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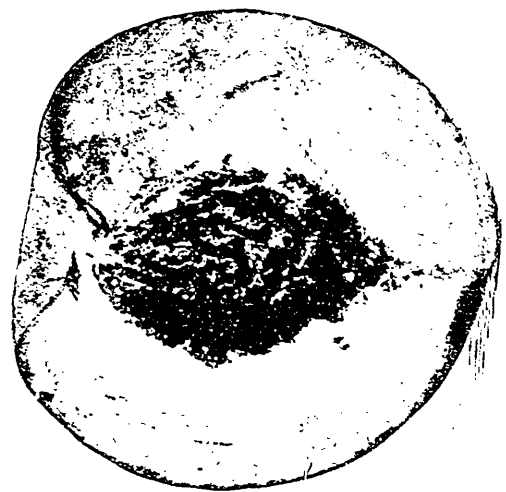


FIG. 2065. THE GARFIELD PENCIL.

THE CANADIAN HORTICULTURIST

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THE GARFIELD PEACH

(BRIGDON.)

A fine yellow-fleshed peach of about same season as Early Crawford.

ORIGIN: New York State.

TREE: Vigorous, moderately productive.

FRUIT: Roundish, ovate; size large, 2¹/₂ x 2¹/₂ inches; average weight, 5 ounces; color, yellow with red cheek; suture marked; stone free.

FLESH: Yellow; texture tender and juicy; flavor rich and excellent.

QUALITY: Cooking, very good; dessert, very good.

VALUE: Market very good.

SEASON: August 25th to September 10th.

Mr. W. W. Hillborn, our peach experimenter in the County of Essex, writes:

The Garfield Peach is of the Early Crawford type, perhaps a little more highly colored, ripens a little earlier, fruit bud more hardy, therefore more regular crops are obtained of it than of the above named variety. I would plant it in preference to Early Crawford for either home use or market, as it has proved equal in every respect and superior in some points to that old standard variety. I have fruited it for some years and consider it one of the best market sorts grown.

Editorial Notes and Comments

NOVEMBER is as early as the fruit farmer can find time for the Thanksgiving holiday, for his apples and his grapes keep him busy every hour during the month of October.

PRUNING may be commenced this month as soon as the leaves have fallen. The work is much more important than is commonly supposed, and much finer fruit would result if more time and attention were given to pruning and cutting back our fruit trees and vines.

THE MUMMY FRUIT on plum trees should be gathered and burned, because it contains the spores for propagating the fungus for the coming year.

MICE must be guarded against, especially in young orchards. In plots where clean cultivation is given, the trees are quite safe, but, if grass or other rubbish is about the trees, their destruction is almost certain when the heavy snowfalls come. A simple protection is a mound of fine earth packed

about the base of the trunks, taking care first to remove all rubbish.

DRAINAGE of orchard land may be done in open weather of the fall and winter, and is most necessary where the water is level and is not below the tree roots.

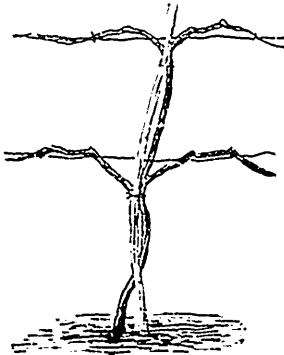


FIG. 2666. THE KNIFFEN SYSTEM OF GRAPE PRUNING.

THE KNIFFEN SYSTEM of grape pruning is the simplest and least laborious, and may be easily understood by a study of the accompanying diagrams. Only two wires are needed in making the trellis. We will describe fully if our readers desire.

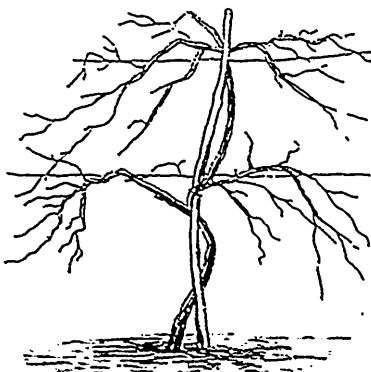


FIG. 2667. THE KNIFFEN SYSTEM.

DWARF PEAR TREES should be well cut back, especially the new wood, in order to keep up plenty of young growth, for on this the finest fruit is produced.

THE COUNTY FAIRS.

THAT our County Fairs are sadly in need of some radical improvements is quite evident to any one who is at all familiar with them. The old unpainted building, often misnamed "the Palace," is enough to give "sore eyes" to visitors, while the grounds are no improvement upon the barest and most aninviting country field, without shrub or shade tree for shade or ornament. This criticism applies to the Bruce County fair grounds at Walkerton, spoken of on page 402; to the Welland County fair grounds at Welland, all of which we have recently visited, and no doubt to many others.

The fakirs, who swarm to these fairs, are a disgrace, and should be routed out by the directors. At Welland the game tables were surrounded by green country youths freely putting up their money in the vain hope of winning a pile of dollars.

THE MODEL FAIRS.

Our Ontario Department of Agriculture has this year offered to aid those fairs which so consent, in several ways; as for example, the appointment of expert judges, the giving of demonstrations in domestic science, in apple packing, and by having experimental plots, right on the very fair grounds. Nor is this all, for demonstrations are also given in chicken feeding, and in the killing, plucking and packing of fowls for shipment to market, in the handling of bees, and in various other interesting and instructive diversions which are a means of education to the young farmers, and which should easily take the place of the fakirs. These offers, made by Mr. G. C. Creelman on behalf of the Department, have been adopted in six places, and their names are: Walkerton, Simcoe, Owen Sound, Brantford, Whitby and Renfrew.

NORFOLK COUNTY FAIR.

The fair at Simcoe on the 13th, 14th and 15th of October was well worthy of the compliment paid it by Mr. Alex. McNeil, Dominion Fruit Inspector, when he remarked to the secretary, "There are but two fairs in Ontario, this and the Industrial!" The grounds are very well laid out; the old "Crystal Palace" was, fortunately perhaps, recently burned down, and its place taken by several tents and smaller single floor buildings. One of these, which was devoted to art exhibits and ladies' work, had three aisles the whole length, with partitions on which the exhibits showed to excellent advantage, while the whole was painted a suitable tint of green. The grounds were in part elevated, and well planted with shade trees, so that altogether the place was attractive to visitors.

Another feature of this fair was the means adopted to interest the officials in the success of the Fair which was continued for three days. On the evening of the second day all the officers, judges, visitors and others were invited to an informal gathering at the Battersby House, where after social converse and light refreshments, brief addresses were given on subjects pertaining to the various exhibits, followed by a free discussion.

THE EXECUTIVE.

Our old-time friend, Mr. H. H. Groff, is the president of the society, and conducts a meeting in a most happy manner. A banker by vocation, but a successful horticulturist and plant breeder by practice and from love of it, Mr. Groff has advanced from being an amateur to the enviable position of a scientific horticulturist, whose contributions to the beautiful in his specialty, the gladiolus, has brought him a world-wide reputation. The superintendent is Mr. W. F. Kydd, successful farmer and horse breeder, whose ad-



FIG. 2668. MR. H. H. GROFF, SIMCOE.

resses before the Farmers' Institutes have been much appreciated. He is an energetic Scotchman, and is as deeply interested in the success of the fair as if it were his own private business. But the man to whom, of all others, the working out of this excellent model fair at Simcoe is due, is Mr. Thomas Murphy, the secretary, whose distinguished ability in conducting the Simcoe Fair to such magnificent success, has led to his appointment as President of the Canadian Association of Fairs and Exhibitions.

A GREAT SUCCESS.

The Norfolk County fair at Simcoe although by no means perfect, may well be called a model fair, for, not only in point of exhibits, but also in point of attendance it was most exceptional. Fakirs were not allowed on the grounds, but instead there were interesting and instructive addresses by experts. In one tent Miss Mills, of Guelph, and Miss Smith, of Hamilton, gave demon-

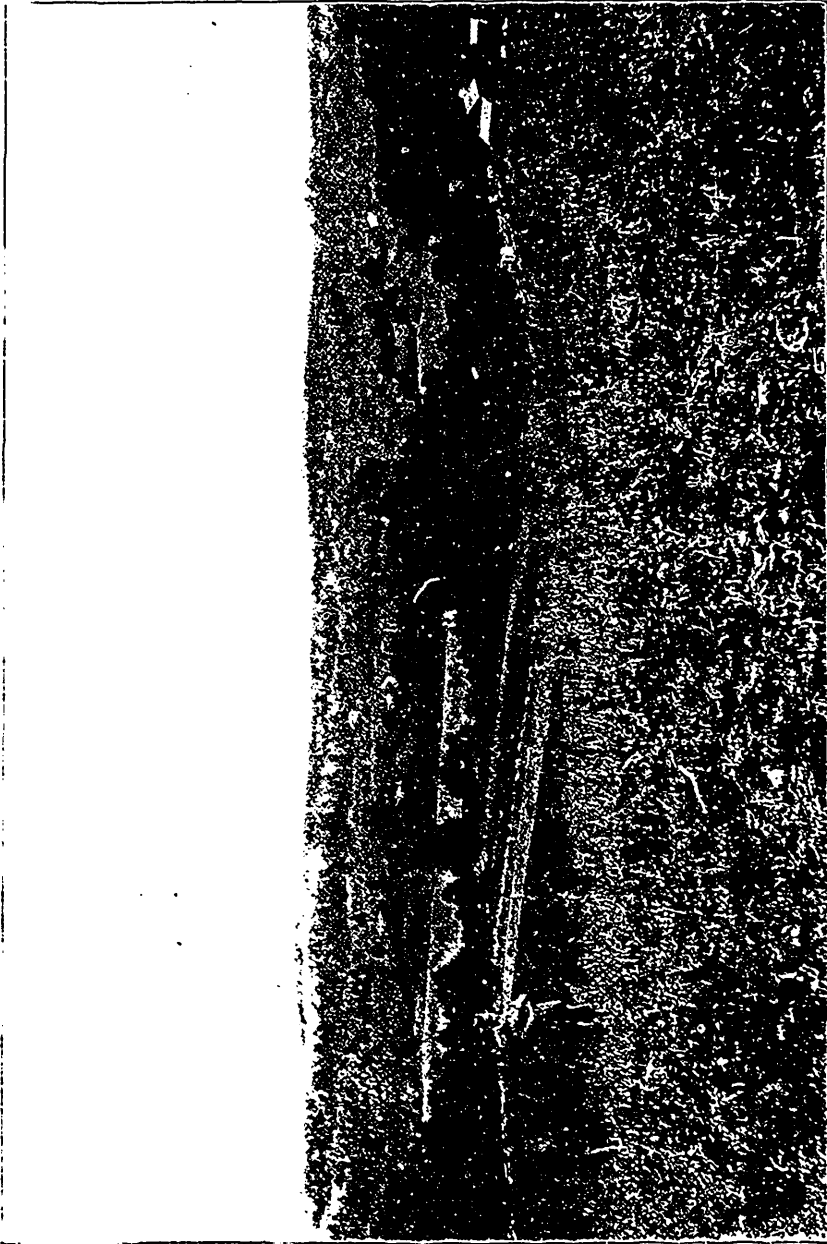


FIG. 2660. A VIEW NEAR WELLAND.

strations in cooking; in another place Mr. Alex. McNeill, chief fruit inspector for the Dominion, gave an address on apple packing, and in another part of the grounds Mr. Zavitz gave the farmers pointers on grasses and grains, from experimental plots sown on the grounds for the purpose.

EXPERT JUDGES NEEDED EVERYWHERE.

The fruit exhibit at Simcoe was remarkably good, and the varieties correctly named. There were magnificent samples of King, Spy, Mann, Bellflower, Hubbardston, Cavuga, Greening, Baldwin, Snow, etc., and the premiums were wisely awarded by an expert fruit judge, Mr. T. H. Race, of Mitchell.

At Welland County fair, which we visited the day previous, the case was very different. Expert fruit judges were not secured, and numerous misnamed fruits remained on the table uncorrected. For example, three prizes were offered for the best collection of 12 varieties of apples correctly named, and in each prize collection there were misnomers which remained uncorrected. In the 1st prize collection *Gloria Mundi* was called *Twenty*

Ounce Pippin, and *Cabashea* (or *Twenty Ounce Pippin*) was called *King*. In the second *Pewaukee* was named *Hubbardston*, and an unknown variety, *Wagener*; and in the third prize collection *Pewaukee* was called *Wallbridge*, and some unknown varieties called *Wealthy* and *Maiden's Blush* respectively. We submit that such work, instead of helping, is a hindrance to the value and success of any fair.

OUR DIRECTOR FOR LINCOLN, WELAND AND MONK.

WHILE visiting the Welland Fair we met Mr. E. Morris, who represents the nurseryman's interests on our Board of Directors. With a business in hand too large, and a mind too broad to allow him to talk shop at our meetings, his presence has always been of value in giving information to us from the professional nurseryman's point of view. Mr. Morris is an example of the success which comes to a young man who, in the words of the honorable Minister of Agriculture, possesses the three elements needed, viz., "Pluck, Plod and Perseverance." Brought up in England, the son of an English farmer



FIG. 2670. ENTRANCE TO THE FONTHILL NURSERIES.



FIG 2671. E. MORRIS, FONTHILL, ONT.

of eight hundred acres of land, he was early trained in the details of agriculture, but after landing in Canada, when still a boy, he was persuaded by his father to enter into the mercantile business, which is carried on with success for some years in the town of Oshawa. This experience gave him excellent business training. Having spent his boyhood days on the farm, he longed for outdoor business, and decided in 1866 to go into fruit growing, and bought a farm in Niagara District for that purpose—being perhaps the first man in Ontario to grow small fruits as a business. His success in this brought him many customers for plants, and he then resolved to go into a general nursery business, and bought a small established nursery of fruit trees, and soon afterwards purchased the Fonthill Nursery. Two years later, finding the business, in all its departments, more than he could pro-

perly look after, formed a partnership with Stone & Wellington, under the firm name of Morris, Stone & Wellington, lately changed to Morris & Wellington. With Mr. Morris' natural talent, and love for the business, he soon mastered the practical part of it, and is now acknowledged to be one of the best nurserymen on the continent.

During our visit at Fonthill Mr. Morris gave us a carriage ride through a huge block of about 400,000 apple trees, ready for sale this fall and next spring. "We plant," said he "about 400,000 per annum, and sell about 300,000. That is, we classify the stock when selling size, into first class and culls. The latter we pull and burn, and only good stock goes out to fill the orders. We have to increase our planting each year, to try and keep up with the increased demand; even then, like other nurseries, we often fall short on varieties that suddenly spring into demand."

One feature of the business that is pleasing and shows prosperity of the country, is the greatly increased demand for all kinds of ornamental trees and shrubs. This branch of the business is increasing faster than any other, although it is very evident that apple growing is still at the front in Canada, and in our opinion it justly holds the first place for profit, taking one year with another, notwithstanding the low prices that sometimes prevail.

FRUIT PACKING DEMONSTRATIONS AT THE FAIRS.

SENIOR Fruit Inspector Alex. McNeill is still attending the fall fairs giving his interesting and instructive demonstrations of the proper packing and marking of apples and pears for the export trade. He was at Brantford on October 2, at Burford on October 7, and on the 15th at the Simcoe Model Fair.

PROPER FRUIT STORAGE.

ONE of the most important provisions for successful fruit growing is convenient cold storage. There is no pear grown which is a greater general favorite than the Bartlett, but in its own season there is a surplus of it, which is still greater by reason of the imports from California; consequently low prices prevail for a time until the market clears, when good and remunerative prices rule.

The apple crop in Ontario is an important one, but for want of safe storage the grower is often at a sad disadvantage, for if he sells to the speculator the fruit becomes over ripe in the heaps while waiting the packers; and, if he packs it himself, he must hurry it off before the approach of cold weather. Now a good storage, which could be cooled in summer and kept just above the freezing point in winter, would help in every way; apples waiting the packers could be stored safely and packed dry; Bartlett pears and Crawford peaches could be held over until the prices advanced; while apples to be packed by the owner could be stored as gathered and packed at leisure during the winter or spring and forwarded to the best markets when most in demand.

There is no doubt at all that a reasonable sum of money put in to such a storage as would maintain an even temperature of about 33 degrees at any season of the year, would be a paying investment for a company of fruit growers in any section, or for the individual one whose orchard is extensive. Chemical refrigeration might be too expensive for ordinary circumstances, but ice storage is economical and within the reach of every one.

SUCCESSFUL ICE STORAGE.

The Illinois experiment station gives the following:

An account of the construction of a cold storage house, capable of holding 2,500 bbls. of fruit and

of storing apples in cellars insulated for the purpose (E. S. R., 14, p. 356). During the season of 1901-2, 2,000 bbls of fruit were placed in the cold-storage house October 5th, and 70 tons of ice put in the refrigerator. The temperature of the storage room fell rapidly after the ice was put in to about 33° F., and this temperature, or a little lower, was maintained throughout the experiment. The cost of storage per barrel of fruit up to April 23 (about 7 months), was 19.1 cents., or 30.9 cents less than the usual charge for apple storage. Based upon these results it is estimated that the building, if stored to its full capacity each year would pay for itself in five years.

The fruit in the building was examined from time to time during storage. Without exception the fruit kept well. "There was no scald, no withering. The fruit remained plump and in perfect condition, and the percentage of rotten fruits was very small." The results are believed to plainly show the utility of buildings of this character cooled by ice. "Commercial growers of apples can well afford to invest in similar houses and thus add greatly to their profits. The experiences in cellar storage show pretty clearly that horticulturists can not afford to insulate a cellar for storing fruit. The earth is too good a conductor of both heat and cold. Fruit stored in these cellars was more or less wilted and the percentage of rot was quite high.

Experiments were made with Ben Davis and Winesap apples in storing at temperatures of 31, 33, 35 and 37° F. The Ben Davis variety kept better and scalded less at 31° than at any other temperature. The difference was not so striking with the Winesap variety, but was in favor of the lower temperatures.

Another problem investigated was the degree of maturity most suitable for picking apples to be held in cold storage. The results obtained indicate a great superiority in the keeping qualities of mature over immature fruit. The mature fruit in storage showed a much smaller percentage of rot, was less subject to scald, did not shrink as much, had better color and better selling qualities when removed from storage.

In this connection it is worth noticing that the Ontario Department of Agriculture has endeavored to encourage the building of local cold storage houses for farmers' produce, by not only providing plans for their erection, but by advancing a per cent. of the cost.

APPLES IN MIDDLESEX COUNTY.

Mr. John M. McAmish, Melburn, Ont., writes:

The apple crop in this section is principally Northern Spy and they are exceptionally good quality, better than they have been for years. There is only one buyer around and he is only offering one dollar a barrel, the farmer to pick the apples, board the packing hands and draw the

barrels to the railway station. Now with the big demand and high prices in the British market it seems a ridiculously low price to offer. As you are well posted in the matter I want you to inform me on the following particulars: 1. What is the cost of shipping a barrel of apples from Grimsby to the British market including of course not only freight but commission and other charges? By a barrel I mean whether they are shipped in bulk in large quantities? 2. What prices are being paid by buyers in your section of the country? 3. What do you think would be a fair price for buyers to pay in the vicinity of St. Mary's, Ont., which is our shipping station? At present it looks to me as if apple buyers have formed a combine to gobble up all the profits which is to be got in the apple business this year.

The great mistake of our apple growers generally is here evident. Depending upon the travelling buyer, their apples waste while waiting for him, until they are glad to accept any offer. Then, barrels are so scarce and so high priced, ranging from 40c. to 50c., and so difficult to get in any quantity, that buyers cannot operate, and immense quantities must either go to the evaporator or else waste in the orchards. Apple growers should secure their own barrels in advance, and be prepared for such an emergency, for then they could combine and ship when they chose. As to prices, buyers never pay according to the foreign values, but according to the values in Canadian orchards; and \$1.00 a barrel for the fruit is not an uncommon average price offered.

Buyers in Western New York have, says Country Gentleman, been paying \$1.75 to \$2.25 for the run of apples on trees. In Pennsylvania, according to a correspondent of the same paper, as low as 85c. to \$1 has been offered. In West Virginia, according to another correspondent, apples are dull, with choicest at a dollar a barrel.

This season apple growers might safely take the risk which is now taken by apple buyers, and export their own fruit in car lots, and they would no doubt double the net proceeds of their apple orchards.

The freight on apples in barrels from Grimsby to Glasgow is about \$1.08 a barrel, to which must be added landing charges,

commission, etc. The commission charged in Great Britain is about 5 per cent. of the gross proceeds.

LOW PRICES OFFERED FOR APPLES IN SIMCOE COUNTY.

Mr. Alexander Armstrong, Barrie, complains of the low prices offered in Simcoe county. "We have very few buyers," says he, "to purchase our apples. I have some very fine Colverts and Wealthys, and the best offer I had for them was 65c. a barrel, and now I have from 65 to 75 barrels of Russets, Snows, and other winter varieties, and am only offered 90c. for Snows and \$1 for Russets."

Of course, these are low prices for good winter apples, in consideration of the prices in foreign markets; but, so long as winter apples are only worth about \$2 in our markets, and barrels are worth 45 cents, and packing, freight and commission costs at least 50 cents more, buyers cannot be expected to take the risks of shipment and offer much more than \$1 for the fruit.

HOW TO PACK A BARREL OF APPLES FOR EXPORT.

WHY not each man pack his own apples, and unless he has a good offer, why not combine with his neighbors and make up a car lot for some responsible British apple house. Names of reliable wholesale houses in England, Scotland, Hamburg and Antwerp will be cheerfully furnished by the editor of this journal, who is himself exporting two carloads a week to Glasgow, Scotland. The following directions for packing a barrel of apples have been sent in by Mr. Eben James, of Toronto, and we think them worth giving to our readers:

"The rule most observed by the largest export packers in Canada is to discard the old system of leaving apples to sweat in the orchard, believing it is generally detrimental to the keeping qualities, and instead to pack as picked off the trees. As the apples are picked they are placed on a canvas table resembling a camp bed, the firsts and seconds sorted out, and the culls discarded. The barrel

should be placed on a plank, and the quarter hoops properly tightened and nailed. Apples of a good average size, not the largest nor smallest, but uniform, should be selected for the face and placed stem end downward on the bottom of the barrel, which should be covered as far as possible without leaving unnecessary holes; follow with a basket selected same as face, then fill in with standard fruit (see requirements), till half full; the barrel should then be jarred, but not shaken enough to displace the face, and as each additional basket is filled in it should be jarred. When filled it should be well racked with a circular board having a pad on one side. See that apples when well racked will be hardly an inch above barrel, carefully turn stem ends up, with the exception of outer row, which are better blossom up; arrange proper sized apples so that any holes are filled, making barrel present an even surface, slightly rising to centre, thereby insuring even pressure. Press in head, line and nail carefully, cut nails preferred. Brand neatly faced end.

Packer must be governed by variety of apples in height in barrel when pressing. Examine occasionally when packing and if you find (providing you have racked well), that skin is severely dinged or broken, press lighter. Storage apples need very little pressing.

STANDARD REQUIREMENTS OF NO. 1 AND NO. 2 APPLES.

THE following is a copy of a resolution by the North American Apple Shippers Association regarding grades, and, although not just the same in wording as the standard set down by our Dominion, are essentially the same and in some respects more in detail.

Resolved, that the standard for size for Number 1 Apples shall not be less than two and one-half inches in diameter, and shall include such varieties as Ben Davis, Willow Twig, Baldwin, Greening and other varieties kindred in size. That the standard for such varieties as Romanite Russet, Wine Sap, Jonathan, Missouri Pippin and other varieties kindred in size shall not be less than two and one-quarter inches. And further, that number one apples shall be at time of packing practically free from the action of worms, defacement of surface or breaking of skin; shall be hand picked from the tree, a bright and normal color and shapely form.

Number 2 Apples shall be hand picked from the tree; shall not be smaller than two and one-quarter inches in diameter. The skin must not be broken nor the apple bruised. This grade must be faced and packed with as much care as No. 1 fruit, and no wormy or spotted fruit packed.

We have adopted XXX to mean No. 1 and XX to mean No. 2. Besides this, we pack an extra grade and call it Fancy XXX.

THIRD CLASS APPLES NOT WANTED IN ENGLAND.

WE have heard so much about the failure of even the common stock of apples in England, which are used for cider and preserves, that we had about decided on putting up some third class stock for export, as an exceptional venture, but our Glasgow consignee does not favor such an experiment even this season. He says: We have been making inquiries of the preserve makers and find they have contracted for nearly their full requirements for the season. Therefore, I cannot recommend you to ship this third grade of fruit, as there would be practically no demand for it here; and, if left to the mercies of the preserve makers on this market, they would be inclined to give very little for it, and I am certain it would not pay freight and expenses.

CANNING FACTORIES AND JAM FACTORIES.

THE Oakville Star of October 1 strongly advocates the establishment of numerous factories for the preserving of fruit throughout the fruit belt of Ontario. The recent losses incurred by growers because of glutted markets at home, and the unsatisfactory provisions for carrying our tender fruits either to Great Britain or to the United States in a fresh state, certainly bring us face to face with the puzzling question, How can we place our tender fruits in those parts of the world where they are most wanted. The Star answers:

To do this, the fruit must be cured, either as pulp (partly preserved or dried), for foreign jam houses, or canned or made into good jam. This means the establishing of canning factories and jam houses in all our fruit belts. Then the fruit could be shipped anywhere and find a ready market. English people are great consumers of jams preserved so that they can be used as a jelly. They do not relish our canned goods, but use thick jams extensively as a substitute for butter. There is no reason why Canada should not supply Britain with great quantities of jam which the Englishman prefers to have put up in glass, in fact he will not buy it unless in that way. In the Northwest during the long winters canned fruit is found almost essential to health, and is being used more

and more each year. This means a great market some day and the district that gets in position to supply this want will profit in a marked degree.

In line with the above, and in confirmation of the position taken by the Star, we have just now received an urgent inquiry from England for fruit pulp, from Messrs. Rotherton & Co., 54 Great Tower street, London. E. C., as follows:

SIR,—We shall be glad to know if you can offer us any Fruit Pulp of any description. We are in a position to handle any quantity, large or small, of all kinds, including Apple Pulp, and if you can make us any shipments we can secure for you a very good price indeed. If you can conveniently do this, we shall ask you to make us a small trial shipment as early as possible, and if you will kindly cable us on receipt hereof what you are in a position to ship, we shall be very pleased to reply by cable, giving you any information that you may require.

In view of the risk attending the export of plums and peaches and pears in cold storage, and the expense involved, it is evident that a great saving would be made by first reducing these fruits to pulp, or jam, and exporting the manufactured product. Not only would there be a great deal less bulk to transport, but the charges would also be reduced, because such goods would carry in ordinary storage. Herein appears to be a good field for co-operative factories among fruit growers, so that the advantages would be retained by them and not given over to a company.

THE BRITISH JAM TRADE.

THE following article from the Scottish Trader will give an idea of the extent of the British jam industry, and of the prices paid for fruits used in jam making: "Not for five and twenty years has jam been so dear as it will be for the next twelve months. The soft fruit season has closed, and raspberries made as high as £45 and even £50 a ton. The plum season is in full swing, but values range from £30 to £40 a ton, so that jam cannot possibly be cheap. The above

quotations refer to jam fruit only. Of course, dessert raspberries made considerably higher prices. We saw quantities sold at 9d. and 1s. a pound first hand, these prices being equal to £84 and £112 a ton respectively. As to the plums, the Victoria, Pond's Seedling and Prince of Wales plums are making from 7s. to 10s. a half bushel. The former is largely used by jam makers, being, in fact, one of their stock plums. At from £30 to £35 there are buyers open to purchase hundreds of tons of plums. These fruits, especially the imported samples, are more plentiful than raspberries, currants, or strawberries were. The jam manufacturer is depending upon the plum to replenish his stocks, though the latter will at the end of the stone fruit season be far under the average of previous years. The bulk of the plums on sale at the present time come from Holland, Germany and France. Though it is stated in the official statistics that American plums are on the market here, they are never used for jam, being far too expensive. Continental plums are plentiful. About 100,000 packages of these fruits have been unshipped in English ports during the past six days. Out of this quantity over 80,000 packages full had been grown in Germany. This season German shippers are monopolizing the plum trade of the British markets. Quite 75 per cent. of the plum jam that will be sold as new season's jam this year will have been made from German plums. Of course, these increased foreign fruit shipments are due to the failure of the British fruit crop. If German plums were not used in English jam we should get little of that popular preserve this season. As it is, despite the seemingly large arrivals referred to, English jam will be unusually dear. It is unfortunate that jam makers have not only had to face a great shortage of fruit and high prices, but that sugar has also increased in value."

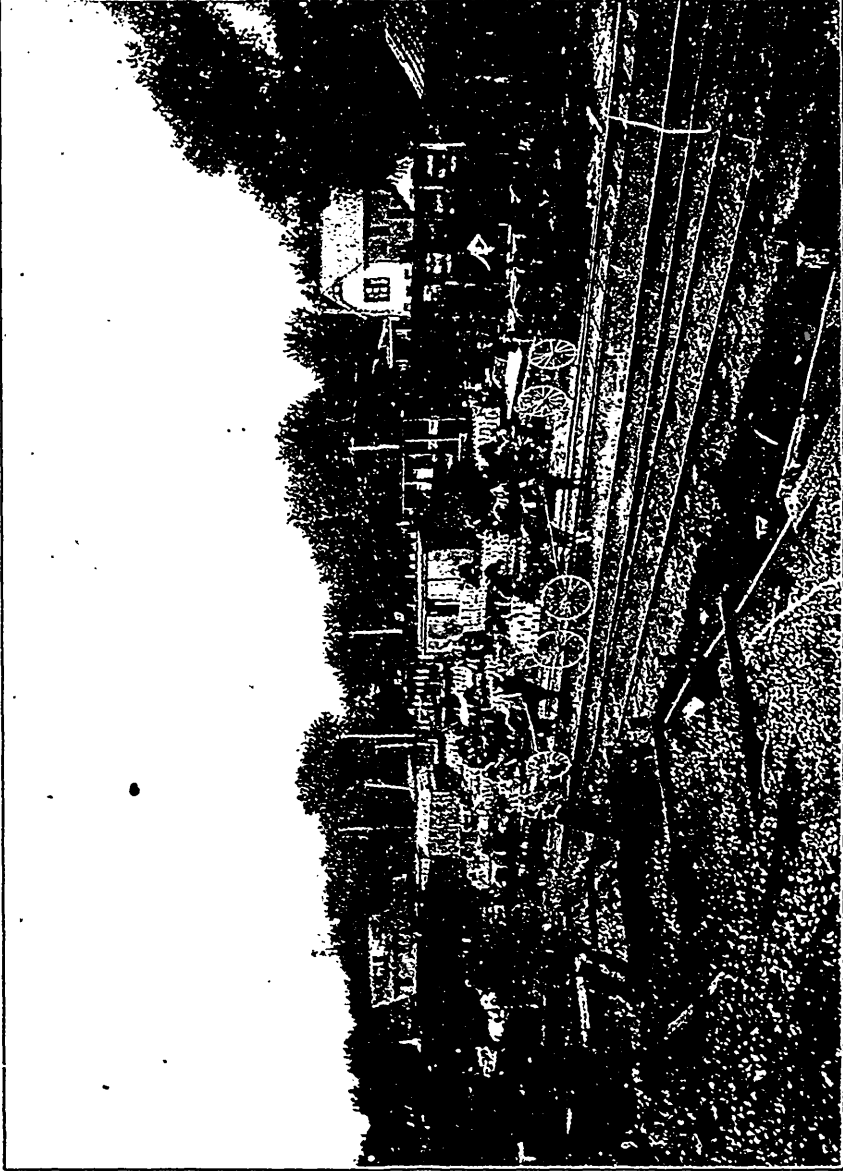


FIG. 367a. LOADING FRUIT AT ST. CATHARINES.

FREE SUGAR.

THE Sun, in discussing the same question of reducing our fruits to jams, jellies, etc., points out that Canadians are handicapped in this enterprise by the tariff, as follows:

The offering of a car load of plums at about one per cent per basket above the cost of the baskets should suggest to the fruit growers of this province the need of relief from oppressive conditions. If it were not for the tariff, that enhances the price of sugar and glassware, Canadian jams, jellies and preserved fruits would find a market wide enough to make a demand for all the products of our orchards and fruit farms. Although at great disadvantages with regard to the growing fruit, the British canners and jam producers are successfully holding markets in all parts of the world. Canadians are handicapped in competing for outside markets by a duty on sugar which amounts to about one-third of the cost. This makes it impossible for a fruit canning enterprise to succeed in any market open to competition. If the sugar duty were not enough, a duty of 30 per cent. on glass jars is a certain prohibition on the most attractive method of preserving for the market.

This journal has no leanings to party politics, but, if free sugar would foster the interests of fruit growers, we hope the tariff may speedily be readjusted so as to facilitate the development of such an important industry.

OUR CANNING INDUSTRIES.

THE canning factories seem to have revived in a wonderful manner of late, and are proving a great boon to the fruit growers situated near them. I think, said Mr. E. D. Smith, M. P., of Winona, that factories for putting up our surplus fruit are needed in every fruit district, and fruit growers would find it a good investment to put their money into them. Plums, especially, which this year were a drug in our markets, should be made up into jam.

At St. Catharines the other day our president, Mr. W. H. Bunting, introduced us to several growers who were considering the question of putting up their Kieffer pears for export. "I prefer," said Mr. Griffis, "to sell mine to the factories and save the trouble and the risk of exporting them. I received one cent and a half a pound for all

my peaches, and I am offered one cent a pound for my Kieffers. Now I don't think that a bad price when you consider that you have no expense for baskets, freight or commission."

THE GRAPE HARVEST.

ABOUT St. Catharines the grapes are turning out very well, and Mr. Bunting told us that everyone was trying to get through shipping as soon after the middle of October as possible. Messrs. Titterington Bros. and Mr. McIntee were loading cars for the Northwest, and splendid refrigerators they were—cars such as fruit men ought always to have, but alas, seldom get, aside from centres where other railways are in close competition.

"We will ship out from St. Catharines this season," said Mr. Bunting, "150 carloads of grapes, largely Concord, and of these at least 50 cars go to the Northwest."

"These six and two-third quart baskets are not the thing," said Mr. Robert Thompson. "They do not pack well together, and if you put peaches in them they go for half baskets, *i. e.*, half of the twelve-quart basket."

"How many baskets of grapes do you put in a car?" we inquired.

"Owing to the minimum for car lots of fruit being fixed at 20,000 lbs., we are obliged to put in from 2,300 to 2,400 9-lb. grape baskets to make a full car load. This makes it frequently necessary to pile the baskets from 10 to 12 high in the car, which is considerably higher than is conducive to the best carriage of the fruit. If the minimum could be reduced to 16,000 lbs. for fresh fruits, and suitable cars furnished in large enough numbers, it would be a great boon to the fruit industry of this district."

THE BENEFIT OF SPRAYING APPLE ORCHARDS.

THE experimental spraying operations carried on during the spring and summer by the Fruit Division, Ottawa, in

the Woodstock and Ingersoll districts have been satisfactory beyond expectations. Mr. W. A. McKinnon, chief of the fruit division, says that they furnish the best illustration of the necessity of spraying that he has ever seen. Aside from the opportunities for comparison between sprayed and unsprayed orchards, chance has provided some remarkable proofs of the value of the operations. In every case where a single tree or part of a tree in one of the sprayed orchards was neglected the fruit on such tree or part of tree is to-day hardly worth the trouble of picking, while on all sprayed portions scab is hardly to be found.

BRITISH COLUMBIA FRUIT.

FRUIT growers in Eastern Canada will have to bestir themselves if they wish to hold their share of the trade with Manitoba and the Territories. British Columbia is a formidable competitor, and only the best quality of fruit put up in proper packages will be found salable in Winnipeg and other western cities and towns.

In a recent issue the *Victoria Colonist* says: "Still another carload of fruit is being shipped to-day by Messrs. Stewart & Co., Yates street, to Winnipeg, consisting entirely of Victoria and vicinity products. The car is made up of packages of apples, pears, plums and prunes of a quality that need fear no competition in the east. Messrs. Stewart & Co. have already on hand the preparation of two and probably three more carloads to be dispatched next week to the same destination."

WHITE PEACHES.

THE white peaches are the favorites in Great Britain, and were it not for the fame of the Early Crawford would no doubt be so in Ontario. The Champion, Steven's Rareripe and Carlisle are three good varie-

ties of this type. The latter commends itself in our experimental plot at Maplehurst this season. It is large, of delicate tender flesh, and good flavor. In season it is latest of all, in use for the table until the end of October.

REPORTS OF EXPERIMENTAL SHIPMENTS OF PEARS AND PEACHES.

THE editor of this journal has forwarded to Glasgow three carloads of Bartlett pears during the month of September. Nearly all of these were at his own risk and expense, although three or four other growers put in some small parcels. They were packed without wrapping, in half cases, with excelsior padding, and shipped in refrigerator cars from Grimsby to Montreal. All were perfectly green and hard leaving the shipping point. They were in two grades, A No. 1 averaging about 2 $\frac{3}{4}$ inches in diameter, and No. 1 averaging about 2 $\frac{1}{2}$ inches.

CAR NO. 1.

This carload of 820 packages was made up as follows: L. Woolverton, 567 packages; E. J. Woolverton, 30; C. E. Woolverton, 50; S. M. Culp, 173. The thermograph showed them to have been carried from Grimsby to Montreal at a temperature of about 53 degrees F., and the inspectors who examined them at Montreal, before loading them on the *Lakonia*, reported them in good condition; but, a cable on arrival at Glasgow reported a "large quantity overripe and unsalable owing to too high temperature on shipboard."

The following is a detailed account of 565 packages marked L. W.:

Glasgow, 28th Sept., 1903.

9 half boxes (20 lbs. of fruit), No. 1 Boussock, at \$1.77.

220 half boxes (20 lbs. of fruit), No. 1 Bartlett, at \$1.58.

15 half boxes (20 lbs. of fruit), No. 1 Bartlett, at \$1.46.

38 half boxes (20 lbs. of fruit), No. 1 Bartlett, at 57 cents.

3 half boxes (20 lbs. of fruit), No. 1 Bartlett, at 30 cents.

30 half boxes (20 lbs. of fruit), No. 1 Bartlett, unsalable.

152 half boxes (20 lbs. of fruit), A No. 1 Bartlett, at \$1.95.

30 half boxes (20 lbs. of fruit), A No. 1, at \$1.71.

5 half boxes (20 lbs. of fruit), A No. 1, at \$1.34.

1 half box (20 lbs. of fruit), A No. 1, at 55 cents.

26 half boxes (20 lbs. of fruit), unsalable.

9 boxes (40 lbs. of fruit), A No. 1, at \$3.47.

2 boxes (40 lbs. of fruit), A No. 1, at \$2.01.

15 half boxes Champion peaches, unsalable.

Notwithstanding the loss of 71 cases, which arrived overripe and had to be thrown out, the net proceeds of the 567 packages was \$555.18, or about \$1.00 each.

The account sales of the other lots were passed on to the other shippers. Suffice it to say, they netted about \$1.50 a package.

This first experimental shipment of this season simply proves the excellent possibilities before us if we could depend upon the ocean storage, and it does seem unfortunate that with all the subsidies granted these lines for cold storage, we fruit growers cannot have our peaches, pears and plums carried at a proper temperature, and a golden opportunity to get high prices for these tender fruits, lost, which should if made practicable, put new life and spirit into the hearts of Ontario fruit growers.

WARM INSTEAD OF COLD STORAGE.

Our consignee, in writing, says: "A per-

centage of these pears arrived here in a very bad condition, and this, I understand, was due directly to the temperature having been kept too high while on board the steamer. It appears that the refrigerator chambers were packed full of fruit, and therefore the cases in the centre of the chamber were blocked in from the air, and it was impossible for the engineer to keep the temperature down sufficiently. The pears were carried at a temperature of 44 to 46 degrees, and I have asked Mr. Brown, the government inspector here, to write you, as he is making a full report thereon to the government. Some of the cases of pears were in perfect order, and sold remarkably well, but others again were in ripe and overripe condition. Had the fruit been all in green condition, the A No. 1 would have realized \$2.00 and the No. 1 \$1.50, but as explained above these ripe and overripe had to be allowed for. The fifteen boxes of peaches were just a mass of decayed fruit and could not be offered for sale at all. The pears would have looked better had they been wrapped in paper. There were also some California plums in the same chamber which also landed in bad condition. They should not have put such a great quantity of fruit in one chamber, and should have left air passages so that the temperature could have been kept at a right degree."

THE GREENING IN PERTH COUNTY.

THE finest samples of the Rhode Island Greening apple that I ever saw (says Mr. T. H. Race, of Mitchell) were brought in to me a few days ago by a farmer of Hibbert township, county of Perth. The farmer, Mr. John Kemp, has five trees of the same variety in an orchard of perhaps two acres, which has not been broken up for years. The apples brought to me were off one of the five trees, but were so much larger and cleaner than the fruit off the other four that some per-

sons had persuaded Mr. Kemp that they were not the same variety. They come like this every year, Mr. Kemp said, though never quite so fine as this season. I inquired for a cause, but was told that the trees got the same care, and that was very little except some pruning out. Mr. Kemp finally told me that he raised a large flock of turkeys every year, and that all through the season, and every season, they roosted in

this particular Greening tree. That partly explains it, I said; that at least explains the size of the apples, but does it explain the absence of worms? Why should the very superior apples of the turkey fertilized tree be exempt from worms, while the fruit on the other four trees was badly affected? The case at all events shows the benefit of top dressing on sod that is never broken up.

AT THE WESTERN FAIR, LONDON

BY T. H. RACE, MITCHELL.

THE Horticulturist has made a number of well-merited references to the fruit display at the Toronto Industrial exhibition. Let me say a few words about the exhibit at London. Everybody knows that the arrangement in the horticultural building at London is much better than that at Toronto, and it is easier to make the display attractive. This year, after the judging was done and everything was put into order by the committee in charge, the effect in the building was very pretty. The fruit itself, though not so plentiful as at Toronto, was superior to it in quality, and being a week later had a little more color. As an object lesson and a means of education the display at the Western is decidedly in advance of that at the Industrial. The low fruit tables running crossways of the hall shows the fruit to better advantage, and is easier of access to those who wish to handle it and ask questions about it than the higher tables with guard railings used at Toronto. And when these tables are decorated with flowers and plants, tastefully placed among the fruit, and the sides of the building on either ends of the fruit tables all covered

with a handsome floral display, the effect is very pleasing and attracts great numbers of people.

The London Horticultural Society is deserving of great praise for the part they take in making the display at the horticultural hall a thing of beauty and a joy to everybody who goes in to see it. They occupy a central position in the hall, with the apple tables to the south and the finer fruits to the north of their exhibit. Their display, contributed by the members of the society, is shown on a large pedestal, crowned with some of the larger plants and covered on all its sides and surroundings with cut flowers and annuals grown from seed distributed by the society. For this enterprising and magnificent display much credit is due to Mr. Gammage, the well-known London florist, to Dr. Bethune, to several of the ladies, and to Mr. C. J. Fox, who is generally in charge. Taken altogether, the horticultural hall was one of the most attractive departments of the Western Fair this year, and the artistic arrangement of fruit and flowers together was an object lesson of real value.

AN ENGLISH NURSERY

BY THE EDITOR.

ON Whit Monday, June 1st, we took a day out of the great city of London to visit the nurseries belonging to Mr. Cheal, whose visit to Maplehurst last September was so welcome.

His home is situated about two miles from Crawley, where we lunched in the old George Hotel, at which royalty so often lunched in coaching days—a half-way house between London and Brighton.

Mr. Cheal's home is a lovely old-fashioned house, half hidden in ivy, clematis, akébia and other climbing vines, and surrounded by beautiful hedges. On one side of the beautifully cut lawn was a rockery well considered a work of art, with rambling walks amid trees and rocks and pools of water, approached over an artistic rustic bridge. Among the rocks was planted a collection of hardy plants, suitable to the conditions and giving one the impression of living in the midst of nature's garden. So popular has this style of work become, said Mr. Cheal, that some men are now making rock gardening a specialty.

The English methods of cultivation are very different from those of our Canadian nurserymen, who cultivate their whole plantation by means of horse labor. Mr. Cheal's nursery is a succession of gardens, separated by lofty walls of hawthorn and hornbeam hedges; and each of these gardens, with its wealth of evergreens, fruit trees, flowering shrubs, hardy perennials, etc., these acres of nursery stock—all are cultivated by hand! "Such a method would ruin Canadian nurserymen," we said. "Our people do nearly every-

thing by horse work, and as little as possible by human labor."

"Land with us is too valuable to plant at such distances as you do, and labor is much lower priced," said Mr. Cheal. "We pay only from \$4 to \$5 a week for labor."

Well, of course, here is a key to the situation; yet we believe the time has come when English farmers and nurserymen should take some lessons from us if they would continue to prosper.

The greater part of Mr. Cheal's business is in connection with large contracts for the designing of parks, for which he supplies the stock and carries out the work; still the firm does quite a business in fruit trees. They make quite a specialty of growing apple trees on English Paradise stock, claiming that these would be profitable if planted in a wholesale way.

The varieties of apples cultivated differ wholly from those grown with us. Cox Orange Pippin heads the list, and is followed by such varieties as Pearmain, King of the Pippins, Queen, Lord Derby, Bismarck, and many others; while such names as Baldwin, Spy, Greening, King of Tompkins, Snow, etc., are not to be found.

Evidently the conditions are so different from ours that different varieties are needed—and it would be vain to expect much satisfaction in Ontario with English varieties as in England with those which originate in Canada.

The hedges at Mr. Cheal's nursery are exceptionally fine, but so high and large that the work of cutting must be enormous. "We are obliged to keep them," said he, "for pro-

tection against the winds." Perhaps; but in our humble opinion, the cost of keeping these numerous immense hedges in good form, would pay for all the injury from the wind and leave a handsome margin in the bank.

The prettiest of the hedges we thought was the Hornbeam, presenting as it did such a pretty light green color, and bearing the shears wonderfully well.

For ornament certainly give us these beautiful English hedges—nothing could be a greater decoration to the country roads and lanes; but it is the number of them that surprises us and leads us to wonder if our British friends are, after all, only "playing at farming" when they divide up their farms into such tiny divisions, with hedges so numerous.



Scene at a Show of the Society in 1849, at Chiswick

FIG 2673.

THE ROYAL HORTICULTURAL SOCIETY

IN view of our reference to the Temple show, of the Royal Horticultural Society, of London, the following extracts from a history of that society, which recently appeared in the *Journal of Horticulture*, may not be out of place:

The present period is an interesting one in the history of the Royal Horticultural Society. It is a period of great prosperity and of wonderful activity. The society's influence is visibly penetrating the provinces and parishes of the three sister king-



FIG. 2674. THOMAS ANDREW KNIGHT.

doms, and we have been surprised and pleased on many occasions recently to discover Fellows of the Royal Horticultural Society in places whose positions could not in the least have brought them into direct touch with the society or its management.

The Royal Horticultural Society was established in 1804, and measures were adopted in the spring of the present year whereby the Centenary in 1904 may be celebrated in a manner worthy of the Mother Society of English Horticulture. How satisfactory and commendable this proposal to build in London a great hall and offices for the society was, has been overwhelmingly demonstrated at the special general meeting held on March 21.

The society in these later days is indebted for its popularity, its advertisement, and its success, almost entirely to the frequent exhibitions and annual conferences, and secondly to the issue of an invaluable journal of the transactions of the society, and the secretarial vigilance. In the early days of the Royal Horticultural Society, before the exhibitions had become a feature of the yearly program, the society's greatest work and usefulness centralised at and radiated

from the experimental garden at Chiswick. This has now altered. "All is change, woe or weal." When, in a few years, a powerful and consolidated fellowship have accomplished the magnificent task now lying before them, a new garden, fruitful in possibilities, will be assured, from the best of all reasons, that it is a necessity.

The most valuable worker and chief instigator in the formation of the society was Thomas Andrew Knight, F. R. S., whose name is associated with the horticultural society during a long course of years, and ever regarded, says Sir Trevor Lawrence, "with the highest honor by all connected with it." He then proceeds: "Mr. Knight, whose name and virtues are commemorated by the Knightian Medal of the Society, had devoted much attention to scientific horticulture and vegetable physiology, on which subjects he had communicated several papers to the Royal Society. He lived in Herefordshire, in the midst of a cider and perry country, and had been struck by the unskilful and unscientific management of the surrounding orchards. The idea of founding a society to bring together British horticulturists occurred to him in 1804. He put himself into communication with Sir Joseph Banks, P. R. S.,* and others; the result being that on March 7, 1804, the new society was founded. Its objects were defined to be "to collect information respecting the culture and treatment of all plants and trees, as well culinary as ornamental; to foster and encourage every branch of horticulture and all the arts connected with it, and to give premiums for improvements in horticulture whenever it shall be judged expedient to do so."

* * * * *

In 1809 a royal charter of incorporation

* Sir Joseph Banks, Bart., was President of the Royal Society for forty-one years. He died in 1820. A new edition of his Journals, during his voyage with Captain Cook, has lately been published, edited by Sir Joseph Hooker.

was granted to the society whose object is therein briefly described to be "the improvement of horticulture in all its branches, ornamental as well as useful." * * *

In 1811, on the death of the Earl of Dartmouth, the first president, Thomas Andrew Knight, Esq., the founder of the society, was elected president, a post he occupied for twenty-seven years, to the signal advantage of the society and of horticulture generally.

* * * * *

In 1818 and the following years an experimental garden was established at Kensington, with a nursery at Ealing; and permanent offices were acquired by the purchase of No. 1 Regent street, at a cost of £4,200. About this time, the annual subscription, which had originally been £2 2s., was raised to £3 3s., a rise which seemed rather to encourage than to cheque elections, 845 new fellows having joined the society in 1891-21. In 1822 the gardens of the society were moved from Kensington and Ealing to Chiswick, where a thirty years' lease of 33 acres had been obtained from the Duke of Devonshire, the lease being renewed in 1852 for a like period. The gardens of the society have continued at Chis-

wick ever since, but their area has been reduced from 33 acres to 12.

A valuable feature of the society's work—one which has had a great and enduring influence on British horticulture—may well be referred to here. As early as 1818 it was recognized that, funds permitting, a horticultural society could not do better than take steps to obtain from countries beyond the borders of Europe valuable and interesting trees, shrubs, plants and seeds. The earliest arrivals came from China and from India. In this way many valuable ornamental plants were introduced into Great Britain, such as azaleas, peonies, roses, camellias, chrysanthemums, etc. One of Mr. John Reeve's introductions from China was the lovely *Wisteria sinensis*, which reached England in 1818. The large tree of this climber at Chiswick is probably a relic of the original introduction. The success of these early efforts encouraged the society to send out collectors at its own cost. This they did with such success that, to quote Mr. Andrew Murray, "the results have affected the appearance of all England. Nowhere can a day's ride now be taken where the landscape is not beautified by some of the introductions of the Horticultural Society."

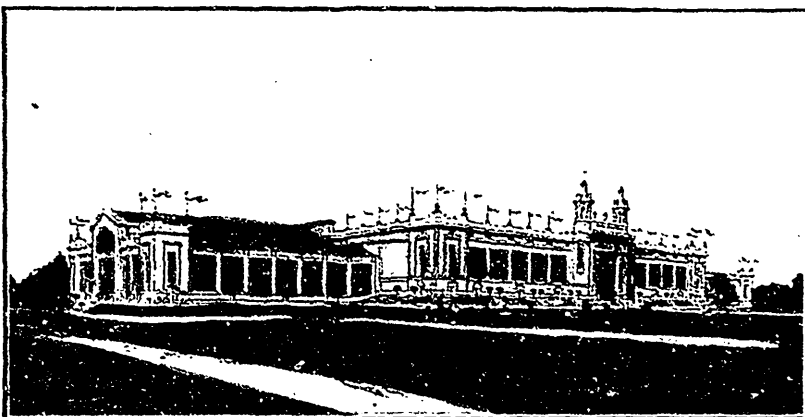


FIG. 2675. HORTICULTURAL BUILDING, ST. LOUIS.

THE WONDERS OF THE NIAGARA DISTRICT.

BY T. H. RACE, MITCHELL.

ONE of the most interesting portions of the Niagara district is Pelham township. The great and fertile fruit belt of the Niagara district is that stretch of land from Hamilton to the Niagara River lying between the lake and the mountain. Up over the mountain on the table-land vineyards and peach orchards are the exception rather than the rule. The surface, for the most part, is too hard a clay for small fruits, and general farming—and some very poor farming—is the rule. Pelham township, however, lying right upon the table-land, is an exception to this rule. Pelham township resembles an extensive mound of rich sandy loam, with a centre ridge of water-washed gravel, as if dropped from some stranded iceberg. From the east, west, north and south slopes of this township the most delightful views of the distant lakes and landscapes can be had. The soil, besides being warm and easily worked, is wonderfully fertile, and every variety of timber from oak to walnut was found upon it, and still exists in its unbroken forest lands. Here small fruits grow in great abundance; one man close by Font-hill, Mr. A. Railton, devoting his whole hundred acres to berries of one kind and another, from which he has realized an easy fortune. Among the farmers of this township there are eighty telephones in use, an evidence of advancement not equalled anywhere in the Dominion.

But it is as the great nursery district of Canada that Pelham township has become especially famous. On the east and southern slopes the Morris & Wellington nurseries, the largest in Canada, are situated. These nurseries cover in all about eight hundred acres, and nowhere in the world are young trees brought more rapidly to perfection with a less percentage of culls.

This, of course, is owing to the most favorable conditions of soil and climate. Frost-bite and black heart are diseases unknown among trees grown in Pelham township. The rapid growth of the ornamental department of these nursery grounds is indication of the great advancement made in later years in home ornamentation, park and lawn planting. A lesson in this department is also learned of the changing tastes, and greater knowledge, perhaps, of arbor culture. The rowanwood, or mountain ash, so well known in song and story in the days of yore, has no longer a place in the nursery row. The same may be said of the horse chestnut. These have given way to the more popular colored birches, maples, and evergreens. To me the rose department of these nurseries was also of special interest. Morris & Wellington are easily the largest growers of this choice of flowers in Canada, and when I visited their rose grounds, comprising several acres, there were still thousands of roses in bloom, though the season was well on into August.

On the western slopes of Pelham township are situated the Brown Brothers' nurseries, the second largest in Canada. Just on the west of the slope, to the west, stands the handsome nursery home occupied by the manager, Mr. E. Morris. From this home can be seen both lakes, to the north and south, with a commanding view also of the landscape to the west stretching as far as the eye can reach. This matter may not be of actual value to the fruit grower; but it is of interest to all of us to know that we have in our country a district so especially adapted to nursery growing and a matter of pride to them that we have a district of so many natural charms, and so advanced in all the developments of our higher civilization.

FRENCH METHOD OF PACKING AND SHIPPING PEARS

BY

W. A. MCKINNON, B. A.

CHIEF OF FRUIT DEPT., OTTAWA.



FIG. 2676. FRUIT PACKING IN FRANCE.

TO those who are accustomed to think of the French as a nation of pleasure seekers it is somewhat of a revelation to mingle for a time among the working classes in the city of Paris and its immediate neighborhood. The discovery is soon made that while Paris is filled with strangers seeking only pleasure, it is in reality a busy hive of ceaseless workers. It was the writer's privilege to become acquainted with the heads of one of the largest fruit houses in France, and to see exemplified the wonderful concentration of business management which enables one firm to place the products of a thousand orchards side by side, in the same market, and packed with absolute uniformity.

At the head office of Champagne Freres orders are received from British and Continental markets for all grades and varieties of pears, plums, dates and other fruits. Daily reports coming in from their agents in all parts of France enable them to give shipping orders in accordance with the supply

and demand, so that one mind controls and directs the entire market operations of the firm.

In every section of the country a representative of the firm visits daily five or six packing houses located in his district. Sectional maps, which are kept at the head office, indicate to the management exactly where each of these traveling foremen is to be found at any particular moment, and what sort of fruit is being "operated" in the district in question. The limits of these districts are definitely fixed, and the foreman is not authorized to buy a single package of fruit beyond these limits, which the experience of the firm has enabled them to fix with accuracy, on the basis of profit. It is true there as in Canada that choice fruit may be produced in a certain village, while at another, five miles away, the same varieties are poor and unprofitable and quite other fruits are the staple. The foremen report daily by wire what quantities of fruit of each variety and grade are available for imme-



FIG. 2677. FRENCH FRUIT PACKAGES.



FIG. 2678. READY FOR SHIPMENT.

diate shipment. The manager at the head office, who has the orders before him, and also accurate information as to the resources for the day, is thus placed in a position to direct shipments in accordance with the available supply.

A visit to one of the packing houses in a village a few miles distant from Paris proved exceedingly interesting and entertaining. We were first shown the process of grading and packing the pears as they arrived from the grower in large straw-lined hampers. Women are employed to sort the pears according to size, at the same time rejecting every defective specimen. A few days' practice with measuring rings enables the graders to distinguish accurately the diameter of the fruit to within a quarter of an inch. In practice, the measuring rings are seldom or never used after the first week. The pears when graded are placed on a canvas covered bench, each size by itself. Here a different set of workers is engaged in packing the fruit into slatted crates, as shown in the illustration, Fig. 2676. Each packer handles only one size of fruit, and every crate put up by her must contain the same number of specimens and must be well filled. The operator stands in the angle formed by the bench and the stand on which

her crate is placed, and faces the latter. The crate is lined on all four sides with paper, which hangs over the sides and the back, where the lid, with its hinges of cord, hangs straight down. The first operation is to place a layer of excelsior in the bottom of the crate; this is covered with a sheet of newspaper, and the crate is ready for its first layer of fruit, which is placed evenly, with the stems all one way, as shown in Fig. 2677. Over the fruit a sheet of newspaper is placed, followed by a fairly thick mat of excelsior and another newspaper. A second layer of fruit is followed by newspaper and excelsior, after which the overhanging newspapers are folded across the package, which is then handed to a man to be closed.

It requires considerable muscle to draw the cover tightly over the bulging excelsior and fasten it securely.

The next operation is the marking, for which this firm employs a code something like that of telegraphy. For example, three dots indicate "No. 1 Bartlett"; two dots, "No. 2"; three dashes, "No. 1 Duchess," and so on; the color is varied to show the



FIG. 2679. PEASANT FRUIT GROWERS.

section from which the fruit comes. Fig. 2678 shows a cartload of fruit ready to be taken to the station for shipment.

Fruit intended for sale within the week is picked and packed while still green and hard. It is not shipped in cold storage, and has time for ripening during the voyage and before it is finally purchased by the consumer.

The crates cost approximately 30 cents each and are returnable. This package is rather expensive, in view of the fact that a crate is said to stand only five or six journeys to England, and the cost of returning it is considerable.

After seeing the product and the method of handling it, we were anxious to see the producers, and a short walk brought us to the middle of a large pear orchard, where we found a peasant and his wife engaged in cultivating the trees. The illustration, Fig. 2679, shows not only the workers and their costumes, but also the only implement which many growers use for cultivating the soil—the short-handled hoe. Of course it is true that the larger farmers use horses in their operations, but thousands of acres in France are tilled by hand. Many pear trees are grown in the open as in Canada, but wall culture is very popular in some sections. The pears are trained up against a wall, the top of which is thatched so as to shed the rain. The peasants know exactly how many pears each tree is carrying for them, and watch with careful eye the development of each individual fruit, noting with alarm the progress of scab or rot. Spraying is known, but not thoroughly understood, and seldom efficiently practised by the smaller owners. Thinning is done wherever necessary, the object aimed at being to produce the largest and finest fruit. Champagne Freres, and other firms engaged in similar business, pay a very much higher price for large pears than they will for medium-sized fruit; small



FIG. 2680. HOUSE USED FOR PEAR PACKING.

and defective pears they will not buy at any price, and growers have learned that it pays them well to produce only the article which brings a high price.

At the right of Fig. 2678 will be seen a typical peasant proprietor and client of the firm. Fig. 2680 shows on the left a peasant proprietor in another section of France, and an unoccupied house, on the floor of which he had his pears spread out in layers, the large ones by themselves. The central figure is the representative of Champagne Freres in that district, who had just completed an inspection of the fruit and a bargain for its purchase.

The chief lessons we can learn from a study of methods in the exporting of pears from France are, first, that it pays growers and shippers alike to take pains in the growing of the fruit, so as to produce shipments which contain no undersized or defective fruit; that it pays all concerned to have the fruit rigidly graded, and to place upon the market substantial packages of fruit, uniform in size, appearance and quality; and further, that the careful packing of choice fruit, even though it seem expensive, is really the most economical way in which to handle it.

NEW ONTARIO, FROM A FRUIT GROWERS' POINT OF VIEW.

BY

HAROLD JONES, MAITLAND, ONTARIO.

ON September 21st thirty-eight members of the Canadian Press Association left Toronto on a tour of inspection to that wonderful country lying north of North Bay, known as New Ontario. We arrived at North Bay in the evening after a very interesting trip through the hills and lakes of the Muskoka region. The next morning I went directly north for a distance of 28 miles, on the government railroad now being constructed. Beyond the first two or three miles north of North Bay the road passes through an unbroken forest of spruce, balsam, cedar, pine, birch, maple and a little basswood. On this railway, at Trout Lake, Sturgeon River, and on the south side of Moose Lake, wild plums grow successfully, also pin-cherries, choke cherries, raspberries, blueberries, gooseberries, elderberries, strawberries and high bush cranberries. The land varies greatly from rocky ridges (granite) to sand, gravelly loams and clay loams. The most of this section, as far as soil conditions are concerned, will undoubtedly be adapted to fruit growing when the forest is cleared away. This section of the country is at a high elevation. Sturgeon Lake, about 25 miles north of North Bay, is 1,200 feet above sea level and 600 feet above North Bay. I understand that portions of this forest I have just mentioned are reserved by the government as a timber reserve, and so will not be open to settlement for some time.

On September 22nd I took the train to Mattawa, a point on the Ottawa river east of North Bay. From there I went by rail 39 miles up the banks of the Ottawa to the foot of Lake Temiskaming, from which point I went to New Liskeard, a distance of

85 miles, on one of the Lumsden Company's steamers. The banks of the Ottawa and of Lake Temiskaming are abrupt cliffs, mostly of a rocky formation, covered with soft maple, silver birch, poplar, balsam, spruce and pine, with some burr oak. These cliffs are rich in scenic grandeur, but very little, if any, fit for cultivation.

At Haileybury, 6 miles south of New Liskeard, the rocky formation abruptly stops, and we enter into the great clay belt of the north, which is said to be 600 miles long, of about 200 miles wide and of unknown depth.

I stopped over night at New Liskeard, a thriving little town of 1,000 or 1,200 inhabitants, who have great expectations. The next morning, September 24th, I drove out on the East road, along the north end of the lake, for a distance of six miles. I found the land here all clay, with the exception of two limestone ridges.

My first stop was at S. S. Ritchie's, five miles east of New Liskeard, whose land is on the banks of the lake. This farm is a rather high elevation above the lake, and upon examining the soil in a cellar that had been dug for a dwelling, I found it sandy for a few inches, with a clay to gravelly subsoil, which would give good natural drainage. At this place I found a Hyslop crab, and what was evidently a Duchess about four years old, in a healthy thriving condition. The natural forest on this farm is deep rooted, and there was no evidence of root-killing, even in varieties of apples that he had planted that were not hardy in wood and branch in that northern country.

I also visited C. W. Tucker, adjoining Ritchie, with soil conditions similar to those just mentioned. Here I found a Hyslop

crab, a good sized apple of Russian origin, bearing fruit, and Concord and Niagara grapes. Concord was ripe, Niagara green. I also found two native plums of excellent quality, in full bearing.

I returned to New Liskeard for dinner, and after dinner drove towards White river and Tomstown, on what is known as the north road, a distance of 10 or 11 miles. I found here a gently undulating country, all clay, with a thick forest growth of medium sized spruce, balsam and cedar. All along this road the country is thickly settled and some quite large clearings made. Oats, barley and all kinds of vegetables do remarkably well, potatoes especially so. I did not find anyone on this road who had tried raising fruit of any kind, and I saw very little wild fruit. The forest here is shallow-rooted, but as the land becomes cleared and cultivation and drainage aerates the subsoil, fruit trees might possibly make a root system. On the road west from New Liskeard I found soil conditions the same, except the elevation is higher, and drainage can be easily done, as the ravines afford an easy outlet.

Weather conditions seem favorable for the growing of all kinds of crops, and there is no evidence of severe frosts up to this

date, corn being still green in most sections. In the winter months the thermometer falls as low as 40 degrees below zero, with the usual snow fall of about 2½ feet. This country is evidently north of the belt of heavy snowfalls such as they have along the north shore of lakes Superior and Huron.

The Township of Dymond held their fall fair at New Liskeard on September 25th, and it was a complete surprise to see the wonderful exhibit in grains and vegetables. There were over 1,100 people on the grounds in the afternoon, and everybody looked contented and happy and pleased with their conditions.

One great advantage to a settler in this country, who has limited means, is that he has an immediate revenue from the forest that is on his homestead, and he can make his winters profitable by cutting and selling wood and timber that it would be necessary to cut anyway in clearing his land.

The new railway, above mentioned, will reach New Liskeard next summer. This will bring in settlers by hundreds and thousands, for this country is 175 miles south of the latitude of Winnipeg, the climate much more temperate, and the winters not so long as in Manitoba. And New Liskeard will be only 15 or 16 hours by rail from Toronto.

RASPBERRY AND BLACKBERRY MANAGEMENT.

THE ideal treatment for raspberries and blackberries is to pinch them back at intervals during the summer and thus secure strong, sturdy bushes three and one-half to four feet high, with laterals one to one and one-half feet long, rather than to practice severe heading back after the plants have become long and "leggy." If, however, as is frequently the case, even in the best managed gardens, the plants are at this season making vigorous growth which may not mature, they should at once be cut back to the desired height and the canes will harden

before cold weather. Many prefer to cut back the canes in the spring. Thinning the canes, which should always be practiced, may be done at any time during the season. In general one-half or more of the young canes which appear should be cut out.

Blackberries and raspberry bushes may be transplanted in the fall, but better results are usually obtained from spring planting. Currants, on the other hand, have given rather better results from fall setting.—*Maine Experiment Station.*

WILLIAM E. SAUNDERS

SECRETARY OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO.



FIG. 2681. WILLIAM E. SAUNDERS.

PROMINENT among Canadian naturalists is Mr. W. E. Saunders, of London, Ont., who has been secretary of the Ontario Entomological Society since the year 1887.

His father, Dr. Wm. Saunders, director of the experimental farms of the Dominion, has always been devoted to the study of the natural sciences, and hence the son's attention was in early years directed to similar pursuits, his interest in them being maintained by the making of collections in the different departments. Geology, botany, entomology and ornithology all in turn provide object lessons for study, training his mind to habits of close observation and filling the leisure of later years with delightful employment.

After a few years of miscellaneous col-

lecting Mr. Saunders turned his attention more exclusively to ornithology, and as soon as the use of a gun was permitted he commenced a scientifically arranged collection of our native birds, showing male and female in summer and winter plumage, with any variations from the types; also the nests and eggs of each species. Year by year the collection is added to, until now it numbers over 1,000 specimens. Mr. Saunders' birds are his intimate friends, and whether in his house or on the public platform his "Bird Talks," illustrated with specimens, show to his audience that he speaks of what he has learned by personal experience in the fields and woods. His enthusiasm for this study is such that he counts it no hardship to walk miles into the country in time to hear some favorite songster greet the dawn. He has also been known to spend a night in the woods in the depths of winter, just to see what he missed by spending his nights in bed.

About two years ago Mr. Saunders accompanied his father on an official visit to Sable Island, a place he had long wished to go in order to see the only known breeding place of the "Ipswich" sparrow. The impressions of this trip were given to the public in an article in one of our local papers, which has since been adapted for some of our scientific magazines. Mr. Saunders was able also to enrich his collection by several specimens of the rare sparrow, as well as some other beautiful birds which have their habitat on that interesting island.

Although Mr. Saunders is kept fully employed in looking after his business interests, he finds a change of work sufficient to afford him the rest he needs; hence, he has

employed his leisure time in many pursuits, and while ornithology may be called his principal "hobby," he has gone rather extensively into gardening and horticulture generally—extensively, considering the size of his lot on Central avenue, but the amount of fruit and flowers there produced is a surprise and pleasure to all his summer visitors. His well-known love for these pursuits and his knowledge of horticulture generally has occasioned his recent election to the chairmanship of the committee who have in charge the care of the street trees in London.

Mr. Saunders received his education principally in London, though two or three years were spent in boys' colleges else-

where. As it was considered best for him to enter the drug business so long conducted by his father, he was sent for two years to the Philadelphia College of Pharmacy, where he graduated with the highest honors. Soon after his return to London he was taken into partnership with his father, but on the latter being appointed Director of the Experimental Farms of the Dominion, Mr. Saunders retired from the retail business and entered into the wholesale exclusively.

On the establishment of the Western University he was appointed to the chair of Chemistry, which he held until the claims of his own business forced him to relinquish the position.—*Canadian Entomologist*.

USEFULNESS OF SPARROWS

J UDD (U. S. Biol. Survey) in Bul. 15 reports upon results of observations upon the feeding habits of the various sparrows found in the United States, as studied both in field work and by examination of stomach contents. The result was unfavorable to the English sparrow, because of his grain-eating habits, which more than counterbalance all his usefulness in eating insects or weed seeds. In the stomachs of 82 English sparrows, for example, insects constituted only 2 per cent. and seeds 98 per cent. of the food; while of the entire food for the year it was found that grain constituted 74 per cent.!

But, aside from this foreigner, our sparrows are most useful in destroying weed seeds, such as rag weed, pigeon grass, smartweed, crab grass, lamb's quar-

ter, chickweed, etc. The work is chiefly done in the fall, winter, and early spring; indeed, during this time the seeds of various weeds constitute about three-fourths of their food, if we may judge by the observations made upon no less than twenty specimens of native sparrows. The ragweed is one of the most troublesome weeds on the fruit farm, growing up so late in the season and giving the whole place such an untidy appearance, so that a bird that feeds upon its seeds is surely a friend. From Mr. Judd's observations it is shown that the native sparrows may destroy 90 per cent. of the seeds of the ragweed within two months, and he found that as a rule the weed seeds were cracked, or otherwise injured, so that they cannot germinate when vented from the body.



FIG. 2682. HOME OF M. AUG. DUPUIS, VILLAGE DES AULNAIS, QUE. Photo by F. T. Shull.

A DRIVE THROUGH THE FRUIT BELT OF THE LOWER ST. LAWRENCE.

BY

W. T. MACOUN,

HORTICULTURIST, CENTRAL EXPERIMENTAL FARM, OTTAWA.

THERE is a district in the Province of Quebec where good fruit is grown which has not often been brought prominently before the readers of the Horticulturist: this may be due partly to the fact that the fruit growers there are more modest than in some other parts of Canada, and partly because they are for the most part French Canadians who do not receive the Horticulturist. The writer refers to that tract of country along the south shore of the St. Lawrence river extending from Levis,

opposite Quebec, through the counties of Levis, Bellechasse, L'Islet, Beauce and Kamouraska, a distance of about one hundred miles, and reaching about latitude 47 degrees 50 minutes.

Although the winters in this part of Canada are very severe, the temperature occasionally falling to 30 degrees below zero, the St. Lawrence river has such a favorable influence that European plums and cherries and other fruits which will not succeed at Ottawa are grown here to perfection, the

flower buds of the plums and cherries coming through nearly every winter uninjured.

Accompanied by Mr. F. T. Shutt, the writer recently had the pleasure of visiting this district and of learning from personal observation what is being done in fruit culture there, and what are the possibilities for the future. Landing at St. Denis wharf from Murray Bay, we drove to St. Denis, a distance of four or five miles, and called on Mr. J. C. Chapais, assistant dairy commissioner, who has done much experimental work in fruit culture. Mr. Chapais received us with great courtesy and afterwards showed us over his orchard and garden, in which were found many things of interest. There was a good crop of apples in the orchard, but we were surprised to find how much later the season was than at Ottawa, a month, as we were informed. Duchess and Fameuse were among the more prominent kinds of apples noticed. The plum crop, which is usually very good, was light with Mr. Chapais this year. Fine strawberries are grown here, and as the season is so much later than at Montreal and Quebec it should be profitable to ship this fruit to those markets. There was a fine vegetable garden kept in good order. Mr. Chapais has also a very interesting collection of ornamental trees and shrubs. We were surprised to find the horse chestnut doing better here than at Ottawa. Mr. Chapais has one of the finest horticultural libraries in Canada, some of his books being valuable French works. There is apparently not very much good fruit land in the immediate vicinity of St. Denis, which is on a point of land with low ground on either side. A drive of twelve miles brought us to Ste. Anne de la Pocatiere, where, although comparatively little is done in raising fruit, it is quite evident good apples and plums can be raised. After a drive of about nine miles we arrived at Village des Aulnaies, a point to which we had looked forward with great

interest as being the home of that veteran fruit grower, nurseryman, and experimenter, August Dupuis, director of the fruit experiment stations for the Province of Quebec. We were fortunate in finding Mr. Dupuis at home. He received us with great kindness and entertained us well. One would almost fancy himself in France here, as the general character of the village, houses and gardens partakes of that country.

Mr. Dupuis, who has been actively engaged in horticultural work for nearly fifty years, and who has conducted a nursery of fruit trees and ornamental trees and shrubs for about forty years, is very enthusiastic regarding fruit growing along the south shore of the St. Lawrence, particularly regarding the cultivation of the European plum, to which fruit he has paid special attention and has tested a large number of varieties. In 1902 his trees were heavily loaded with fruit, and although last winter was unusually severe (the temperature falling to 30 degrees Fahr. below zero), and spring frosts and summer cracking did much damage, there was a good showing of some varieties. Varieties which are quite unprofitable at Ottawa and only yield a good crop of fruit once in three or four years, succeed admirably here almost every year, and varieties which are regarded as comparatively tender in the best plum districts do well. Two kinds which are giving the best results this year, and which are among the most profitable are Washington and Grand Duke. I saw and tested ripe fruit of these and many other kinds in 1902, grown by Mr. Dupuis. The varieties found to be most profitable and hardiest in fruit bud are: Lombard, Moore's Arctic, Reine Claude, Montmorency, Green Gage, Washington, Grand Duke, and several varieties of damsons. On November 1st, 1902, Mr. Dupuis shipped 50 gallons of his Lombard and Grand Duke plums to England, where they arrived in perfect condition. Some of his Grand Duke



Photo by F. T. Shatt.

FIG. 2683. VISTA IN BOTANIC GARDEN, WITH VIBURNUM HEDGE IN FOREGROUND. GROUNDS OF AUG. DUPUIS, VILLAGE DES AULNAIS, QUE.

The photo shows an avenue in grounds of Mr. Dupuis, the veteran fruit grower and pioneer in horticulture, being seated on the bench or garden seat in the foreground. Among the other figures are Mr. A. Verreault (in front of the streamer "Horticulture"), superintendent of the grounds, and Mr. W. T. Macoun (next to Mr. Verreault), the writer of this article. The streamers and flags were displayed by Mr. Dupuis in honor of the visit of the officers of the Experimental Farm.

and Golden Drop, which had been kept in a cool and dry building, were packed on November 10th, and on December 1st they were still in good condition and sold well. The plum season begins with Favorite and Mirabelle in the first half of August and ends with Golden Drop and Grand Duke about December 1st.

Mr. Dupuis is now experimenting with a large number of varieties of pears, forty-six of which he imported from France, most of them being on dwarf stocks. A large proportion of these were fruiting this year, and some of them give promise of being especially adapted to the district along the south

shore. Among the most promising were Claude Blanchet and Toukoubia, which, although not of the best quality, were of good size and appearance.

Morello cherries are also successfully grown here, and good crops of these are produced nearly every year.

There is a good sized apple orchard here with trees twenty-five or thirty years old, and perhaps more. The hardiest varieties succeed best, but we were surprised to find a Northern Spy tree in fairly vigorous condition which was planted more than twenty years ago. Among the varieties which are most reliable here may be mentioned Tetof-

sky, Yellow Transparent, Red Astrachan, Duchess of Oldenburg, Wealthy, Fameuse and Alexander.

We saw here some of the largest English gooseberries which have ever come under our notice.

Among the ornamental trees and shrubs, of which there are many species, there were some great surprises. As at St. Denis, horse chestnuts were doing well. Cut-leaved birch, planted in 1874, were still fine, healthy trees, probably forty or fifty feet in height. There was an American sweet chestnut tree, planted in 1874, which was in fine condition, and about twenty-five feet high. There were many black locust trees eighteen years old. The smoke tree (*Rhus Cotinus*) was doing well, and the *Althæa* or Rose of Sharon, which kills out root and branch at Ottawa, was found blooming at Village des Aulnaies.

Very intense cultivation is practiced by Mr. Dupuis, and his fruit and ornamental trees are planted close, which gives them greater protection. Some idea of his methods may be obtained from the photo of part of his nursery, taken by Mr. F. T. Shurt, chemist of the Dominion Experimental Farms, and the photo of his house taken at the same time shows the pleasing effect of the trees, shrubs and vines. Mr. Dupuis has also a fine horticultural library containing many rare works.

From a little below Village des Aulnaies, and up the river about 40 miles to Montmagny, which is as far east as we went, there is within a mile or more of the St. Lawrence river many suitable locations for orchards. The soil, which is warm sandy loam, gravelly, or mixed with shale, has good natural drainage, and appears well adapted to fruit growing; yet in all this dis-

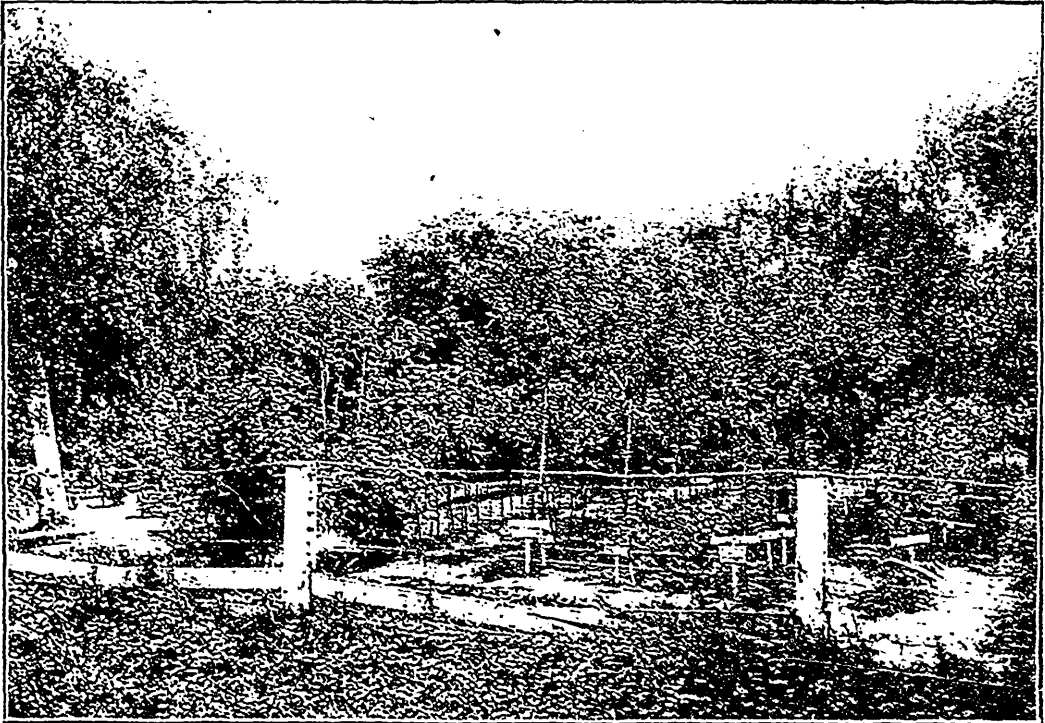


FIG. 2684. VIEW IN NURSERY OF AUG. DUPUIS, VILLAGE DES AULNAIS, QUE. Photo by F. T. Shurt

tance, with the exception of the orchards of Mr. Chapais, Mr. Dupuis, and a few others, such as that of Mr. Verreault at St. Jean, Port Joli, which we did not visit, there was nothing that could be called an orchard, although many farmers had a few trees. Plum and cherry trees are dying or dead from

black knot, and apple trees are none too thrifty, whereas in the two orchards mentioned, and no doubt in others which we did not see, black knot is practically a stranger and the trees making thrifty growth, showing what can be done in this district if there is a will to do it.

A PRINCE EDWARD ISLAND FRUIT SHOW.

THE exhibition of fruit this year at the Provincial show, Charlottetown, Prince Edward Island, was by no means the grand feature of previous years. The reason for this is found in the fact that last year was a full year here, his even more than an off year, for besides being off as to the bearing qualities of the trees, the season has been so backward as to leave the small proportion of fruit on them strikingly ungrown and immature. In the early apple class Yellow Transparent showed up splendidly, because other years it had gone out of season in late September. But Duchess of Oldenburg was not nearly so large nor well represented as one would have thought, only 34 entries being made. Alexander and its offspring, Wolf River, were a good exhibit as to number, but even this fruit was not fully grown and but poorly colored. The lists comprehended Alexander (Emperor), Baldwin, Banks, Baxter, Belle Fleur, Ben Davis, Bethel, Blenheim Pippin, Sutton's Beauty, Chenango Strawberry, Rome Beauty, Duchess, Hubbardston Fameuse, Inkerman, Golden Russet, Gravenstein, King, McIntosh Red, Mann, Nonpareil, R. I. Greening, Red Beigheimer, Rid Russet, Ribston Pippin, Stark, St. Lawrence, Wagener, Wealthy, Winter Bough, Wolf River, Yellow Transparent, with all the crabs and a number of plums, pears and grapes. Ontario, Nonsuch and

Rome Beauty failed to fill. Inkerman, one of my own origin, was only represented by one plate, and in several other sections there was but a small exhibit. It is peculiar to me how you secure a half decent show of fruit at your exhibitions in Ontario, held so early in the season. For our part, we believe that we shall have to come to the winter show of fruit for anything like practical results.

From present appearances it doesn't look as if we could grow good Nonpareils here. We can get good Spys, fair Baldwins, Russets, Manns, good Kings, Gravensteins, Ribstons, Starks, Ben Davis, Wealthys, etc. The autumn apples do well—our Alexanders and Wolf Rivers beat the world. Those we



FIG. 2685. PRIZE CLAPP'S FAVORITE.

can grow well we ought to plant extensively, and thus be correct economically, anyhow. Next year there will, if things go right, be a big crop. All that we could export this year would not load a small ship.

The pear show was not too bad for the year. Clapp's Favorite made a splendid section. We can grow this pear grandly and ought to do so extensively. E. Bayfield showed some splendid specimens and carried off the red easily. The portrait of

the young tree in full bearing, from which the prize pears were taken, is given herewith. It will be seen from it that we can get a crop of pears in an off year at least.

In the barreled fruit Senator Ferguson and John Robertson, Inkerman carried off the honors. In the collections there was some superior merit in infinite variety. The Silken Banner Sweepstake remains with

Yours truly,

A. E. BURKE.

SCHOOL YARD IMPROVEMENTS.

FLAG RAISING CEREMONY.

MR. G. R. PATTULLO, the honorary field secretary of the Canadian League, has sent out a circular in which he aims to promote a greater interest in the school properties. The following is an extract from it:

The chief objects of the League, in brief, are: To promote a higher civic spirit and a wider interest in the improvement and beautifying of our cities, towns, villages and rural districts.

The directions in which these objects may be promoted are many and varied, but I shall in this letter mention only one, namely: The improvement and beautifying of rural school properties, including the school-houses, outbuildings, and surrounding grounds. These at present are, for the most part, unattractive, bare, and in many cases, offensive in appearance.

With the hope of improving them, the Canadian League of Civic Improvement is endeavoring to stimulate a more general interest in their school properties on the part

of the Boards of Trustees and the people of the several school sections.

To aid in doing this, it has been suggested that if the parliamentary representative of each constituency were to offer as a prize a Canadian flag (British) to the rural school section that makes the greatest improvements upon its school property during the year 1903, there might be developed a keen but friendly rivalry between the different sections, and thereby great improvements effected, such as planting Boston ivy or other vines about the school buildings, the planting of trees about the grounds, and the making of one or two flower beds.

Apart from this, another good object could be accomplished, namely: The furnishing of school sections with the national flag, which each one of them should have and should fly on all appropriate occasions. The trustees would, of course, supply the flag poles and equipment, and the formal ceremony of flag raising might be an interesting and patriotic event.

POWER SPRAYING

BY

W. A. MCKINNON, B. A.
CHIEF FRUIT DIVISION, OTTAWA.

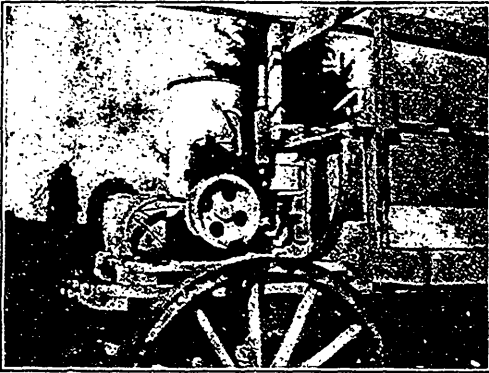


FIG. 2686. GASOLINE POWER SPRAYER USED AT INGERSOLL.

WHOEVER has watched the trend of events in the fruit growing sections of the United States must be struck with the advent of power spraying as one of the routine operations on the farm. The many difficulties which attend spraying by hand are so well known ..

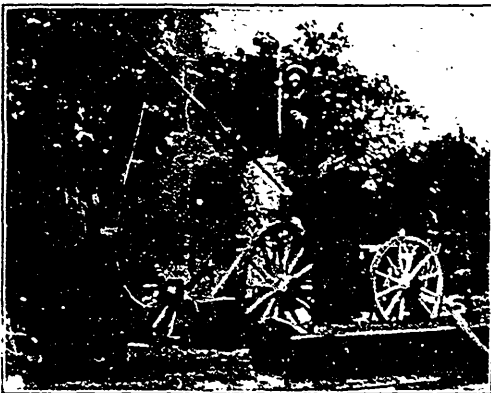


FIG. 2687. STEAM POWER SPRAYER USED AT MCKINNON'S, GRIMSBY.

the readers of the Horticulturist that they need not be enumerated. It is also well known that the great bulk of Canada's export fruit comes from small orchards where the difficulties referred to are greatest, and where the inducement to the owner to overcome them is least. With these facts in mind the Minister of Agriculture last spring authorized the carrying out of some experiments by the Fruit Division with a view to demonstrating the advantages of power spraying over the old method. These experiments were highly successful from the operators' point of view. It was found possible to cover twice the acreage in a day that



FIG. 2688. POWER SPRAYER USED ON FARM OF J. C. HARRIS, INGERSOLL, ONT.

could have been attended to with hand pumps. In some cases the difference was even more marked. These experiments, which were carried on in the neighborhood of Woodstock, and on the Island of Montreal, proved extremely successful in eliminating fungous diseases. Facts and figures

regarding the cost of the operations and the result as shown in the fruit when harvested will be furnished to the public later on when full details are at hand.

The power used in the Government demonstrations was gasoline. Other forms of power have been adopted by some of the large growers of the Niagara district. Jos. Tweddle, of Fruitland, used compressed air for spraying his orchards, and with considerable success; Vance Cline, of Grimsby, employed gasoline; while on the farm of D. J. MacKinnon & Sons steam was the power employed. The accompanying illustrations

show the steam outfit and the gasoline outfit at work.

It is strongly recommended that growers should give this matter serious consideration now, so as to be ready for operations next spring. Owners of three thousand or more trees would do well to procure a power outfit for their operations, while those whose orchards are smaller can in almost every instance combine together to secure and operate an outfit of this sort, which would effect a considerable saving of expense and secure much more effective work.

THE NORTHERN SPY.

WITHOUT doubt the Spy stands unequalled as a winter apple. Its long keeping qualities, and crisp, spicy, high flavored flesh, make it a universal favorite with consumers, either for dessert or cooking. When cooked in pies or sauce, it possesses that rich, spicy flavor that one always appreciates in a first-class cooker, and after mid-winter there is scarcely anything to equal it for dessert. It is also a splendid canner, and this is another use that many housekeepers make of this splendid apple. When the canned fruit is getting scarce toward spring, the empty cans can be filled with Spys, and when properly done there is scarcely anything that equals them as a canned fruit. This apple is always in demand in the large cities of the United States, and it has often been sold at fancy prices for dessert, when the samples were very choice, of uniform size, clean and well colored. Although of American origin, it reaches greatest perfection in the Province of Ontario, and especially in the Georgian Bay district, although it has a wide range

of adaptability. It is about the latest variety to mature; in the Georgian Bay district it does not get fully colored until near the end of October. It has the merit of clinging well to the tree, and is very little affected by wind storms. When the ground is strewn with other varieties, during the autumn gales, there are very few windfalls among the Spys.

But the tree is not without faults, and the most prominent one is the long time it takes to come into bearing, and then its liability to split in the crotches and fall apart. But these faults can be remedied by top-grafting it on some good hardy stock, and this is certainly the best way to grow the Spy. It will then come into bearing much earlier; the liability to splitting is avoided, and you will have a long-lived tree. That growers are catching on to this idea is evidenced by the large demand for Talman Sweets, to be used as stocks for top-grafting on, it being one of the best for this purpose.—*Farmers' Advocate.*



STORING SUMMER FLOWERING BULBS AND TUBERS DURING WINTER.

BY

WM. HUNT,

O. A. C., GUELPH.

TUBEROUS ROOTED BEGONIAS. As soon as the foliage has died down no more water should be given them. The tubers can be shaken out of the soil and packed in dry sand in shallow boxes and placed in a room or dry cellar or basement, where the temperature is from 40 to 50 degrees. Or the tubers can be left in the soil, if they have been grown in pots, leaving the tubers undisturbed in the soil until spring. The pot should be placed away in a dry cool place and no water be given them until March or April. Before growth commences in spring the tubers should be shaken out from the soil and started into growth in sand or sandy soil in small pots. I have had the most satisfactory results from tubers that have remained undisturbed in the pots than from those taken from the soil and packed in sand or any similar material for the winter. Whatever method is adopted, great care must be

taken not to place them where water or moisture can reach them during winter.

ACHIMENES AND GLOXINIAS.—Very few of the first mentioned of these are grown in windows, but their oddly shaped flowers and peculiar habit of growth make them doubly acceptable to those who love odd and pretty flowers that are not common. The same treatment as recommended for tuberous begonias can be given both achimenes and gloxinias during winter, with the exception that they should be stored in rather a warmer place than the begonias. A temperature of about 50 degrees will suit them very well. The soil or material the roots or tubers are in should be kept quite dry, but not too near the stove or furnace, as an intensely dry position would weaken if not destroy altogether perhaps the vitality of the tubers.

CALADIUMS.—As soon as the foliage of fancy caladiums show signs of decay less

water should be given them until the foliage has completely died down, when the leaves and stems should be cut off and the pots laid on their sides in a warm moist situation, where the atmosphere is damp. A warm corner under the greenhouse bench will suit them. Place the pots so that no water can drip on them from the plants on the bench above, and no water should be given them, as the most atmosphere will supply all they need in this respect. A very dry position does not suit fancy caladium bulbs when dormant, as they often suffer from dry rot if kept in a very hot dry place.

Bulbs of the caladium esculentum, or as it is commonly called the "elephant ear" plant, that succeeds so well in the open garden in summer time in light moist soils, is not so particular as to its winter quarters as its more fancy relative I have just mentioned. The bulbs of this variety should be dried fairly well when they are taken from the ground and then packed in dry sand in a box and the box placed in a fairly dry warm room or cellar where the temperature is never below 45 degrees, and not above 70 or 75 degrees during winter. No water should be given them until they are started into growth in pots in April or early in May.

CANNAS.—These most useful decorative plants are natives of tropical climates, so that even in winter the roots of these must not be exposed to a low temperature. Very few cellars except those that are artificially heated by a furnace are suitable for storing canna roots in. A temperature of 50 to 60 degrees suits them very well during winter. By leaving a fair amount of earth around the clump of roots when they are taken from the ground and allowing the soil to dry somewhat before storing them, canna roots can be kept successfully in almost any dwelling house, provided they are kept in a warm temperature as before mentioned and not allowed to become either too dry or too wet during winter. If the room or cellar they

are stored in is very hot and dry the roots should be covered with dry earth or sand entirely, but if the position is only fairly moist the soil adhering to the roots will be sufficient to keep the fleshy tubers or roots from drying out too severely. Nothing approaching a freezing temperature agrees with cannas even when dormant, so that care should be taken to keep them at least in a temperature above 45 degrees. I have known very heavy losses to occur in the storing of canna roots during winter from their having been kept in a continuously low temperature during winter, although the temperature had never reached actually to freezing point. The fleshy rhizome like roots looked quite fresh when taken out to start them in spring, but the growth germs of the tubers had lost their vitality, a very large percentage not growing at all, and many of those that did, made only weakly sickly growth until well on in the summer.

DAHLIAS.—There is nothing better for storing dahlia roots in during winter than sand or sandy soil. Dahlia roots can be kept in a lower temperature than cannas. A fairly moist cellar (not wet) and a temperature of about 40 to 45 degrees will suit dahlia roots very well. Care must be taken not to put dahlia roots too near the furnace, as an excessively dry moisture will often prove fatal to them. The plan of drying the roots and stringing them up to the joists in the cellar as is often—in fact frequently—practised in England is not as a rule a success here, where the atmosphere is drier and where more artificial heat is used than in the old land in heating dwelling houses. In very damp cellars or basements, however, dahlia roots might possibly winter through by being hung to the joists or rafters, but dry earth or sand is about as good material to keep them in as can be found. An occasional dip of low temperature, short of actual freezing, will not hurt dahlia roots, but a temperature of about 40 degrees suits them

best. Dahlia roots will winter very well where beet roots or mangold wurzel will winter in good condition.

GLADIOLI.—The bulbs or corms of these beautiful showy flowers that have become such popular favorites with all flower lovers, are perhaps the easiest of all the summer flowering bulbs to winter through, if only ordinary care be given them. The roots of these should be dug up before severe frosts, or as soon as the tops have become browned slightly from frost. The tops should not be cut off when the roots are dug up, but should be left on just as they are dug until after the corms or roots have been dried fairly well, when they can be cut off about four or five inches above the bulb or corm. A dry cool room or shed is a good place to dry off gladioli roots in. They should be spread out thinly, tops and all, on the board floor or on benches or in shallow boxes for two or three weeks, when the tops can be cut off as before mentioned and the corms or bulbs can be put into shallow boxes and placed in a fairly dry room in a temperature of about 40 or 50 degrees, where they can be left until spring. If the room where they are kept is very hot and dry the corms should be covered with dry sand, or dry sawdust or charcoal, as an excessively dry temperature will

weaken the vitality of the corm and sometimes prevent it from starting into growth again at all. A very damp position must also be avoided, as this will induce mildew and possibly rot. I have frequently wintered gladioli roots very successfully by tying them together by the tops and hanging them to the joists in a fairly warm moist cellar but have had the best success with them by packing them in shallow boxes in dry sand and placing them in a fairly dry warm room or basement. An upstairs room or attic in a house where a furnace or steam boiler is used for heating purposes is often too dry to keep gladioli roots successfully, but in a house or room that is not over heated they can usually be kept without any very great care or attention.

In conclusion I would say that in wintering over any of these roots or bulbs I have mentioned, care should be taken to avoid extremes, whether of heat or cold, dryness or moisture. Try and give them as nearly as possible the natural conditions they receive when dormant in their native haunts, and avoid intensifying these conditions too severely, as is often done at the risk of losing partially, or altogether perhaps, a valuable collection of summer flowering roots.

FLOWER AND PLANT LORE

BY EDWARD TYRRELL, TORONTO.

CYCLAMEN PERSICUM, white, with a bright claret purple blotch at base, is the finest of the species and the parent of all other varieties cultivated in pots. It is a native of Greece, Palestine, and other parts of Syria, and was introduced into England in the middle of the eighteenth century. I read with pleasure the notes on the cyclamen by Mr. Wm. Barron, of Orillia, encouraging those who have

not already done so to try and grow these beautiful flowers, for as he says, "they respond with such a generous profusion of bloom to moderate care and cultivation."

I had just been reading Dr. Hugh MacMillan's book on the "Poetry of Plants" (although there is not any of what is generally known as poetry in it), and his description of the cyclamen as he saw it growing in its native country is so beautiful that I

thought your readers would appreciate some extracts. They are rather longer than usual, but will repay for reading if you can spare the time. Dr. MacMillan says: "The cyclamen is the earliest of the flowers of Palestine. It is in the Sacred Land what the snowdrop is in our own country. Its pale petals, tinged with a hectic red, which are turned back in a way different from other flowers, remind one of an eager runner with his hair streaming behind in the wind, and his face flushed with the exertion he has been making, who has just reached the goal and won the prize. First in the floral race of the year, the cyclamen is crowned with a special beauty. It does not seem at all a wild flower akin to those weeds that are trodden hopelessly under foot, or cast out of field or vineyard. It is carefully nurtured by nature under the blue sky of God's own land as in a conservatory."

"The cyclamen brings back in imagination the days when heaven came down to earth and breathed its fragrance over these holy fields. It looks like a prophet flower with its ears bent back to hear the mystic voices of the past, and especially the voice of Him who spake as never man spake, and said, "Consider the lilies how they grow." Year after year the cyclamen grows in the clefts of the rocks and on the slopes of the hills. Its cluster of round leaves, with mysterious markings upon them like some unknown cypher writing, cling to the barest spots, clothing their nakedness, and making the wilderness and the solitary places to be glad.

"Shall I ever forget the mystic afternoon when I first gathered the cyclamen in Palestine? It was in a field beside the road that winds round the base of the hill on top of which is built the village of Latrun, the traditional birthplace of the Penitent Thief. We encamped on this spot all night as our first resting place between Jaffa and Jerusalem. The green field on which our tents were pitched was well watered by a little

brook whose musical murmur was distinctly heard in the universal stillness. It was covered with myriads of scarlet anemones and white cyclamens which almost hid the bush grass and made most gorgeous patterns like those of an Indian robe. And when the moon stood still over the wonderful scene, as it did in the days of Joshua over the valley of Ajalon, near at hand the anemones lost their scarlet hue, and darkened down with the grass among which they grew into a mass of shadows, while the blossoms of the cyclamen gleamed with a ghostly white radiance in the sympathetic light. The dinner table that night was resplendent with a bouquet such as never again adorned it in our camping experience, and a link of association with this lovely flower was formed in my mind which always vividly recalls the haunted scene and makes it "a joy forever."

"After this I frequently saw the cyclamen in the Holy Land, but the place where it struck me most was on that "green hill far away without a city wall," the mound outside the Damascus gate of Jerusalem, which is supposed to be the true site of Calvary, and as I gazed on the vivid red circle that stained its snowy petals I thought not of the Virgin Mary to whom the flower used to be dedicated, nor of the "Bleeding Nun" which the flower used to be called, but solely of the sacred blood of the crucified Redeemer shed on that spot. I saw it flourishing in great abundance in different spots along the saddest path ever trodden by man, by which Jesus ascended from Galilee to Jerusalem, and I felt sure in my own mind that he greeted none with a more tender smile than this delicately formed blossom.

"The cross and the sepulchre have vanished, but the garden remains; the shadow of the cross rests upon these cyclamens, and the hope of the resurrection rises up anew with them out of their winter grave, consecrating them as God's heralds, that speaks to us of a world won by the great victory of

the cross and the sepulchre where there shall be no more death and where the sunlight is eternal.

"The religion of Jesus has exorcised the baneful superstition which gathered round this lovely flower, and made it an object of dread as capable of causing personal injury to maid or matron who happened to step over it, so much so, indeed, that Gerarde, in his famous Herbal, tells us when he had cyclamens growing in his garden he stuck a fence of sticks around them and laid others

crosswise over them lest any woman should touch them and be hurt."

Shirley Hibberd says it is quite a common event to see cyclamen persicum with fifty to one hundred flowers, and we once saw a plant that must have had at least five hundred blossoms. It was presented at a meeting of the floral committee of the Royal Horticultural Society by Mr. Wiggins, on the 12th of February, 1884. The plant was at least seven years old, with a corm nearly as large as a baby's head.

MIGNONETTTE MACHET, WHITE PEARL, THE WHITE MACHET.

BY this demonstration the well known firm, Pape & Bergmann, Quedlinburg, Germany, sets forth a very remarkable novelty, which forms indeed a magnificent counterpiece to those varieties, Rubin and Goliath (the red machet), introduced by the same growers several years ago.

The exhibit of this novelty is that peculiar to the machet class, viz., vigorous and compact also very ramifying and of rich bloom. The blossom stems, erect and firm, bear long very thick and nicely obtused blossom panicles, towering elegantly above the quite dark green slightly undulated foliage, such as ought to be the case with a genuine machet. With a mignonette the color of the blossoms is of a remarkably pure white, among which now and then appear single red anthers, rendering more striking and showy still this novelty, these two colors together forming a very good and pleasant contrast with each other.

Mignonette machet (White Pearl) is as appropriate for pot flower as for growth in open ground, affords remarkable enrichment to the material for bouquets, flower glasses, etc., a white machet certainly forming a beautiful and striking alteration among the other varieties known, so this novelty will obtain a lasting and prominent

situation in the flower line. Combined with Machet Rubin, be it in beds or in bouquets, it will afford an excellent effect, these two varieties being so well adapted the one for the other. Not yet quite constant.



FIG 2689. MIGNONETTE MACHET.



The Canadian Horticulturist

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

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

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

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

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

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

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

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

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

CORRECTIONS.

THE ORILLIA FRUIT EXHIBIT.—A correction. On page 422 Mr. Race frankly admits the "superiority of the Spy, Baldwin and Greening." This should read the *inferiority* of those varieties; at the end of the paragraph on the second column, instead of "as far as possible *education*," read *educative*; and at the bottom of the page, instead of "the tree is said to be a good *grader*," read a good *grower*.

BRUCE COUNTY.—On page 402 of October number, instead of A Visit to Grey County, read A Visit to Bruce County.

APPLES 1.

THE Fruit Division, Ottawa, has several times called attention to the scarcity of fruit in Europe this season, and the consequent good prices which

were likely to rule there for first-class Canadian fruit. In reporting on a cargo of 165 barrels of Canadian apples recently landed at Bristol in such a condition that the juice was leaking through the bottom of the cars before leaving the dock, Mr. H. J. Goff, Inspector of the Department of Agriculture at that port, confirms the opinion frequently expressed by Chief McKinnon, of the Fruit Division. Mr. Goff says: "I feel confident that if our shippers are as particular as they should be, shipping only first-class fruit, properly packed and put up, this season is bound to prove one of high market prices, as there is practically no fruit in England."

FRUIT, GOOD AND BAD.

Mr. John Driscoll, Inspector at London, reports that the S. S. Evangeline discharged

about 6,000 barrels of Nova Scotia apples on September 22nd in splendid condition. Although landed in good condition, some of the soft varieties went off very rapidly. The trade makes some objections to receiving varieties such as Astrachans, as they claim that these injure the reputation of Canadian apples. This emphasizes the fact that fall varieties should be picked early and shipped in boxes rather than barrels if satisfactory returns are to be expected.

Mr. Driscoll also reports the arrival on the S. S. Iona of 1424 barrels of apples and 46 boxes of pears. The apples were of many varieties, and arrived in satisfactory condition, but the pears were very inferior, and both consignees would prefer not to receive such shipments.

In his bulletin on the "Export Pear Trade," which may be had free of charge on application to Mr. MacKinnon, of the department, at Ottawa, Mr. MacKinnon has summarized as follows: "The exporter of pears must never lose sight of the fact that in the British markets he has to compete with the best fruits in the world; that the French exporters have attained almost to perfection in their system of grading and packing, that the Californian exporters place upon the market annually thousands of cases filled with practically perfect fruit, of larger size and excellent appearance; and that, therefore, only the most rigid exclusive grading will result in the selection of such Canadian pears as will win a place in the esteem of the public in competition with the shipments already familiar to them. One

further fact is of the importance, namely, that pears are sold individually or by the dozen, after passing through the hands of the importer and wholesaler; that each individual pear which comes from Canada is scrutinized first by the retailer, before being placed on show, and then by the consumer when it is purchased. The presence of a few pears in unsatisfactory condition reduces the retailer's profit, and as a consequence renders him less anxious to repeat orders for fruit from the same source. The Canadian exporter should therefore, 1. Grade carefully so as to have only one size in a package, and to exclude rigidly all under-sized or defective fruits. 2. Pack carefully in uniform packages plainly marked with the name and address of the shipper, the variety and grade of the fruit, and the word 'Canada' always occupying a prominent position."

FRUIT DAMAGED IN LOADING.

Fruit Inspector P. J. Carey, writing of his observations at the port of Montreal, reports to the Fruit Division that shippers make a great mistake in holding off shipping until the last moment, with the result that often the half or more of the entire shipment of handled, even from the cars, after 8 o'clock the last night of loading. When this is the case it is impossible to handle otherwise than roughly, consequently the fruit is often damaged more by the handling the last night loading on the ship than it is the rest of the week.

Question Drawer

CUTTING BACK PEACH TREES.

SIR.—When should peach trees be pruned or cut back.

JOHN THOMPSON, Cowal, Elgin Co., Ont.

The usual time for pruning the peach tree is in spring, just before the growth starts.

This is the best time if the vigor of the tree is the chief consideration. If, however, the object is to thin the fruit for the current year and develop fruit buds for the year following, the cutting back may be done in June, when the young fruit has set.

BERTRAM'S SEEDLING APPLE.

SIR,—I send you four seedlings for your opinion as to their quality. This tree, of which the samples are the second years' bearing, came up in our shop yard, and it seems to be a vigorous and healthy tree and good bearer. I shall be pleased to have your opinion any time.

JOHN BERTRAM, SR., Dundas.

A fine appearing apple, of about the size of Duchess, and of about the same season. The skin is a pale straw color, suffused with stripes, splashes and tints of bright red. Had we not already the Duchess, we would commend this apple for further trial.

A GOOD WASH FOR FRUIT TREES.

SIR,—What is the composition of a good wash for fruit trees, and when should it be applied?

JOHN THOMPSON, Cowal, Ont.

For cleansing the bark of fruit trees of fungi, and oyster shell bark louse lye washes are excellent. The concentrated lye or potash may be bought at grocery stores. This comes in pound cans at 10 cents each, or three for a quarter. A can of this powder is dissolved in an ordinary large pailful of water, and the solution applied to the trunks of the young trees the latter part of April or up to the 15th of May, by means of an old broom or a swab. The solution is very caustic and will damage the hands or any clothing on which it falls. Great care must be taken, therefore, in handling it. We believe, however, that it is very desirable treatment for all sorts of young trees, and even for older ones which have been neglected. In cases where the trunks are attacked by the oyster-shell bark louse, this treatment is especially valuable. Soda is cheaper than potash and ought to answer equally well.

PEAR GROWING IN P. E. I.

SIR.—Mr. Bayfield, president of our P. E. I. Fruit Growers' Association has a photo of a pear tree in full bearing, with the crop of Clapp's Favorite which took the prize at our maritime fair. At his request I sent it you. What do you think of this variety for cultivation in Prince Edward

Island in the light of your experience in the export of pears to Great Britain.

A. E. BOOKE, Alberton, P. E. I.

The Clapp's Favorite, if gathered before it begins to ripen at the core, is a fine export pear, and carries a little better than the Bartlett. The only difficulty is to get a proper temperature on ship board, and until we can have a guarantee of about 33 degrees F. for such fruit, it is better to grow Duchess, Anjou, Bosc or some such variety which will carry with apples.

FRUITS FOR NAME.

SIR,—I send you two pears and four apples for name. I received October number of your journal and quite agree with your remarks about fewer varieties. I have too many varieties in my own orchard and many orchards about are in the same condition.

ALEX. ARMSTRONG, Barrie.

Pear No. 1 is Idaho, and No. 2 Duchess. Apple No. 4 resembles Phoenix, and No. 5 resembles Princess Louise, but is not ripe enough to judge of its flavor, which should resemble that of Fameuse.

GRADE MARKS.

SIR,—I ship my apples north in sugar barrels, with canvas tops, and I would like to know if the Fruit Marks Act requires them to be branded.

A. ARMSTRONG, Barrie.

The Act requires the grade to be marked on all closed packages. We should judge that barrels with canvas tops, which are easily removable for inspection, are not closed packages, and that the only requirement in such case would be that the faced or shown end be a fair representation of the contents.

BRIGHT'S SEEDLING PEACH.

SIR.—I send you samples of a seedling peach tree which came up in my garden eight or nine years ago. Last year we had ten baskets of fruit from it, and this year seven or eight. This peach is fine preserved. Please give me your opinion of it.

Oct. 3rd, 1903. CHAS. E. BRIGHT, Brampton.

This is a fine seedling, size about $2\frac{1}{2}$ inches in diameter. Color of skin creamy white, with a bright red cheek; flesh white, tender, very juicy, sweet, rich and delicious; season, beginning of October.

Yellow flesh peaches of the Crawford type have been so far most sought after in Canadian markets, on account no doubt of the popularity of the Early Crawford, and we

know of no white flesh peach of the same season, more worthy of cultivation, than this seedling. For home uses, such as the delicious luxury of "peaches and cream," we doubt if any peach can surpass this one. It is altogether too tender to be cultivated as a market peach, consequently it would never be planted on a large scale.

ANNUAL MEETING OF THE ONTARIO FRUIT GROWERS' ASSOCIATION, TO BE HELD IN THE TOWN HALL, LEAMINGTON, ONT., NOVEMBER 24, 25, 26, 1903.

SPECIAL FEATURES.

1. Peaches.
2. Commercial Side of Fruit Growing.
3. Experiment Stations.

PROGRAMME.

Tuesday afternoon, Nov. 24, 2 p. m.

DIRECTORS' MEETING.

At this session will be presented a written report by each director of the work done in his district during the year. The secretary will present to the Association a record of the year's work throughout the Province, and business matters pertaining to the management of the Association will be discussed.

Tuesday evening, Nov. 24, 8 p. m.

PUBLIC MEETING.

Chairman—President W. H. Bunting.

Addresses of Welcome—Lewis Wigle, mayor of Leamington; John A. Auld, M.P. P., Amherstburg; C. W. Cady, President South Essex Horticultural Society; J. L. Hilborn, Leamington.

Reply to address of welcome—W. H. Rickard, M.P.P., Newcastle.

President's address—W. H. Bunting, St. Catharines.

Address—Hon. John Dryden, Minister of Agriculture.

Address—M. K. Cowan, M. P., Windsor.

Address—"Nature Study," by Dr. Muldrew, O. A. C., Guelph.

Address—"Co-operative Fruit Packing and Shipping," by W. H. Owens, Catawba Island, Ohio.

Music by Leamington orchestra.

Wednesday morning, Nov. 25, 9 a. m.

BUSINESS MEETING.

9.00—9.30—Arranging of fruit display from experiment stations.

9.30—9.45—Reading of correspondence and appointing of committees.

COMMERCIAL SESSION.

9.45—10.30—Report of Transportation Committee by G. C. Caston, Craighurst. Discussion led by W. H. Bunting, St. Catharines.

10.30—11.15—"Fruit Packages," by A. McNeill, Ottawa. Discussion led by E. D. Smith, Winona.

11.15—12.00—"Marketing," by commission merchants.

Wednesday afternoon, Nov. 25, 2 p. m.

ORCHARD FRUITS.

2.00—3.00—"Peach Growing in Michigan," by Prof. L. R. Taft, Agricultural Col-

lege, Michigan. Discussion led by J. L. Hilborn, Leamington.

3.00—3.30—"A Season's Observations in the Peach Orchards of Georgia," by A. B. Cutting, Guelph.

3.30—4.30—"Hardy Fruits for Northern Districts," by W. T. Macoun, Ottawa. Discussion led by A. D. Harkness, Irena.

4.30—5.00—"Power Spraying," by W. A. MacKinnon, Chief Fruit Division, Ottawa.

5.00—5.30—"Insects and Fungous Diseases of 1903," by Dr. Jas. Fletcher, Ottawa.

Wednesday evening, Nov. 25, 8 p. m.

PUBLIC MEETING.

Chairman—W. H. Bunting.

Introductory—J. Elliott, Principal Leamington High School.

Address—Dr. Jas. Mills, O.A.C., Guelph.

Address—"Civic Improvement," by Geo. R. Patullo, Woodstock, secretary of the Canadian Association for Civic Improvement.

Address—"Pear or Twig Blight," by Prof. F. C. Harrison, O.A.C., Guelph.

Address—"A Visit to the Old World," by L. Woolverton, Grimsby.

Thursday morning, Nov. 26, 9 a. m.

9.00—9.15—Report of Nominating Committee.

9.15—9.30—Appointing Standing Committees.

WORK OF FRUIT EXPERIMENT STATIONS.

Chairman—Dr. James Mills.

9.30—9.45—"New Fruits," by Prof. H. L. Hutt, O.A.C., Guelph. Discussion led by Prof. W. T. Macoun, Ottawa.

9.45—10.00—Secretary's report. L. Woolverton, Grimsby.

10.00—10.30—"Grapes," by Murray Pettit, Grimsby.

10.30—11.00—"Blackberries and Currants," by A. W. Peart, Burlington.

11.00—11.30—"Raspberries and Commercial Apples," by A. R. Sherrington, Walkerton.

11.30—12.00—"Apples and Cherries," by C. C. Caston, Craighurst.

Thursday afternoon, Nov. 26, 1.30 p. m.

1.30—2.00—"Plums," by J. G. Mitchell, Thornbury.

2.00—2.30—"Pears," by R. L. Huggard, Whitby.

2.30—3.00—"Apples," by W. H. Dempsey, Trenton.

3.00—3.30—"Apples," by Harold Jones, Maitland.

3.30—4.00—"Strawberries," by E. B. Stevenson, Jordan.

4.00—4.30—"Peaches," by W. W. Hilborn, Lemington.

Unfinished business.

HORTICULTURAL SOCIETIES.

Thursday morning, Nov. 26, 9.30 a. m.

Chairman—T. H. Race, Mitchell.

9.30—9.45—Introduction by the chairman.

9.45—10.30—"Planning and Planting the House Grounds," by W. Hunt, O. A. C., Guelph.

10.30—11.15—"The Arrangement of Flowers at Our Fall Fairs," by W. Gamage, London.

11.15—12.00—"The Work of Our Horticultural Societies in Our Towns," by A. K. Goodman, Cayuga.

Thursday afternoon, Nov. 26, 1.30 p. m.

1.30—2.15—"The Coleus and Other Foliage Plants," by J. S. Scarff, Woodstock.

2.15—3.00—"The Gladiolus," by R. B. Whyte, Ottawa.

3.00—3.45—"Winter Window Gardening," by Dr. Jas. Fletcher, Ottawa.

3.45—4.30—Address by H. L. Hutt, O. A. C., Guelph.

HOTEL ACCOMMODATION.

The Wigle House, Leamington, will be the directors' headquarters during the convention. Rates, \$1.50 per day. The Huffman House, Deming House, and Ryall Hotel are also prepared to accommodate visitors at \$1.00 per day each.

RAILROAD RATES.

All visitors to the convention will please secure single tickets and standard certificates from their respective station agents. These, when signed by the secretary and presented to the station agent at Leamington, will entitle the holder to a reduced return rate. Where two roads are used, certificates should be procured from each.

OUR BOOK TABLE.

RURAL SCHOOL AGRICULTURE, by W. M. Hays, Professor of Agriculture, University of Minnesota, St. Anthony, Park, Minnesota; McGill-Warner Co., printers, St. Paul, Minn.

This is a unique book, containing two hundred most interesting exercises for practical class demonstrations in nature study, agriculture and household economics. It should be a great aid to teachers who wish to interest and instruct their pupils along these lines.

SYSTEMATIC POMOLOGY.—Treating of the description nomenclature and classification of fruits, by F. A. Waugh, Orange-Judd Co., New York, 1903.

This is a work of great interest to students of Pomology. It deals in excellent fashion with description, nomenclature and classification of fruit. Such a work should go far to reduce to uniformity the work of students of horticulture, especially in their studies of Pomology. No one making the least pretensions in such lines should be without it.



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