than the corn plant?"

PRUNING PLUM TREES

TAKING for granted that your trees are bought from the nursery, pruning should be commenced at the time of planting in the orchard, carefully trimming the bruised or broken ends of roots with a sharp knife. Carry out with the top the same idea you would when planting shade trees—cut back somewhere near in proportion to the loss of roots, and you will have a much stronger immediate growth than you will if no pruning is done.

If your young tree is a long switch, it is easy to plan for the future form of the tree. Cut back as low as you dare have the branches spread from the trunk. It is not desirable to have the branches up so high that a horse may pass under. Better if the branches keep the horse so far away that the whiffletrees cannot touch the body, but you will want to get under the tree yourself to pick up fruit. Some varieties will scarcely permit this if allowed to grow their own way when young.

You may sometimes buy young trees which have not been properly trained in the nursery, thus making it necessary to cut well back to force the growth of a new body rather than to have a sprawling thing which will compel the removal of large branches at some future time. If your trees thrive well, the branches will be long switches, which should be cut back to one-third of their length, otherwise some will throw out branches near the ends, and the most thrifty ones will incline to take on the form of trees themselves. The more luxuriant the growth of the switch the more positive should be the pruning. This cutting back should be repeated so long as the tendency to make long extensions of growth is continued, but after fruiting commences, attention will have to be given mostly to keeping the inside sufficiently open and preventing

interlocking or crossing of small branches.

Forethought in pruning will make the trees more compact and strong, thus lessening the tendency to break down when loaded with fruit. A good time to prune is late in winter during the pleasant days when you feel as if you just wanted to do some horticultural work that makes it seem as if spring is coming. Other good times to prune are when the weather is not too hot nor too cold. It would be well to keep your knife in your pocket when the wood is frozen, and not plan for any pruning during the dog days, but even then you may help nature along if you have overlooked here or there a small branch which shows that the tree will soon have no use for 't. A knife blade with a straight edge is better for pruning than the orthodox form of a hooked blade. With a slight pressure with the left hand on the branch to be removed and a drawing cut with the right hand, you can with a straight sharp edge remove a much larger branch than should be found necessary to take off.

Pruning for stubs to strike on when jarring off the curculios and gouger seems to be of double necessity. When cutting for scions, judgment should be used in regard to the future shaping of the young tree, and it would be well to do it yourself rather than to defer to the opinion of the man who wants the scions. After the trees have commenced to bear you may have difficulty in getting scions from such free fruiting varieties as the Arctic, Townsend, DeSoto, Rollingstone, etc.

Experiments in cutting back parts of trees this year on the Arctic and Baraboo, prove that we can in this way promote young growth. Reasoning from this, I think we can to some extent thus rejuvenate our old trees of such overbearing varieties

as the DeSoto, which after a few years bearing shows lack of vigor and tendency to die out. There is another kind of pruning which is of marked benefit, not only in promoting the vigor and in prolonging the life of the tree, but also in improving the quality and size of the fruit. I refer to fruit pruning as thinning, but by all means let it be done by removing the fruit and not the fruit spurs.

The curculio and gouger will try to do

the thinning for you. but they make such a mess of it their work should be prevented as much as possible. Sometimes the injury from aphid is in such shape that it is well to trim off and burn the infected branches. Black knot and blights should be treated with the knife and fire, but I have not been troubled with these diseases, so can say but little about them. In conclusion, would say, keep your knife sharp.—*American Agriculturist.*

APPRENTICESHIP OF A GERMAN GARDENER

FIRST of all, it is required of an aspirant to have a fair school education; if possible, language (Latin especially) and geography, which help him considerably and save a lot of study in after days. If the young man has found a place to enter as an apprentice, the majority of establishments charge a certain sum per annum, Germany generally from 100 to 150 marks (\$25 to \$37.50); France and Belgium about the same. Then he must enter a contract to serve a time, generally three years. In rare cases he will be allowed a small compensation at the last year of his time.

There are some places which take apprentices without pay, but then he must generally serve a time of four years.

This time will never be forgotten by any young man who passed through it. It is a time of hard work—in many places it is compulsory to pass through evening school to collect knowledge in landscape drawing, geometry and surveying. This goes through to sometimes three years during winter. Then besides at home it is not only practical work, which occupies the young man, but also theoretical. There are the names of all the plants to be learned, their nature, native country, under what conditions they grow best, what soil is best for them; books

have to be bought and studied; many employers require their apprentices to keep a day book in which all work done during the day has to be entered. Not only superficial, but to the minutest details. After twenty-six years the writer recalls many instances of apparent negligence and the rather strong reprimands he received. In this way the time passes for the apprentice under constant work with few and long between pleasures. After the expiration of his time he is called an assistant and receives his certificate, of which every young gardener is as proud of as any young girl of a new Easter hat.

Then his time comes to travel. Of every young gardener it is expected that he sees other establishments, if possible, other countries, and widen his knowledge. We all, who passed through the mill, know how proud we felt and thought we knew it all; but no matter how hard we worked and studied, after getting to a new place he finds out how little he really does know. Wherever he goes there are different methods, other plants, always something new; so it keeps him hustling to keep up to date.

It is a constant learning as long as he is in the profession. But this is a gardener.—*R. W. Unger, in Union Gardener.*

SELF-STERILITY IN APPLES

C. B. S., U. S. DEPT. OF AGRICULTURE.

ABOUT ten years ago Prof. M. B. Waite called attention to the absolute sterility of certain varieties of pears when fertilized with their own pollen. Later Prof. F. A. Waugh and others showed that all the varieties of Japanese plums and practically all the native American plums are self-sterile, and will not bear any fruit whatever, unless crossed with other varieties. This work led to similar investigations with apples, and very interesting results have been obtained. The Ben Davis apple, which proved self-sterile at the Kansas experiment station, was found entirely self-fertile at the experiment stations in Rhode Island, Vermont, and Canada. Even in Kansas, where 26 per cent. of the self-fertilized blossoms set fruit, it was found that the self-pollinated fruit was not so large or so vigorous as the fruits from cross-fertilized blossoms on the same tree. Besides, a much larger proportion of the self-fertilized fruits dropped before they reached the size of a hazelnut than of the cross-pollinated fruit.

The following alphabetical list shows the varieties of apples that have thus far been found by actual trial at one or more experiment stations to be self-sterile: Astrachan, Belleflower, Ben Davis, Blenheim, Canada Red, English Russet, Fameuse, Gravenstein, Grimes Golden, Hawley, Huntsman, King, Mann, Northern Spy, Porter, Primate, Ribston, Rhode Island Greening, Roxbury Russet, Spitzenberg, Stark, Talman Sweet, Wealthy, Williams Favorite, Willow Twig and Winesap.

The following varieties have been found more or less self-fertile and capable of pro-

ducing some fruit when standing alone, and not cross-pollinated: Alexander, Astrachan, Baldwin, Ben Davis, Bough, Chenango, Early Harvest, Esopus, Fameuse, Jonathan, Ontario, Rhode Island Greening, Smith Cider, Twenty-Ounce and Yellow Transparent. With many of the varieties in this list not more than one blossom in a hundred set fruit when self-fertilized. With scarcely any was a good crop secured, and in nearly every instance the fruit has been smaller and less desirable than cross-pollinated fruit. The conclusion seems inevitable that large blocks of a single variety of apples should never be planted. Varieties should be intimately mixed in the orchard to insure cross-pollination. These varieties should be such as will blossom about the same time and be capable of cross-fertilizing each other.

With respect to the latter point, Jonathan, Huntsman and Cooper Early proved especially valuable as pollenizers at the Kansas experiment station. Prof. G. H. Powell, at the Delaware station, found that Paragon, Staymen, Winesap and Lily of Kent, all weak pollen bearers except the latter, to be inter-sterile, and should therefore never be planted together in commercial orchards for the purpose of cross-pollination. Further work along these lines to determine what varieties bloom together and are most suitable for pollenizing each other is very desirable. And since varieties behave differently toward each other in different sections of the country, these data should be determined in many different localities.

Civic and Rural Improvement Garden and Lawn

IMPATIENS SULTANI

BY

WM. HUNT, SUPT. GEENHOUSES, O. A. C., GUELPH.

THIS plant is very commonly known amongst plant lovers as the "Patience plant," and is one of the best and easiest plants to grow for the window.

It is very seldom at any season of the year, whether in the window in winter time or when growing in the open garden in summer time, that at least a few of its beautiful bright rose-scarlet flowers are not found on the tips of its pale green waxy-like foliage; whilst at times the plant is almost covered with its showy blossoms. This continuous habit of flowering and its easy culture are two strong points in favor of this perennial relative of the annual Balsam (*Impatiens Balsamina*), that is so well known and so often seen in flower borders during the hot summer months. The annual variety, however, is a native of tropical Asia, whilst the *Impatiens Sultani* is a native of Zanzibar in tropical Africa, and is often for that reason called the Zanzibar balsam.

There are several hybrids and types of the *Impatiens Sultani* offered for sale by plant growers besides the scarlet flowered variety, named "Rosea" being amongst the best of the newer types introduced.

Cuttings of these plants will strike readily in fine sand. The cuttings should be taken in April or May, about two inches of the tips of the shoots being best for this purpose. Care should be taken in inserting the cuttings into the sand not to bruise or tear the base of the cutting. The sand should be well watered first and holes dibbled in the



FIG. 2720. MISS ELMA O'FARRELL.



FIG. 2721. MISS MINNIE BAILEY.

sand a little over an inch in depth to place the cutting in, when the sand should be filled in level around the cutting and sufficient water given them to thoroughly moisten all the sand in the pot or box that is used. A warm place in the window where the sun does not strike directly in the middle of the day will suit the cuttings very well. The sand should be kept moist, but not saturated with water.

In about three or four weeks the cuttings should be rooted sufficiently to pot off. Small pots ($2\frac{1}{2}$ -inch) should be used for

each cutting, and a compost consisting of two parts of rich loamy potting soil and one part of sand mixed with it will suit them very well for the first potting; less sand can be used for future pottings if the plants are grown on in pots.

I have grown fine bushy specimens of these plants in the open ground out of doors during summer by planting the small plants out about the end of June after danger from frost is over. A light rather sandy soil, fairly rich, suits them best. The plants should be potted about the end of August

and taken indoors before the nights get chilly and cold. Some broken pieces of flower pot, coarse gravel, or some coal cinders should be placed at the bottom of the pots before the plants are potted, as bad drainage in the pots during winter will often cause the foliage to turn yellow and drop off prematurely.

The aphid or green fly, as well as the red spider, are often troublesome pests to these plants. Tobacco smoke or tobacco water will kill the aphid, whilst the red spider can be disposed of by dipping the foliage of the plants in tepid water once or twice a week if the plants are badly infested.

I know of no plants that will give such continuous flowering results the year round, whether grown in a greenhouse or in the window, more especially when the very little

care and attention they require is taken into consideration, than these Zanzibar balsams will.

I had intended to send along a photo of a specimen of these plants with this article, but unfortunately the negative was a failure. Possibly I may secure a picture for next month's issue.

CHRYSANTHEMUMS.

The two photos I am sending are those of two of the new chrysanthemums I mentioned in the December issue, viz.: Miss Elma O'Farrell, a bright rosy-magenta colored flower, and Miss Minnie Bailey, a light silver pink flower, of a decidedly pretty rosette shape. Both are good varieties for pot culture for the window or greenhouse.

DAHLIAS

THE most convenient method of raising dahlias is to place the old roots—during the month of April—in benches or boxes, covering over with sand and stand them in a greenhouse or hotbed in a temperature of about 60 degrees. They should be kept moist, but not over wet. When the shoots attain a length of about four inches, take off as cuttings and insert in propagating bench with about same temperature. When rooted, pot off singly into three-inch pots, using a sandy compost. Shade till started, then give plenty of light and gradually harden off. Plant outdoors end of May. Training must be done according to the purpose for which

the plants are intended. For exhibition blooms, three shoots only are left; these are tied to separate stakes and all buds are removed except the centre one in each shoot. But for general purposes, twelve or more shoots can be left. One strong centre stake will be sufficient, the side branches being supported to this by a string of sufficient strength; disbud to one bloom on each shoot. These remarks on training apply only to the larger double flowered varieties. For singles and pompons, little or no disbudding is necessary; all that is generally required is to give them the requisite support.—*Am. Gardening.*

THE CONFERENCE OF HORTICULTURAL SOCIETIES

ONE of the wise steps in advance, introduced by our worthy secretary, has been the division of our annual meeting into sections, so that delegates could attend to those sections most in line with their work. We have now a fruit section and a flower section; by and by we may have a forestry section and a domestic science section, all coming together for a union session each evening.

The chairman of the flower section was Mr. T. H. Race, of Mitchell, so well known to our societies by his talks on Rose Culture. One of the most valuable papers was the following, given by Prof. H. L. Hutt, of the O. A. C., Guelph, on

BEAUTIFYING HOME GROUNDS.

THE sturdy pioneers who first settled this country came with a determination to subdue the forests and to hew out for themselves homes in the wilderness. Their first aim was to clear the land for the growing of crops, and this usually kept them so busy that they had little or no time for leveling of lawns or planting of shade trees and ornamental bushes. But we have now reached a period in the country's history when comfortable homes are thickly dotted throughout the land, and more attention is being given to the beautifying of the home surroundings. Not only is the skill of the landscape architect more and more in demand, but there is a call for information on the subject by which those who have not the means to employ a professional gardener. In this paper we shall call attention to some of the leading principles which should guide in laying out and beautifying the surroundings of a country home.

In the first place it must be understood that the most beautiful scenes are, as a rule, more or less natural. We should, therefore, accept nature as our teacher, and study the materials and combinations which go to make up natural beauties.

The materials with which the landscape gardener has to deal may be classified as natural and artificial. The natural materials are the ground, grass, trees, shrubs, vines, herbaceous plants and annuals, and in some cases rocks and bodies of water. The artificial materials are trees and shrubs clipped into unnatural shapes, geometrical beds of improved flowers, terraces, walks, drives, buildings, fountains, statuary, etc. The skill of the landscape gardener in producing

beautiful effects depends upon the judicious use of these materials. We shall now treat of some of these in detail.

The Ground.—One of the most important features in the ground surrounding a home is the contour of its surface. This is what gives character to a place. A low lying lawn with something of a depression in the centre, has an altogether tame appearance, while an otherwise similar lawn, with but a slight covering in the centre, has an altogether different appearance. Sometimes a perfectly straight surface line is pleasing, and the level lawn is more in keeping with the place and its surroundings than any other could be, but as a rule some variation from the straight line is preferable. In nature we take more delight in bold outlines of hills and valleys than we do in level stretches of country. This is because we love the variety which hill and hollow affords, and this suggests the desirability of introducing undulations in landscape gardening whenever the size of the grounds and other circumstances will permit.

The buildings should, of course, be on the highest elevation, and the grounds should be made to slope away from them. On a steep hillside the grounds may have to be terraced, which, if well done, adds much to the appearance of a place, but likewise adds considerably to the cost. Whether the grounds are flat or rolling the small irregularities of the surface should be levelled and smoothed so that the mower may be worked easily. Wherever much grading or filling has to be done due allowance must be made for settling, and a few inches of good surface soil should always be left on top. The character of the surface soil is a matter of great importance, because on it depends the luxuriance or poverty of the grass and trees growing over it.

The Green Sward.—There are two ways of clothing the ground with grass, either by sodding or by sowing grass seed. On small plots or steep banks and along borders, sodding is the quickest and most satisfactory method, but on large areas seeding is not only the cheapest but the best. In preparing the ground for seeding it should be plowed, harrowed, rolled and made as fine as possible, and as a final preparation nothing is better than going over it carefully with a garden rake.

The kind of seed to sow is a matter of importance. Coarse grasses, such as timothy, are not suitable for lawn making. Many of the finer and more delicate grasses may be obtained in "lawn grass mixtures," but the most satisfactory mixture we have found is made up of equal parts by weight of Kentucky blue grass, red top grass, and white Dutch clover. All of these are hardy and stand well the extremes of our climate. The seeding should be done on a still day when there is no wind to carry the lighter seeds. Thick seeding should be the

rule. Three or four bushels per acre is none too much for seeding down a lawn. In fact, the grass should come up as thick as the hair on a dog's back. After the seed is sown it should be lightly raked in, and if the weather is dry it is well to go over the ground with a hand roller. The work of making a lawn may be done at almost any time of the year, but where much levelling and filling is necessary it is well to do the grading in the fall, so that the ground will have finished settling by the spring, and then the surface may be raked over as soon as it is dry enough to work, and the seeds sown as early as possible. A lawn sown early in the spring should be nice and green by the middle of the summer, or seed sown early in the fall should give a good grassy carpet early next spring.

Keeping a Lawn.—To keep a lawn in prime velvety condition it should be mowed frequently, particularly during the season of rapid growth. The mowings should be so frequent that none of the grass should have to be raked off. This is the practice followed on well kept city lawns where men, money and mowers are available. On the farm, where these articles are not so plentiful, and where the area to be gone over is usually greater, it may be kept in very respectable condition with the ordinary farm mower, the cutter bar of which should be set low and the knives kept sharp. On the farm the front yard and back yard, the lanes and the roadsides should all be levelled, seeded and put in such condition that they can all be gone over with the farm mower, and if the mowing is done as often as the grass is high enough for the knives to catch nicely the improvement made in the appearance of a place would in many cases add nearly 50 per cent. to the value of the property.

To maintain a luxuriant growth and a rich dark green in the color of the grass, the lawn should occasionally receive a top dressing of stable manure in the fall. The soluble portion of this is washed into the ground by the fall and spring rains, and early in the spring the coarsest portion of the manure should be raked off.

Trees and Shrubs.—In the trees and shrubs we have some of the finest forms of natural beauty. They present a great variety of ornamental qualities, in habit of growth, in size, in color of bark and foliage, and in their flowers.

Taking the trees first, they may naturally be divided into two classes, the deciduous and the evergreen trees. If space permitted we could give a lengthy list and mention the special claim of each to a place on the lawn, but we must be content with mentioning only a few of the most desirable. Among the maples we have the sugar maples, the soft maples, and Weir's cut-leaved variety of the same, the Sycamore maple, and the Box elder, sometimes called the Manitoba maple, which is particularly valuable on new places on account of its rapid growth, but along with it should be planted some of the more durable trees, which will come in and last long after the Box elder has served its purpose. As a successor to it we know of none better than

our native American elm. In its finest form, with feathered trunk, high spreading arms and long, pendulous branches, this is, in our opinion, the most stately and graceful of our native trees. On large grounds, where there is room for variety, some of the rugged oaks and fragrant lindens add a charm to the scene. The cut-leaf weeping white birch is very ornamental in both summer and winter, and shows a striking color contrast, particularly when placed so as to have for a background a group of evergreens or a dark colored building.

Among the evergreens the pines and spruces occupy a first rank. The Austrian and Scotch pines make handsome specimens, although when young our native white pine is equal to, if not superior to, any of the foreigners. The same might also be said of our native white spruce, as compared with its more vigorous relative from Norway. But for a handsome specimen of nature's coloring let us have the dainty little blue spruce of Colorado. Among the arbor vitae, junipers and retinosperas there are some very beautiful forms, such as the pyramidal and globose arbor vitae, the tall Irish juniper, and the plumose retinospera, but those last mentioned are less hardy than the arbor vitae and require protection for a few years in the colder sections of Ontario.

Ornamental Shrubs.—For a list of some of the most desirable and hardy ornamental shrubs adapted to our northern section, I cannot do better than refer intending planters to the valuable list given in Mr. Macoun's report in the Central Experimental Farm Report for 1897. One hundred species and varieties are there mentioned, with twenty-five of the most desirable marked. If we were compelled to reduce the list to half of that number, we would from our own experience select the following: The Caragana or Siberian pea-tree, *Hydrangea paniculata*, the Tartarian bush honeysuckle, the mock orange or *Philadelphus*, the golden currant, *Spiraea Van Houtii*, the *Weigelia*, the Purple fringe, the old-fashioned lilacs in variety, the snowball or *oldburnum*, and last but not least, roses in variety.

The Arrangement of Trees and Shrubs.—To artistically arrange and distribute a collection of trees and shrubs on the lawn requires much more skill and judgment than to set out trees in a straight line in an orchard. The following rules should be observed in lawn planting:

1. Follow as nearly as possible the natural order of arrangement. Nature does not plant in stiff and formal geometrical lines, but rather in irregular profusion, in too much profusion. It is often necessary, therefore, to modify the natural arrangement to meet the needs of the case. One has said that "the aim should be to exhibit nature idealized rather than nature real." A prominent American landscape gardener tells us that for his first lesson in arranging trees on the lawn he was told to take in his hand as many stones as he had trees to plant; to stand by the house and throw them in the direction he wished the trees to stand, then plant wher-

ever the stones fell. And he says that with a few slight modifications the effect was all that could be desired.

2. **Arrange to give an air of breadth and expanse to the place.** This is a most desirable effect, and is secured by preserving a more or less open lawn in front of the house, by scattering and grouping the larger trees at the outside of the grounds so as to more or less hide the boundaries. This suggests an unlimited extent, beyond what the eye can see at any point. Another means is by opening vistas between the trees, looking out upon distant scenes beyond the boundaries. In this way we may shut out undesirable objects, and we may appropriate to ourselves desirable scenes, such as a wooded hillside, a stretch of river, or a church spire, and thus make our little grounds seem like part of an extensive park.

3. **Arrange for trees to give comfort as well as ornament.** One of the first considerations should be to shade the buildings from the heat of the sun and to shelter them from the sweep of the prevailing winds. On the south and west should be planted a few of the largest trees, such as elms or maples, not so close as to exclude the light from any of the windows, nor so that any of the branches, when the trees are full grown will overhang the house, but close enough that their shade will fall upon it. In all planting the effect should be watched from the principal windows, and we must take into consideration what the results will be when the trees are full grown.

As a protection against the sweeping winds of winter some of the strong growing evergreens, such as pines and spruces, are most useful. Thick belts or clumps of these should be planted on the most exposed quarters, and along with them may be planted a few of the light colored deciduous trees. In winter the evergreens give a cosy appearance to the place, and in summer their sombre darkness is relieved by the bright green of the deciduous trees.

In arranging the smaller trees and flowering shrubs these may be grouped into ornamental groups, or occasionally fine specimens may stand out by themselves. When grouping into clumps the tallest growing specimens should be planted in the centre, and along the border the smallest shrubs should come to the front so as to blend the grass with the taller trees in the background.

Beautiful color combinations and contrasts, both in flower and foliage, may often be arranged if the planter understands his work. For instance, a beautiful color contrast is obtained by planting a purple-leaved barberry near a golden-leaved spiraea or a dark Australian pine as a background for one of the light colored Colorado spruces.

Vines and Climbers.—Among the vines and climbers we have a number of beautiful species which may be made very effective in many ways in beautifying the home surroundings. They are particularly valuable on small grounds and town lots, as they take up so little

room, but they are also quite as valuable in beautifying a country home. One of the most hardy and vigorous is the common Virginia creeper. This is excellent for covering a summer house or an unsightly wooden wall. As a covering for a brick or stone wall the Boston Ivy (*Ampelopsis Veitchii*) is one of the handsomest. In northern sections it requires winter protection for the first few winters, but when once established it grows rapidly, and will soon convert a brown or red front into a wall of living green. For a handsome, hardy flowering climber we have nothing to equal Clematis Jackmani, with its large purple flowers; and Clematis paniculata, with its innumerable small white flowers late in the fall. Hall's climbing honeysuckle and the Chinese Wistaria are beautiful climbers, well adapted to climbing verandah posts or festooning a balcony, but they will not stand our winters without protection except in the southern parts of the province.

Walks and Drives.—These are not in themselves very ornamental, but they are necessary and have an important effect in the appearance of a place.

When properly located they convey the idea that the place is inhabited, and they seem to impart an air of welcome.

As the walks and drives are artificial, and not in themselves ornamental, there should be as few as possible. Business roads should as a rule be straight, but pleasure drives give more pleasure if they are laid out in graceful curves. The curves give variety and help to relieve the angular outlines of the buildings. They should not, however, be introduced at the expense of utility, and should offer no temptation to take short cuts across the grass. Whenever a curve is introduced there should be trees or some object in the road to make the curve appear necessary. If such are not there when the drive is laid out, they may be planted afterwards. A curve without some apparent cause for it looks meaningless and affected.

The drive, whenever possible, should enter at the side of the lawn, and curve gently around towards the buildings as though it were the nearest and most natural way of approach. It should be dotted here and there along the sides with trees and shrubbery, which partly screen the buildings from sight, so that we keep getting a different view of the house as we approach. This gives variety and pleasure, and always leaves just enough unseen to make us feel like following it up to see where it leads to.

The width of drives and walks should vary according to their length and the amount of travel upon them. If long and much travelled the drive must be wide enough for two rigs to pass easily, but if short and not so much used, 8 to 10 feet, or room for one wagon, is enough. Walks or footpaths will vary from 3 to 5 feet. The drives and walks should be properly graded and made slightly crowning from the centre to the sides so as to give good drainage. If good gravel is obtainable they should be covered with gravel, raked smooth and rolled hard.

Fences.—As a rule fences largely enter into

most landscapes, and are worthy of note. They are artificial materials, and at best they are necessary eyesores, but in the majority of cases their necessity is only imaginary. If all of the really unnecessary fences were removed, and the ground which they occupy leveled and seeded down or put under crop it would make a wonderful difference in the appearance of the country. It would remove a great harbor for weeds and insects; it would effect a great saving of labor and expense, and it would remove one of the most striking features which advertise the slovenly farmers all over the country. The only fences necessary, or which should be necessary, are those for the purpose of fencing in stock, and not fencing out that of our neighbors. Fences, in many cases, might be movable or temporary. Roadside fences in many sections might be dispensed with, the ground levelled and seeded and the grass kept mowed from the boundary to the roadbed. Bill Nye says that "the farm without a fence in front of it looks as if the owner were honest and thought his neighbors the same." If a permanent fence is necessary let it be as inconspicuous as possible, or let it be an ornamental hedge.

Some of the other artificial materials sometimes used in landscape gardening are trees, trimmed into fantastic shape, fountains and statuary, flower beds of geometrical designs. All these are artificial and should be used with as much discretion as one should use in wearing fine jewellery. The more the artificial prevails in the general surroundings the more these can be used without giving offense. In proximity to large and expensive buildings, or in extensive parks, they may have their place, but on the farmer's lawn, where most of the surroundings are natural, and where the buildings are not elaborate and costly, they would be altogether out of place.

Another excellent paper was contributed by Mr. A. K. Goodman, secretary of the Cayuga Horticultural Society, through whose exertions the town of Cayuga and its surroundings have been wonderfully improved during the past few years. The following is his paper:

THE WORK OF OUR HORTICULTURAL SOCIETIES IN OUR TOWNS AND CITIES.

THE work of our Horticultural Societies depends largely on the individual enthusiasm of its members. The world has been full of great messages. There has been wonderful progress and development in literature and art, in all that is beautiful and good. The message of this society is to take up the work and receive in return better health, a new lease of life. Who are to be the messengers? The local societies that we have formed. After the message is well established it becomes the message to the

individual. This is to join the local society, to improve your own surroundings and get a home of your own. That means that you are to get up early and live a regular life. If you study nature, the first thing that strikes you is the system about it.

A lesson that the society needs is the lesson of co-operation. See that your town is in the front rank of improvement. Keep pounding away until you fairly make the council take hold and do something. It is pretty hard for one man to go to the council and try to get them interested. It is the individual member's duty to promote an interest by growing everything he can as well as he can, improving everything, and giving the world what he can. I do something like my friend, Mr. Race, and provide all my friends and my neighbors with boxes of flowers, and it looks as though I was in the business and expected a return for it. My return is improvement in my own character, and in my other lines of work.

The most important thing around the town is the drainage, and the horticultural societies should take very great interest in that, because on the drainage depends the health of the community. Water, like men, to keep out of mischief, must be always on the move. There must be no stagnant pools. The roads should all drain to their proper water courses, the gardens should be drained, and everything about the property should be drained. The water should keep moving. You look in a man's back yard and see nature working out her system of irrigation. There is a dry spell, and the earth opens in cracks and fissures. The heavy rain comes, and away rushes all that fever and disease into the well, and soon a typhoid fever breaks out and a loved one is lost. All this because the man did not realize the message that was brought to him by the horticultural society. Another thing, it encourages thrift about the home. Many of the crimes of the age are due to idleness. You are very lucky in the neighborhood if idleness does not lead to drink or crime.

Coming back to the home, a good beginning is the planting of an asparagus bed, or the growing of a little parsley. Get a man started, and soon he will want to show his work to everybody.

Then go to the schools. We neglect our schools. Some of the trustees neglect the school building. They will not go into the building to see if it is properly lighted or heated, or the grounds laid out properly and the children given a chance to play. I was glad to see that in Toronto Junction they have spent \$12,000 in getting a playground for the school. In most cities they skimp the school grounds. If you do not begin with the children you might as well drop the work right now, because you cannot expect older people to break off their habits. You must get the children interested first.

Then go along the streets, to the different public places. The street is often neglected as to shade trees. They should exist for beauty, and for the protection of the pedestrian. Also, they

increase the value of property. Anything you make more beautiful you make more valuable. People will like to come to the streets. Refinement and beauty do not exist only in immense buildings, for the humblest of homes can be made a bower of roses, and there is just as much refinement and culture as there is in a large home. Ruskin says that the character of a people is displayed in their architecture. That is not true in this country, where people have to take things as they find them.

Another thing that seems awful to me is the condition of the church houses and the churchyards. This is the fault of the clergymen. There ought to be more life in their sermons. A "Nature Sermon" from a clergyman who does not know anything about it falls flat. The church grounds should be models of neatness and taste.

The promenades is another thing that should receive attention. Attractive promenades will induce people to go out walking. The tongues get a great deal of exercise in this age, but the legs do not get so much. There should be more walking, more exercise.

Next as to the driveways. There is no excuse in this country why any man should not swim and shoot and ride and be pretty good at any kind of sport, and the driveways and promenades would encourage more of that sort of thing. I am a great believer in keeping up the driveways.

Another thing is the roads leading into the towns. Good roads are a great assistance in building up a town. I have known many towns to be stunted because the roads are not in good condition. Trade moves to the best centers of transportation.

The horticultural societies should encourage individual gardening by displays, premiums, and by teaching people of the work and how to do it. If there is any religion in a man at all, when he

comes into the garden his nature becomes uplifted. He remembers that the Lord walked in the garden. The Lord walked in the garden of Eden. The Lord of Life walked in the garden of Gethsemane, and in the garden was a grave. Every man's life is a garden and in every man's life is a grave. Man is the finest flower of God's creation; therefore, in your garden let there be order and beauty, and a constant striving after better results.

A very good idea is to go to the public gardens of our towns and rub shoulders with the gardeners, the people in charge, and find out from the practical men how they are doing things. It is simply wonderful the information you can get, and in many cases you can apply it to practical use when you get home.

The horticultural society has a general tendency to uplift the town. Canada is on the eve of a wonderful burst of opportunity. Now is the time for us to take the opportunity. People should spend money in uplifting the town, and the money spent on civic improvement is not wasted.

To come to our little town, Cayuga. We had one of the dirtiest and most miserable of towns. We started our Horticultural Society. Of course Mr. Beal is responsible for the whole thing. He started the machinery and pressed the button, and we have kept it going. We have cleaned up the two schools, planted hedges, and done wonderful things there. We have spent probably \$500 on these grounds since we started them. We have spent \$10,000 on cement sidewalks. We have new public gardens, and now each neighbor vies with the other as to who would have the best boulevard. The first thing we knew we had landed a factory, a leather goods factory, employing forty hands, which we never would have done if we had not started improving our town. And we owe it all to the Horticultural Society.

PEANUT CANDY AS FOOD.—Professor Hilgard, of the University of California, recommends peanut candy as a healthful substitute for a meal when it is necessary to omit one, says *Country Life in America*. The starch of the peanut, and the sugar in the candy, are both blood and tissue builders and are exceedingly nourishing and at the same time harmless when obtained at a reputable candy store.

THE ICE CROP.—Have the ice pond

cleared out and made tight before letting in the water to be frozen, and see that all sources of pollution of the water are cut off. Freezing does not purify water, and if impure the ice will not be fit for use. Impure ice is more dangerous than impure water, as the impurity of it is so much more likely to be overlooked in the hot weather. Clean out the ice house, and if necessary thoroughly repair and drain it. If no ice houses exist now is the time to build one if it is to be used this winter.

COLEUS IN WINTER

COLEUS plants, as a rule, are not a success in an ordinary window in the winter season. For several years I experimented with them, using both old and young plants, keeping them cool or hot, moist or dry, and finally hit on a plan by following which they are a complete success every year. My experience has been that old plants generally do not do well the whole winter through. When the main stalk becomes tough and woody it is time to discard it and begin afresh.

My plan is this: Just before the first killing frost in the fall, I go the rounds of my coleus plants taking about three slips of each variety. These are placed in glasses of water to root; when nicely rooted they are potted off into three or four inch pots in a soil composed of two-thirds garden soil (not too rich) mixed with one-third sand. I find a very rich soil is not conducive to extra bright color in the leaves, and I have known the plants to be grown beautifully bright in pure sand. I keep two plants of each kind and they remain in the same pots until spring. They are placed in the highest shelf in my bay window, which makes them six feet from the floor and one and a half feet below the top of the window. It is of necessity a very hot place as, in addition to the heat from the stove, the sun beats in on them all the forenoon and half of the afternoon of every sunny day.

As the plants begin to grow tall, I pinch out the ends of the shoots to make them branch freely until about February 1st, when I let them grow for slips. They are usually large enough by March 1st, when I put them in water to root. In a few days the roots appear and they are potted off as before. I give the new plants the upper shelf then to get them in good condition to bed out in May and set the old stock plants aside. Some of the old plants will branch out again and raise another lot of slips, which are discarded at once.

From the time the slips are potted off in the fall until March that high shelf is my particular pride. The gorgeous colors and soft velvety texture of the leaves are as beautiful as flowers.

Some of the best varieties are Golden Bedder, Charm, John Goode, South Park and Golden Crown for yellow sorts; Louise Chretien, Ruby and Moonbeam among white and pale tints; Crisp Beauty, Geo. Simpson among light red and pink sorts; Dr. Koch, Brightness, Firebrand, Fire King and Midnight, crimson and maroon; Progress, Mrs. Hunt and Butterfly among mottled and shaded ones.

There are a few new varieties that are of a stronger growth, with leaves of immense size for coleus. I have not tried any of them, but have seen them displayed in greenhouses and also at our last agricultural fair. Some of the leaves were five or six inches long, and though the plants are handsome as decorative plants, they do not seem so appropriate or beautiful for bedding purposes as the old sorts. A specimen plant is a lovely sight, but a mass of them spoils the effect.

Coleus, as a rule, are remarkably free from insect foes. I never found any but the mealy bug on mine, but they can kill the plants in a short time, as they seem to sap the life of the plant so that it wilts and falls over before one knows anything is the matter with it. Eternal vigilance is the best remedy, but when you find them on the plants the use of alcohol or whisky on them will kill them at once.

It is hard to give coleus too much heat, but a chill will cause the leaves to fall off. Mine are watered three times a week during cold weather. Later in spring they need it every day. They are sprayed every morning before the sun is on them. To sum it all up, young plants with plenty of heat and not too much water will give one a fine display of coleus all winter.—*Vick's Monthly*.



The Canadian Horticulturist

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

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

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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.

ST. LOUIS FAIR NOTES.

New York grape growers have two tons of choice grapes in cold storage and will display them in the Palace of Horticulture on the opening of the World's Fair.

Two acres immediately west of the Palace of Agriculture at the World's Fair grounds have been converted into a natural garden. There may be seen all the wild flowers and shrubs indigenous to the Mississippi and Missouri valleys.

NIAGARA DISTRICT FRUIT GROWERS.

THE following officers were elected for the ensuing year: President, C. H. Honsberger, Jordan; Vice-President, George S. Stewart, Jordan Station; Second Vice-President, James Dunlop, St. Catharines; Third Vice-President, S. M. Culp, Beams-

ville; Secretary-Treasurer, C. E. Fisher, St. Catharines.

THE WESTERN NEW YORK Horticultural Society will hold its 49th meeting at Rochester in the Common Council Chamber of the City Hall, on January 27 and 28. An interesting programme is announced. John Hall, Rochester, is the secretary.

THE MONTREAL APPLE MARKET IN DECEMBER.—The Montreal Trade Bulletin says: Complaints are beginning to be heard regarding the unsatisfactory nature of account, sales received by shippers from the other side, which is not to be wondered at considering the immense quantities of apples that have been pouring into Great Britain during the past 2½ months. One would suppose that English consumers would have been surfeited by this particular fruit before

this. Therefore, the recent dullness and depression in prices should cause no surprise. On the whole shippers have done fairly well this season and are looking for better times about the first of the year. The cause of the recent low prices on the other side was said to be due to the poor quality of fruit arriving at the different ports. Last week's shipments from all Atlantic ports showed a big decrease amounting to only about 60,000 barrels, which should afford a good chance for the clearance of held over stocks in the English markets. The market here keeps very dull and depressed owing to the large quantity of frozen apples selling to pedlars; about 1,200 barrels were sold at auction which realized from 80c. to \$1.60 per barrel, the average being about \$1.25. Until this class of goods is worked off there will not be much doing in the better qualities, as the cheap stock will fill a considerable portion of the demand in the meantime. No. 1 fruit has sold at \$2.50 to \$2.75 in good sized lots, and No. 2 at \$1.75 to \$2.25.

SALE OF CANADIAN FRUIT IN IRELAND

TO the Secretary Ontario Fruit Growers' Association:

I have recently been in communication with the Canadian Department of Agriculture relative to the advisability of Canadian fruit growers having a representative here and have consignments sent direct to the Irish market, instead of by way of Liverpool or Glasgow. The department approved of my suggestion, and proposed I should communicate with the Fruit Growers' Association to ascertain if they would fall in with my scheme, and thereby bring them in closer touch with these markets.

As you are no doubt aware, American and Canadian fruit exporters supply the English markets (whence we get our supplies) through brokers in London and Liverpool. Bery little fruit is grown in Ireland, with

the result that American fruit exporters have always found a good market here, but nevertheless Canadian growers would have a good field to work in if they so desire.

My suggestion is that one or more Canadian Fruit Growers' Associations establish a central agency in Dublin for the supply of the Irish market, the fruit to be sent here direct by say, the Head or Lord Line boats, the agent not to handle any but Canadian fruits, and this agency I am prepared to take up and can undertake to work it successfully. Amongst the advantages of such an agency with direct representation are:

The growers would have an agent on the spot to look after their interests.

Direct consignments to Dublin would save to the growers and consumers the heavy cross channel rates incurred by the present system. These rates are nearly as heavy as the rates from Canada.

A saving to growers and consumers of the profits now paid to brokers and wholesale fruit dealers in Liverpool, London and Glasgow.

The tendency nowadays is to buy direct from the producer wherever possible. The public realize that they have to pay dearly for an article which, before reaching them, passes through three or four sets of dealers, all requiring a certain profit. At present, after providing for (a) middleman's profits in England, (b) heavy freights from Canada to England and thence to Ireland, and (c) Irish retailer's profits, Canadian and American apples retail here at a penny to twopence apiece.

I would impress on both Canadian fruit growers and shippers that an agent here engaged solely in their interests is absolutely necessary if they wish to successfully compete with Americans, Australians and other competitors.

The Americans find a good market here; Australian apples are now prominent here,


and there is certainly no reason why the Canadians should not do well, if not better, but it will be necessary for them to bring their their products before the people, and this can be done by means of a central agency devoted solely to pushing Canadian fruits. I can undertake to obtain for the Ontario Fruit Growers' Association a good paying market in Ireland by working on these lines, and I would therefore thank you to lay the matter before the members and await the favor of your reply.

I can, of course, furnish first-class references, and if required, am prepared to give security to any amount desired.

Yours faithfully,

J. H. SHERIDAN.

Dublin, 17th October, 1903.



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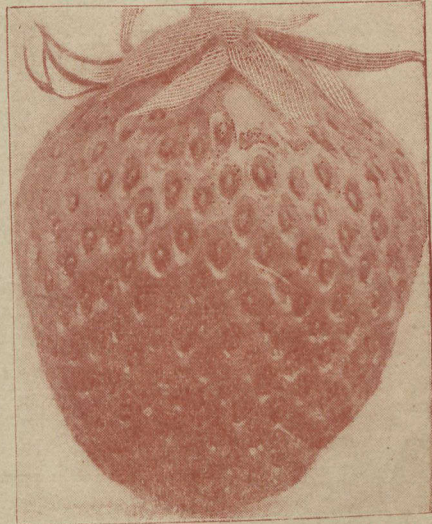
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