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NOVEMBER, 1890.

The
Canadian
Horticulturist.

THE JOURNAL DEVOTED TO FRUITS, FLOWERS, AND VEGETABLES

EDITED BY L. WOOLVERTON, M.A.

PUBLISHED BY THE FRUIT GROWERS ASSOCIATION OF ONTARIO.

Published at Toronto and Grimsby. * Office Address—Grimsby, Ont.

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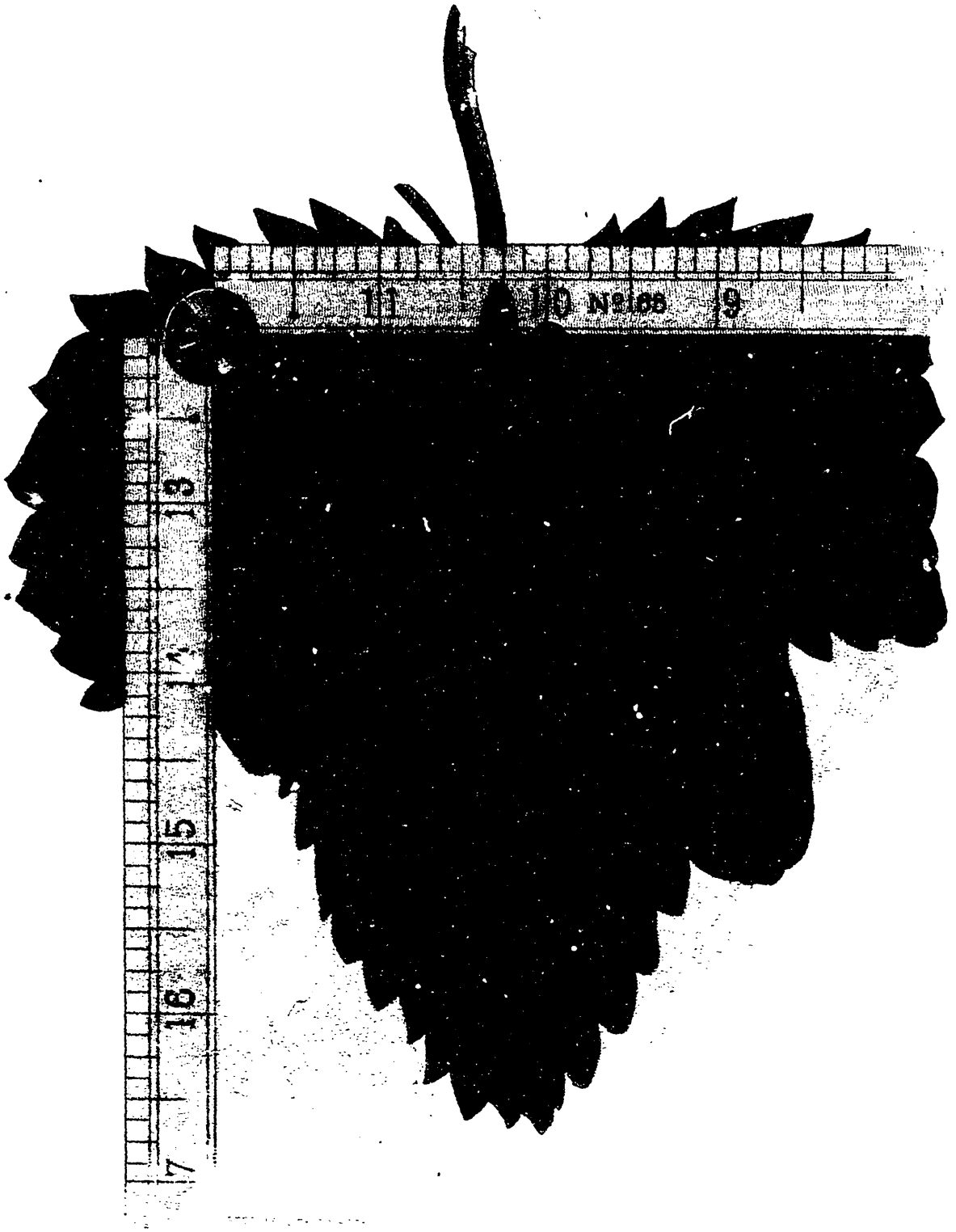
In the CANADIAN HORTICULTURIST, published by the Fruit Growers' Association of Ontario, at \$1.00 a year; average circulation, 3,000 copies per month, among all the leading Fruit Growers and Gardeners of Ontario, and distributed to 1,000 post offices.

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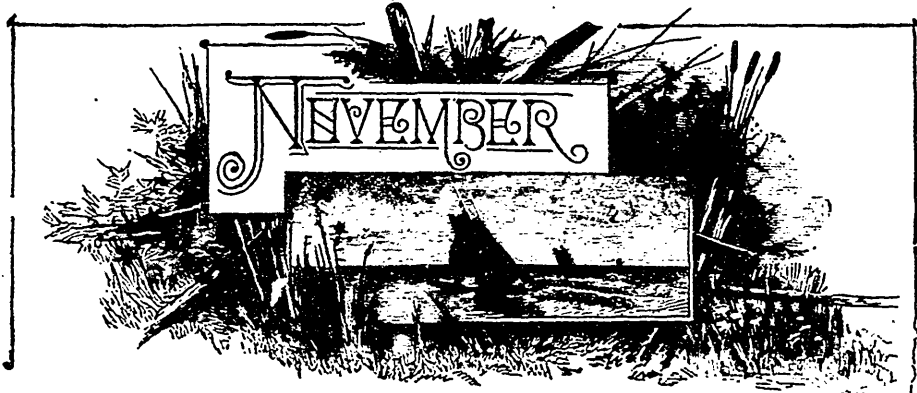
PARKER EARLE.

THE
Canadian Horticulturist.

VOL. XIII.

1890.

NO. II.



HINTS FOR NOVEMBER.

WINTER APPLES.



NOW that the apple crop is mostly gathered, the shortness of the crop is proved to be even greater than was anticipated. Maplehurst orchard is no doubt a fair representation of the majority of orchards in Ontario and in Western New York; and in it, where there should be a crop of several thousand barrels, we have only harvested one hundred; and these largely seconds.

There are a few favored sections of our province, and some parts of Michigan also, where there is a fair crop, but these have been speedily bought up by speculators, and will be held for the high prices which cannot help being the outcome of a general failure. In Montreal, the price of winter apples is firm at \$3.50 to \$4 per barrel, while in New York city it ranges from \$4 to \$4.50 for fancy fruit. The old country market too is getting excited and as much as \$8 per barrel has been paid in Glasgow for choice Kings, and \$5 for choice Baldwins.

From all this it is evident that our readers who have apples to sell may safely count upon getting good round figures for them. We do not, however, advise holding too long, for in the month of November competition usually runs about as high as at any other time. Buyers are then laying in

their stock, and each one knows about what he needs to carry him through, Neither do we advise every one to try exporting apples. There is so much to be learned about packing in proper shape for the export trade that many fail in this particular.

But whatever is done with them, it is all-important to grade all apples with respect to both size and quality. The high prices cannot be expected for fruit that is thrown into the barrels helter skelter; such will only bring the price of a second grade, while one first-class barrel will bring the price of two or three of mixed quality. In a year like this, it will no doubt pay to ship seconds to market, but they should always be so marked, and sold for what they are.

It shows a lack of enterprise on the part of our Canadian fruit growers that so little fruit is evaporated at home. By such means, when the crop is large, all second class stock could be evaporated and a good price got for it; while the market would be relieved of that which causes the gluts. There is a market for even the cores and skins, under the name of chopped apples, which are dried and sold for jelly making. Just now the price of evaporated apples in New York city, is from 13 to 15 cts. a pound, while dried chopped apples are worth from 4 to 4½ cents.

STORING FRUIT.

Some of our readers may wish to store fruit either for higher prices or for their own use. To them we would say, that the chief requisite to ensure success, is to keep the fruit at a low temperature. There will be little trouble in keeping apples, pears or grapes, if a temperature can be maintained that rises little above the freezing point. In this case it will matter little whether apples are packed in closed or open barrels, unless perhaps with such varieties as the Golden Russet, which have a tendency to shrivel if at all exposed to dry air. Some writers advise bins in the cellar for apples, or drawers and shelves.



FIG. 63.—DRAWERS FOR APPLES.

Such plans may do very well for the farmer who only keeps a few apples for family use and to feed stock; but the large orchardist, who stores hundreds of barrels, does not want to empty out on shelves or in bins; he wants them in the barrels, which can be removed and emptied out on a packing table when the time for shipping arrives. In our next report will be found an article by President Lyon, of Michigan, on fruit storage, which will be interesting in this connection.

For home uses, the plan given by Mr. J. J. Thomas is very good, because it gives one an opportunity of examining his fruit from time to time, and using it as it ripens. He recommends trays, 1½ by 2

feet and about $3\frac{1}{2}$ inches deep, in which to put away choice apples for home use. Such trays will hold just one layer of fruit, and can be piled in vertical piles in the cellar, each succeeding tray being a cover for the one beneath it, as shown in the illustration. The same kind of trays would no doubt be good for keeping grapes for winter use. This is referred to by our Quebec friend, Mr. Pattison, in his article in this number on "Keeping Grapes." Some have also tried packing apples in dry sand, or in oats, and seem to have had wonderful success.

PACKAGES FOR GRAPES.

A great many ingenious devices have been invented for packing grapes attractively for market. The trouble with the twenty and ten-pound baskets so commonly used in the Niagara district is that the fruit on the top is usually too much mashed by the time it reaches the market to sell to advantage. The new protection cover is a great advantage, and does away with this difficulty to a certain extent, but not altogether; for it is impossible to lay the top bunches on evenly. Some handy package is needed which allows the packing to be done from the bottom, so that the upper

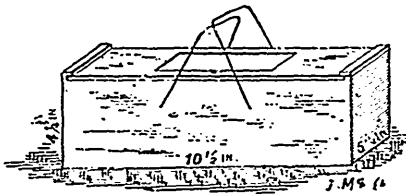


FIG. 69.—WOODEN BOX USED IN MARKETING GRAPES.

surface will present a nice fresh and even appearance. A great amount of money is paid nowadays by some people for appearance, and it is only fair that, in an honest way, we fruit growers should have a share in the spoil. Some such a box is described by "Traveller," in *Popular Gardening* and is here shown in fig. 69.

It is a light white, wooden box, having a slide bottom from which to pack, and a little slide in the top, on which was pasted a neatly printed label, showing the kind of grape and the name of the shipper. These boxes may be crated together and so easily handled by the express companies.

CUTTINGS.

This is a good time for the amateur fruit grower to increase his stock of currant and gooseberry bushes at a very slight expense. Cuttings may be made from the young wood of six or eight inches in length, and buried in a dry sandy place, until planting time in the spring, when they will nearly all grow if properly set out. In burying them, care should be taken to place earth and cuttings in alternate layers. Few seem to realize how cheaply such plants may be propagated, for, if they did, less money would be paid to nurserymen for what can be as well grown at home.

FERTILIZING APPLE ORCHARDS.

Dr. Reynolds writes in the *American Agriculturist* showing the necessity of thoroughly enriching the ground about apple trees in order to grow fine fruit. He points out that the common method of placing manure on the surface of unploughed orchard ground, was of little benefit to the trees, because the roots of the grass absorbed most of the nutriment, and very little of it ever reached the roots of the trees. The only plan, without ploughing, would be to so thoroughly mulch the whole surface of the ground that the grass would be destroyed, and then the fertilizers could have some effect upon the apple trees. Of course, no one would think of seeding down a young orchard, it is therefore only an orchard that has reached bearing age that is under consideration. The great difficulty, in our opinion, in carrying out the doctor's plan of mulching, is to find material enough, unless for a very small orchard. When an orchard covers ten acres, or fifty acres of ground, it would be simply out of the question to provide mulch sufficient to keep down the grass. In such cases, the only possible plan we can see, to keep the orchard as it should be kept, is by frequent cultivation. At Maplehurst, where we have about one hundred acres of orchard to care for, we plough up in parts, working up one portion for two or three years, until the trees have reached a vigorous state, as a result of both cultivation and manure; and then seed it down to clover for two or three years, while another portion is undergoing the same treatment.

The question of fertilizers for the garden and orchard is one of the most perplexing that faces the ambitious fruit grower. Stable manure is perhaps the best of all for general application, but what farmer ever has any to spare for his apple orchard? He never has enough for his field crops, upon which so much of his labor is spent, how then could he spare any for his orchard, which shifts for itself. In most parts of the country, wood ashes may be had for a very little cost, and it is by this means alone that we have been able, so far, to solve this question. We find that by giving the trees which are being worked up, one half to a bushel each year during their turn of cultivation, the result will be evident for several years thereafter, and the fruit will be larger, of better quality and of a better color.

 THE PARKER EARLE STRAWBERRY.

OUR colored plate this month represents one of the latest competitors for the coveted honor of being heralded as the "coming strawberry." It is named in honor of the president of the Illinois Horticultural Society, Mr. Parker Earle, of Cobden, Illinois.

This strawberry is thus described by Mr. M. Crawford, the great Ohio strawberry cultivator:—"Color, bright glossy red; texture, firm and quality good. The trusses are large and spreading, the blossoms bisexual, and the plants dark green, strong, stocky and perfectly healthy." He adds, "What I have seen of the Parker Earle corroborates my former opinion that it is an acquisition."

PLUM LEAF OR SHOT-HOLE FUNGUS.

DURING this last season much curiosity was awakened by the peculiar appearance of many of the leaves of our plum and cherry trees. They were full of small round holes, for which there was no apparent cause. We looked in vain to find an insect, to which the damage might be attributed; but the mystery is explained by the following article by Prof. Scribner, on the fungus *Septoria Cerasina*, in *Orchard and Garden*. This fungus is very generally distributed throughout the States east of the Mississippi. It attacks the foliage, and although not regarded as a serious

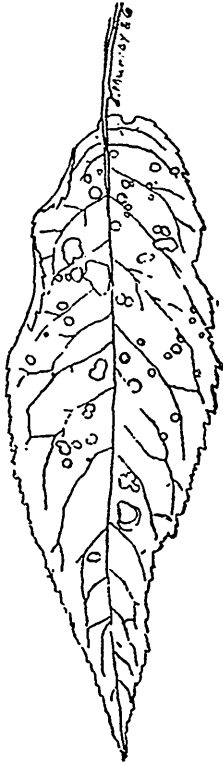


FIG 70.—LEAF-SPOT DISEASE OF THE CHERRY. A SPOTTED AND DISCOLORED LEAF.

pest, it often inflicts considerable injury both to the cherry and plum, by interfering with the proper functions of the leaves, or by causing these to drop prematurely, sometimes as early as the first of August. The leaves attacked show, at first, scattered here and there over the surface, dark purple spots, visible on both sides, varying from 1-24 to 1-8 of an inch in diameter. After a brief period it will be noticed that the tissue covered by some of these spots has become dead and brown in color. Such spots usually have their margins clearly defined, and are most often circular in outline. Sometimes this dead tissue drops out from the leaf, leaving a clear cut, round hole, giving the leaf the appearance of having been perforated by shot holes, hence the name sometimes given to the disease, mentioned above.

If we examine one of the brown spots under a lens, we will usually detect upon the under surface one to several very minute black points. These points are the fruits of the fungus—little capsules, within which the spores of the fungus are produced in great abundance. They, the spores, are very slender, many times longer than broad, and quite transparent. They are usually divided by one or more cross-walls into two or more cells. These spores serve to propagate the fungus; each cell in every spore being capable of producing a new

growth of the parasite. It is thought that the fungus continues its life and completes its development upon the same leaves which it first attacks, after they are fallen to the ground. The spores produced on the old leaves in the spring, serve to propagate the fungus during the new growth of the parts which it infests.

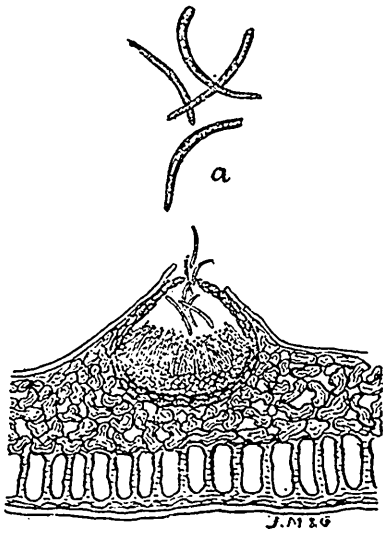


FIG 71.—MAGNIFIED SECTION OF CHERRY LEAF SHOWING FUNGUS CAUSING LEAF-SPOT DISEASE; *a*, FOUR SPORES MORE HIGHLY MAGNIFIED.

All infested leaves are more or less discolored with the purple or brown spots mentioned above, or they may turn before falling to a clear yellow color. In figure 70 is shown a leaf of the cherry attacked by this fungus, exhibiting a spotted appearance, a portion of which has become discolored through the action of the parasite upon the leaf tissue. Figure 71 represents a highly magnified section through the leaf including one of the spore capsules; and at *a*, above, are shown some of the spores still more highly magnified.

We do not know that any direct attempts have been made to prevent the disease here described. The parasite is one which buries itself in the leaf-tissues, and, consequently, whatever treatment is given it must be *preventive*. If the trees are sprayed with the sulphate of copper compounds for the purpose of preventing plum rot on the monilia of fruit, it will be well to observe what effect these applications have upon the development of the leaf-spot fungus.

FRUIT STATISTICS OF THE DOMINION.

MR BUCKLE, says in his History of Civilization, * "Statistics as a branch of knowledge, which, though still in its infancy, has already thrown more light on the study of human nature than all the sciences put together." Herewith is a diagram of the fruit statistics of the Dominion for the past nine years, showing the exports and imports of apples from 1881 to 1889 inclusive. It will be seen that though our exports fluctuate somewhat, they are steadily on the increase. It is believed when suitable varieties are grown, the export trade is simply unlimited. The causes of fluctuation proceeds principally from the failure of the crop, or

*Page 24, Vol 2.

APPLES.

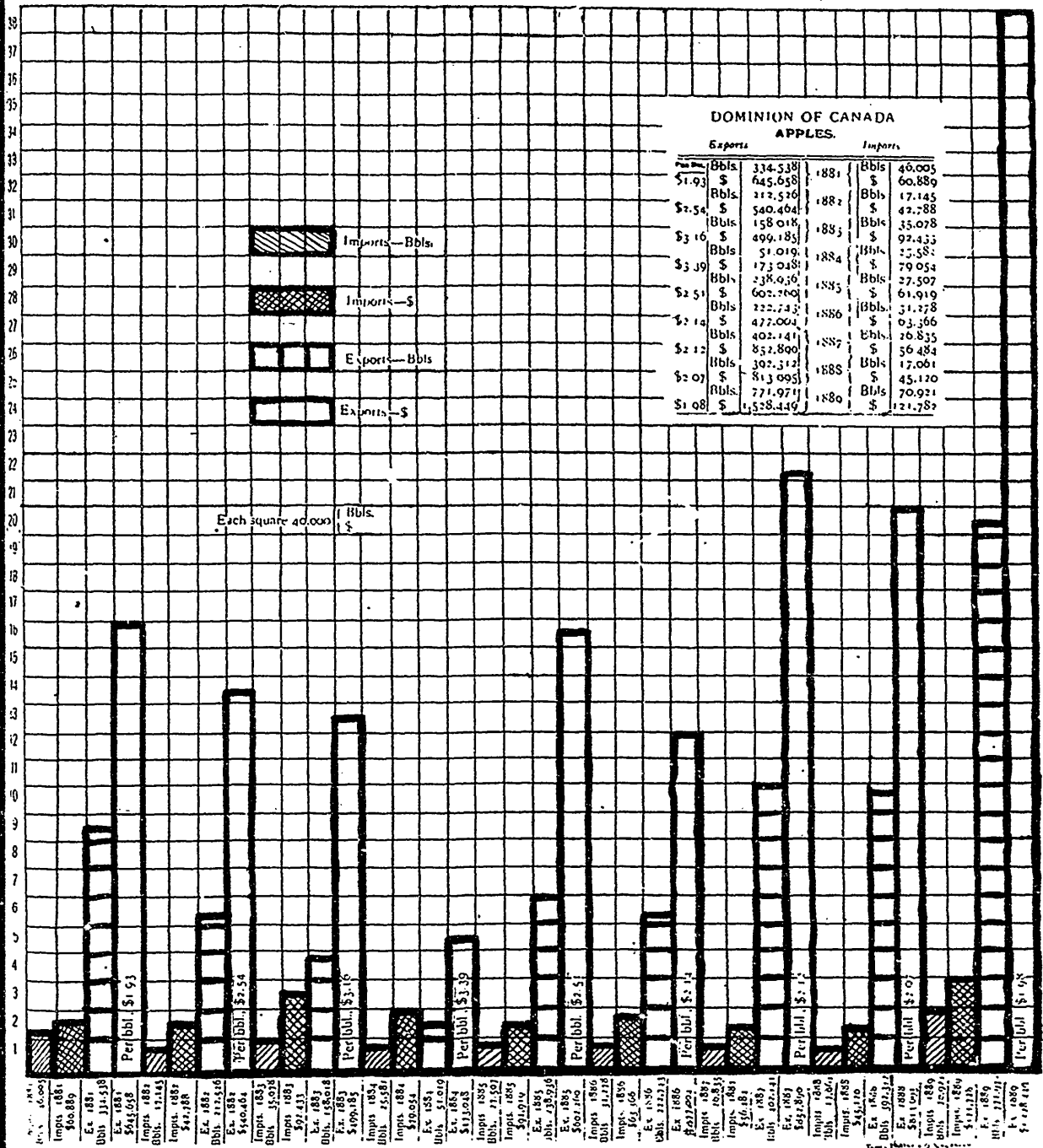


FIG. 72.—DIAGRAM SHOWING QUANTITIES OF APPLES EXPORTED AND IMPORTED FOR THE YEARS 1881 TO 1889 INCLUSIVE.

the unsuitable means of transportation. The latter subject was so well ventilated at the Dominion Convention in the city of Ottawa, last February, that it is probable new methods, such as cold air chambers, will be employed to render the shipments more secure from destruction in transit, and the delivery of fruit in better condition when landed, more of a certainty. The appliances for handling packages en route, the size and shape of them are factors in the export trade. The apple business is now assuming such proportions that it is becoming worth while for individual ship owners to see that proper storage is given to freight of this nature, because there are now so many competing lines of steamers, that consignors have an opportunity of selecting the one which will give the best storage advantages.

It was my intention to show: First, the exports and imports of the various provinces of the Dominion; second, the countries shipped to, and third, the value of fruits shipped, but found: First, the methods adopted by the Customs Department for keeping the export returns did not provide the necessary information, the exports being entered in the customs returns at the port where the goods are shipped, the port of Montreal being the largest shipping port for the British market. The Province of Quebec shows a larger export trade than the Province of Ontario, though the fruit exported is almost entirely grown in the latter province. Second, large quantities of apples are shipped to Europe from Ontario, *via* New York. These are entered by the customs as exported to the United States, and third, the values as given by the customs are those placed on the fruit by the shippers, and do not in any way give the selling price in Europe, which is the true value gained by the Dominion. So that all we can really glean, from the present mode of keeping our statistics, is the bare fact that so many barrels are imported, and so many exported, within each fiscal year. Mr. Geo. Johnston, the eminent statistician of the Dominion, whose office is attached to the Department of Agriculture, and to whom I am much indebted for the figures given, has called attention to the above facts in the press, but it is presumed the expense that would be entailed on a more definite method of keeping the exports and imports, has deterred the Government from making more exact returns.

It will be noticed by the diagram that the exports of 1889 were within a fraction of double those of 1888, and that ever since the Colonial Exhibition, held in London, England, our fruit trade has steadily advanced. The poor apple crop of the present year will, no doubt, do much to diminish our exports, but when circumstances are more favorable to the producers, the export trade will assume larger proportions than ever before.

It would be well if planters would look more to the foreign than to the home market when setting out orchards. Our local trade may be easily over supplied, but if all the land in Canada, suitable for apple culture, was devoted to one large orchard, producing suitable varieties for the foreign

trade, we could not supply more than the demand for really good fruit. The talk about over-production is simply ridiculous. Certainly there will be a surplus of undesirable varieties and of badly grown specimens, for which other means will have to be employed for working them up, such as canning, drying, making jellies, vinegar, cider, etc. Much of the refuse can be profitably used in feeding cattle, sheep and pigs, but a first-class article of fresh fruit will always find a ready and remunerative sale in the markets of the Old World. Especially will this be the case when faster transport is had and better conditions en route are placed at the disposal of the shipper.

Ottawa.

P. E. BUCKE.

THE GRIMSBY FRUIT SECTION—II.

CONTINUING our trip eastward from Maplehurst Farm toward the Methodist camping ground, we pass through the quiet and picturesque little village of Grimsby, less than a mile from the former place. There is nothing specially striking or worthy of note in or about the village itself, except it be the large shipping trade that is done there during the fruit season. The short drive from the village to the camp is a very interesting one, and it seemed to me to be the centre of the raspberry section. The Cuthbert was just in its season, and on both sides of the road acres of it were besieged with busy pickers, sending off, I suppose, thousands of baskets daily. It seemed strange to one, whose great difficulty is to devise a fence high enough and strong enough to protect his few square rods of Cuthberts from pilferers, to see acres of them growing along the road side with no fence of any kind between them and the public highway. There are no way-side fences required in the Grimsby section, as no farm stock are allowed to run at large, and this lends an additional attractiveness to the whole mountain valley.

We reached the camp ground in due time, and found it to be very nicely situated in the heart of this much favored section, overlooking the lake, and the hand of man has done much to add to its natural attractions. But to me it lacked the attractiveness of the fruit farm, the vineyard, and the garden that surrounded it on every side, except the north. It was an "off day" at the park, they said, and although there were two thousand people within the ground, so we were told, it appeared as if they had all gone "off" to sleep, except the hotel clerk who was wide enough awake to take fifty cents apiece for a very moderate dinner. The air and aspect of idleness and suspended activities that prevailed within the park were in too great a contrast with the activities of industrial life on every hand without to be long enjoyed, nay-endured, by an enthusiast in horticulture, and in less than two hours we were again among the orchards and vineyards on our re-

turn trip. Hundreds of people go to the park annually to "rest" from their idleness at home, but the industrious fruit farmer toils on heedless of their near presence. To my mind and taste his enjoyment is greater than theirs, and if he rightly enjoys his calling, his reward is certainly greater, for the fruit of his industry is a vastly greater blessing to humanity.

It would be profitless to speculate on the different formation periods that contribute to the peculiarities of the Grimsby Valley, rendering it so peculiarly adapted to vineyard and general fruit culture. The table land is there, then the sudden and tremendous depression of hundreds of feet forming the valley, so called, stretching away to the lake at the north. At the foot of this abrupt ridge, commonly called the mountain, the soil is a deep red clay loam,* its color indicating the presence of a high percentage of iron. This soil is peculiarly adapted to grape growing and its fertility seems almost inexhaustible, as its depth indicates the washings of iron from the rocky crevices, and vegetable debris from the heights above, through incalculable ages. As was said of the Nile Valley, all that this soil requires is to be stirred with the hand of industry, and it will laugh in sweetness and bring forth fruit abundantly. I noticed that many farmers were extending their vineyards, owing, for the most part, to the failure, during the past few years, of peach culture in the locality. Mr. M. Pettit will in a year or two more have over fifty acres in bearing vine and proportionately less of peach and apple orchard. Just why the peach tree should be so destructively attacked by the yellows in this particular section, while it enjoys an entire freedom from the disease in the Niagara district, no one seems to be able yet to explain. But such is the fact. This one drawback, however, is likely to be made up for in a few years by the increased production of grapes. This year, while there is scarcely a peach in the whole Grimsby section, the grape crop is an unusually abundant one. Of the different varieties grown in the Grimsby vineyards and their comparative profitableness, I am not qualified to speak; nor am I of the fruits of the orchards which abound so plentifully on every hand. But of the pleasure awaiting the visitor to the Grimsby fruit section from what he may see and learn, and of the hospitality accorded him by the dwellers in the favored valley, I can speak with the authority of one who has had personal experience.

Mitchell, Ont.

T. H. RACE.

ROTATION OF STRAWBERRY CROP.

SIR,—In your journal for September I have read the communication of Mr. Nichol, of Cataraqui, in which he writes under the question: "Can Strawberries be continually grown on the same land with profit?" After dealing fairly with the question, Mr. Nichol brings in, very strongly,

* The prevailing soil in this fruit district is a deep, rich sandy loam.—Ed.

evidence to prove that "the second crop of apple trees cannot be grown successfully on the same ground."

Here is my experience with the latter. The soil I have to deal with is a marl with a clay sub soil. I cleared away the old orchard, the trees were large, one in particular was three feet in diameter, spreading its limbs from one side to the other—fifty feet. I cleared the roots so as not to be touched by the plough. The manure I have used is barnyard and ashes. Thirteen years last spring I planted the ground with Duchess of Oldenburg and Wagener apple trees. The Wageners have not done well. They give me full crops of fine fruit, but the trees are unhealthy and are dying out. This variety does not succeed in any soil in this locality. The Duchess has done well, and presents an appearance in growth, quality and quantity of fruit not to be surpassed. This year from fifty-three trees we picked and shipped 146 barrels of No 1 fruit. We sold to a house in Winnipeg, at \$3.00 per barrel here. Sixty Duchess were planted twenty feet apart each way. Three trees had no fruit this year, and four had been replaced with other varieties.

If Ontario can produce a finer orchard, growth of wood, quality and quantity of fruit, I would like to see it. Many of the limbs and two of the trees were broken down with fruit.

Rednersville.

W. R. DEMPSEY.

HON. JOHN DRYDEN, THE PRESENT MINISTER OF AGRICULTURE.

THROUGH the courtesy of the *Farmers' Advocate*, we are enabled to give our readers an excellent engraving of our new Minister of Agriculture, the Hon. John Dryden, of Brooklin, Ont. Since our Association exists under the patronage of the Department of Agriculture, it is of especial interest to us to know who is at the head of it, and whether he is a gentleman interested in the progress of our work. We have reason to believe that the interests of the gardener and of the fruit grower will not be less carefully fostered by the present minister than under his able predecessor, the Hon. Charles Drury.

Mr. John Dryden was born in the year 1840, in the township of Whitby, and received his education at the High School of the town of the same name. He was a very bright student, and completed his studies with great credit.

The same ambition to excel which characterized him as a student seems to have marked his course as a practical farmer, for his path has been one of constant progress and acknowledged success. At first renting his father's farm of two hundred and thirty acres, and paying the rent annually as long as his

father lived, he afterwards added to this about as much more land, and managed the whole in the most enthusiastic manner. Every detail came under his own immediate observation, and nothing was allowed to be done in slipshod style.

Although the raising of pedigreed stock has been the chief aim in Mr. Dryden's farming, and that upon which his reputation as a farmer has more



FIG. 73.—HON JOHN DRYDEN.

especially gone out in the world, yet he is by no means behind hand in fruit culture, having several fine orchards, which are a large source of profit.

Step by step, he has been coming forward into public life, until he has reached his present position, a position of power and influence, which we are confident will be used for the benefit of his fellow farmers and fellow fruit-growers.

PERFECTLY HARDY.

IT has long been a common practice with some nurserymen and dealers to send out new trees and plants designated as perfectly hardy. There seems to be a gross misunderstanding as to what is really meant by the designation. It is very often misleading; I have frequently been deceived by it, and I know of thousands of others who have been deceived in the same way.

Peach trees cannot be grown north of Toronto, therefore they cannot be said to be hardy. The so called Russian Apricots are said to be hardy; but they are not, because they cannot endure very hard frost.

The fact that a tree is grown and may have originated in Russia does not by any means prove that it is perfectly hardy. Peaches and many varieties of apricots thrive well on the north shore of the Caspian Sea, which could not be grown on the Baltic; and even in that part of Russia trees are grown which would not endure the climate of the northern part of Ontario.

In Russia, as well as in China, there is grown an endless variety of apricots, which are not hardier than peaches. In Transalpine Dauria, in the empire of Russia, there is found growing a double flowering kind of apricot, which is said to be hardier than any of the fruit-bearing kinds; but along with it is found growing on the same mountains the Rhododendron Dauricum. Now, we know quite well that none of the large flowering Rhododendrons can endure intense frost; so, to suppose that all the native trees and shrubs of that part of Russia are hardy enough for the northern part of Ontario would be a great mistake, and trees which will not endure that climate should not be designated as perfectly hardy.

The Russian Mulberry is not perfectly hardy, yet thousands of farmers have purchased it, supposing it to be so because it is grown in Russia, and I daresay many of the same dupes will readily invest in the next Russian novelty—for, just as Mr. Dempsey says, some farmers seem to like to be humbugged.

Cataraqui, Ont.

D. NICOL.

A HANDY FORCING HOUSE.

THE annexed illustration, reduced from *Home and Farm*, represents a fire hotbed or forcing house, described as follows: The sashes are 3x8 feet, the beds built with 1½-inch oak, three feet deep on the higher side, and 30 inches deep on the lower side, giving a six-inch slope to the south. Oak posts were used every eight feet. Then a scantling was nailed eighteen inches from the top on each side to hold up the floor. The

flue for conveying the heat is below the floor. Two scantlings run the entire length of the bed with props under them to hold them up on each side of the flue. The floor must always be built strong or it will break down. It holds ten inches of earth and here the seeds are planted. Wood is used for fuel, and but little fire is needed. Build the furnace on a level with the ground or a little lower, excavating a place five feet deep in which to stand and fix the fire. The flue has a rise of eighteen inches in the first twenty feet; after this fifteen

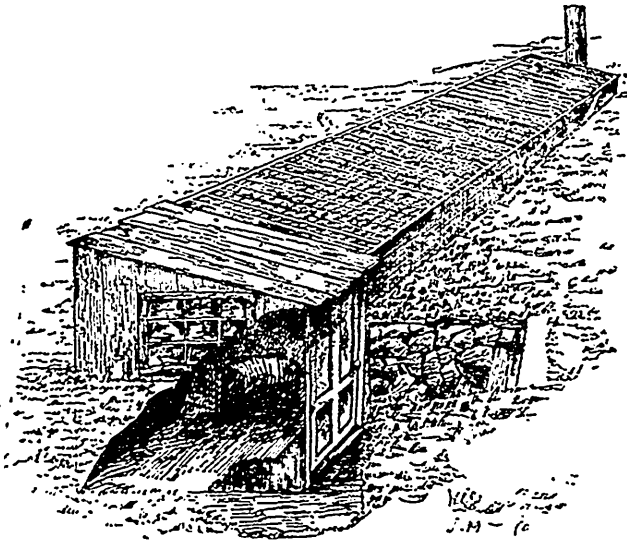


FIG. 7.—A HANDY FORCING HOUSE.

to eighteen inches to the end of the bed is sufficient. Two boards seven inches wide, and two nine inches wide, all twelve feet long will answer for the chimney. To make the furnace, use three grate bars, each 5x40 inches, and raise them ten inches from the ground on bricks. These are enclosed with firebrick, fire-clay tiles cover the top and fire-clay should be used for mortar. The flue for the first ten feet must be made of fire brick. Common brick will answer the balance of the way. A board roof should be placed over the furnace excavation, and sheet iron should be nailed above the furnace door to keep it from taking fire. Four air holes on a side allow the air from the space beneath the floor to rise under the glass. If it should get too warm, boards could be laid over the apertures. Do not burn coal. The soot will choke the flue and coal gas is sometimes generated, which is fatal to the plants. A vessel made of galvanized iron and placed on the furnace generates moisture, and makes it more desirable for plant growing.

THE APPLE HARVEST.

AFTER growing a fine crop of apples, careful gathering and assorting are indispensable to success in selling. An open shed with northern exposure is desirable. The apples should be picked into padded baskets with swinging bales, so that the basket can be let down to the

bottom of the barrels and turned carefully over. The barrels, after being filled, should be taken on a platform wagon to the shed and sorted, being marked according to quality. The proper time to pack depends upon the locality. Fall pippins picked early keep fairly well until February. The Hubbardstons should be picked by September 20; Baldwins and Russets come in last. This fruit, well grown and carefully handled in cool cellars or cold storage, can be depended upon for fair prices. Two hundred and forty barrels per acre sold at \$1.50 per barrel, net \$300, which is not an extravagant estimate for a good orchard. Pick and pack the fruit absolutely from one end to the other in each barrel. Do this each year and your name will be a guarantee, your reputation widely known and your produce will obtain ready sale at fancy prices with an ever-increasing demand.—*P. M. Augur, Middlesex County, Vt.*

FALL SET FRUITS.

EARLY spring is the best time for transplanting strawberries, but raspberries, blackberries, currants and gooseberries can just as well be set in the fall after the leaves have dropped. Strawberry rows should be $3\frac{1}{2}$ ft. apart, blackberries 7 to 8 ft. with plants $2\frac{1}{2}$ ft. in the row. Cuthberts and all tall-growing raspberries should be $7\frac{1}{2}$ ft. and Brandywine and small growing varieties 6 ft. between the rows and $2\frac{1}{2}$ ft. in the rows. Use a hand hoe only where a cultivator cannot be run. In strawberries be sure you go through the rows the same way each time, narrowing your cultivation as the plants spread. Ground bone and unleached ashes have proved to be the best kind of fertilizer with me. Raspberries require the least fertilizer. With all small fruits the land should be well manured with yard manure the year before setting out. Ground bone which has been mixed with twice its bulk of ashes, moistened and covered for a few weeks with dry loam or plaster, is especially acceptable to strawberries, raspberries and currants. As a farm crop I prefer the matted row system of growing strawberries, but for the garden or for a fancy trade the hill system is preferable.

They should be cultivated once in two weeks the first season after setting, and it is best to plough them under and raise some other crop after the second season. Set out a bed every year to keep up a good supply. A field of Cuthbert raspberries set on good soil six years ago, and have since had good cultivation between the rows until picking time, are growing better each year, although they have not been fertilized. Some Brandywines, set seven years ago, gave me as fine berries as they ever did last season. A field well cultivated, fertilized and weeded will remain in good condition for years. Blackberries require more frequent fertilizing and

should be set on moist ground. Many writers recommed setting on high gravelly soil, but this advice has caused many to go out of the business as unprofitable. Three years ago I sold from a little over one-third of an acre of Wachusett Thornless blackberries \$325 worth, besides using and canning quite a quantity.—*G. W. Goddard, Hillsboro County, N. H.*

GRAPES.

KEEPING GRAPES DURING WINTER.

THE cultivation of out-door grapes for domestic use has become so general that the subject of keeping them for winter use, and the best method, may profitably claim attention. The past season I selected from over one hundred varieties in my grounds, forty of those in general cultivation, and a few very recent introductions, to test their keeping qualities. It is the generally received opinion that the thick-skinned native seedlings are the only keepers. This is correct so far as regards preserving flavor, but several hybrids of foreign blood are the best keepers known. The varieties intended to be laid up for winter use should be those only which adhere well to the stem, and are not inclined to shrivel soon after removal from the vine. They should be allowed to remain on the vine as long as they are safe from frost; a clear dry day is necessary for picking; careful handling and shallow baskets, are important. The room in which they are to be kept for awhile should be well ventilated, and the fruit laid out in single layers on tables or in baskets, where the air freely circulates, closing the windows at nights and in damp weather. In about ten days the stems will be dried out sufficiently to prevent moulding after they are laid away. When danger from this is over, and the stems resemble those of raisins, the time for packing has arrived. I have used baskets for permanent packing, but much prefer shallow trays or boxes of uniform size to be placed one above the other so that each box covers the one below, the uppermost only needing a cover. Until very cold weather the boxes can be piled so as to allow the remaining moisture to escape through a crevice about the width of a knife blade. Before packing, each bunch should be examined, and all injured, cracked and rotten berries removed with suitable scissors; if two layers are packed in a box, a sheet of paper should intervene; the boxes must be kept in a dry, cool room, or passage, at an even temperature. If the thermometer goes much below freezing point, a blanket or newspaper can be thrown over them, to be removed in mild weather. Looking them over once in the winter and removing defective berries will suffice, the poorest keepers being placed accessible. Under this treatment the best keepers will be in good eatable order as late as February, after which they deteriorate.—*W. M. Pattison, of Clarenceville, P. Q., in American Agriculturist.*

UNFERMENTED GRAPE JUICE THAT WILL KEEP.

The grapes are picked when they are well ripened, and the juice expressed and bottled as soon as possible afterward.

The bottles are filled brimful, and placed up to their necks in the vats of hot water within ten degrees of the boiling point. When the must is as hot as the water, the cork is forced into the bottle, expelling a portion of the liquid. If the least measure of air is left between the cork and the liquid, the oxygen contained in the air will set the saccharine matter in the wine in motion, and fermentation will ensue.

When the cork is forced into the bottle the liquid is in a state of expansion from the heat. As it cools, it contracts, leaving a vacancy between the cork and the liquid. But the vacancy must not be an atmospheric chamber. The cork must, of course, be thoroughly air-tight. If fermentation does set in, it may be driven off by re-heating the wine. The bottles are then laid on their sides in a cool place, and the organic foreign substances must be allowed to settle, so that the liquid may become clear.

The settling may occupy whatever period the manufacturer chooses. Sufficient time should, however, be given. But, it can lie six months or a year without damage. At the end of the settling period it is decanted into other bottles, the sediment being left behind. These bottles must be brimful, and are again set into vats of hot water heated up to the same degree as at first, and corked in precisely the same manner, using sealing wax to exclude the air. The wine is then left to cool in the ordinary way, and must be kept in a cool place.

It is now ready for use, and will keep as long as it is kept free from contact with the atmosphere. It forms a delightful beverage, entirely free from alcohol, and is valuable for invalids and children.—*From address of E. Hulse before the Victorian Vegetable Commission of Australia.*

THE JUICE OF THE GRAPE.

Those who wish to make wine must wait until the grapes are fully ripe, for the quality and body of wine is in proportion to the quantity of sugar the grapes contain, and the saccharine matter is in proportion to the maturity and perfection of the fruit. A grape to make good, sweet, or fermented wine, should weigh on a must scale 80°, which is equal to two pounds of granulated sugar to the gallon. If it does not come up to this standard it is not fit for wine, and is but little better than crab apple cider. The principal secret in making either fermented or sweet wine, is to have grapes of high quality. Then mash and press them, and for fermented wine put the must in clean casks and let it work just until it is over; then bung up tight to exclude the air, put it in a good cellar and let it alone, except to make a small vent hole, which should be opened once in a while to let such gas as may accumulate escape.

To make sweet wine, as soon as it is pressed out add five grains of salicylic acid to each gallon of must; let it stand in a vessel about fifteen hours to become clear, then draw the clear must off and put it on the fire. As soon as it boils bottle or can it in air-tight jars, and it will keep for years in perfection, just as fresh as when first put up. The salicylic acid should be rubbed up into paste with some of the must, or cut with alcohol before putting it into the must, or it will float on the top. This acid is not put in to keep it, but for the purpose of settling and making it clear. It may be boiled and skimmed, but it will never become so clear and good as with the acid, neither is it as quickly and readily done. This is our method and one that we have used for years, and found every way satisfactory.—*Orchard and Garden.*

BURDOCK CUTTERS.

THE accompanying illustrations are from the *Country Gentleman*, showing two instruments that are useful in the work of destroying this very noxious weed. The one at the top of the illustration is made by the use of an old spade handle and a piece of an old wagon spring.

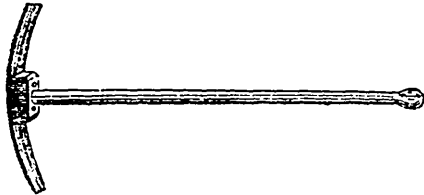
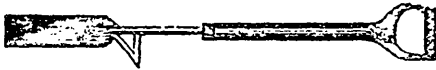


FIG. 74.—BURDOCK CUTTERS.

The blade of the other instrument, shown at the bottom, is a wide piece of an old wagon spring, twenty inches in length, sharpened at both ends. A block of hard wood, seven inches long, is bolted to the centre of the blade, to hold the wooden handle forty inches in length. With this latter instrument, it is claimed that burdocks can be removed at a rapid rate.

The writer has been fighting burdocks during the last summer with a tool that has worked well. It was simply a solid iron bar about one inch square and about four feet long. This was rounded at the upper end for a handle, and flattened at the bottom into a chisel shaped blade about two inches wide. With this a man could destroy a large number of weeds in a day, and very effectively; for with a single blow they may be cut off an inch or two below the surface of the ground, so that there will be no chance of their throwing up new shoots. In our opinion there is no weed so hateful about dwellings or in pastures, as the burdock. It clings to one's clothing, it becomes matted in the manes of the horses, and in the tails of the dogs and cows, and is only removed with the greatest difficulty. We place this and the Canada thistle in the same category, and make it a special point to allow neither one to perfect its seeds anywhere about the premises.

New ◦ ◦ ◦ Little ◦ Known ◦ Fruits

THE WILLIAMS STRAWBERRY.—Mr. John Little thinks this berry no improvement on Bubach, Eureka or Mrs. Cleveland, either in size or productiveness. We would like it tested by growers in different localities and on various soils. Growers about Brantford seem to prize it very highly, indeed above any other variety, and the samples shown us would lead us to do the same.

SEEDLING APPLE from W.W. Higginson, Hawkesbury, Ont. Description: Large, round, conical, color bright red, splashed and dotted, calyx half open, basin shallow, stem long thin, cavity deep smooth, core open, flesh yellowish white, fine grained, flavor sub-acid, highly aromatic. An early autumn dessert apple, worthy of trial. Note by Mr. Higginson: "Originated on the farm of Henry Walker, Vankleek Hill, Ont. The tree is of iron-clad hardiness, a good bearer, comes in after Duchess and will keep for a month, a pleasant eating and cooking apple."—JOHN CRAIG, *Central Experimental Farm, Ottawa.*

SEEDLING GRAPES.—Two samples of seedling grapes have been sent into this office; one from Chas. H. Biggar, Niagara Falls S., a dark red grape, of medium size, and very close bunch; the other from Frank Hunt, St. Thomas, which was so crushed in the mail that it was impossible to judge of its value. He writes: "I send you a seedling found growing in Judge Hughes' garden—a heavy bearer, probably a seedling of Agawam." So far, we see nothing in either of these grapes to make them more valuable than other varieties already existing, of the same season, as Lindley, Brighton, etc., and unless a variety has some peculiar excellence beyond those already in cultivation, it would be better not to have them brought before the public.

IRETON'S SEEDLING APPLE.—Mr. W. H. Wylie, of Carleton Place, sends us a rather handsome fall apple, which might be desirable were it not for other more beautiful apples of its season, as the Golden White, the Alexander, the Larue and others. Mr. Wylie says:—

SIR,—I send you by mail a sample seedling apple, grown by Mr. John Ireton, of Lanark township. It is a medium sized apple out of about a dozen he gave me. I have had it about a month. It looks like a good fall apple, and is handsome fruit. The tree is young, and was grown from seed by Mr. Ireton.

The apple may be thus described:—Size, above medium; form, slightly conical, obscurely ribbed; color, light green, striped and splashed with bright red; stem, short and stout, set in a deep, regular cavity; calyx closed, in an irregular basin; flesh, white, tender, juicy; quality, fair for cooking. Season, October.

THE HALIBURTON APPLE.—

SIR,—We mail you herewith two apples, samples of an alleged seedling grown in the Haliburton district and which in that section goes under the name of the "Haliburton." Can you inform us if it is simply some old variety to which a new name has been attached? What is your idea of the apples as to quality, etc.? The tree is represented as very hardy and bears heavily every year.—CAVERS BROS, *Galt, Ont.*

This is no doubt a purely local apple, and appears to have some value on account of its beauty of appearance. Prof. Saunders gives us the following description of it:—

Haliburton, grown north of Peterboro, size medium or under, $2\frac{1}{8} \times 2\frac{1}{8}$, form oblate, color pale yellow, nearly obscured on the side exposed to the sun by carmine red, marked with splashes and streaks of a deeper hue. Stalk short and moderately stout, set in a small but rather deep cavity, calyx open with a very shallow smooth basin. Flesh fine grained, creamy white and more or less tinged with pink, rather soft in texture, austere and with an acid taste, with very little flavor, a pretty apple but of poor quality. Ripe latter end of September.

A GREEN FAMEUSE.—Mr. R. W. Shepherd, of Montreal, writes as follows regarding this seedling:—

SIR,—I am sending you to-day, by parcel post, a box containing two specimens of a Fameuse seedling apple. The original tree is growing on our farm at Como, Que.,—must be about 25 or 30 years old—and grew up where some old Fameuse trees formerly stood, but which succumbed to the severe winter which killed off almost all the Fameuse orchards in this province some thirty years ago. The tree is apparently quite hardy. Fruit is (as you will see) larger than Fameuse, but not nearly so much colored, in fact only odd specimens have any blush at all. This apple has been propagated by me to a very limited extent under the name of *Green Fameuse*. When you taste it, you will find the true Fameuse texture of flesh and flavor. I think the variety is worth propagating, being a heavy bearer, good size, excellent quality, and very little, if any, given to spotting. The Green Fameuse having a tougher skin than its parent, carries better and keeps longer. I shall be pleased to send you scions of the variety if you think well of it.—R. W. SHEPHERD, JR., *Montreal, Oct. 3, 1890.*

We have received the samples in good order, and can vouch for the truth of the statements above made with regard to this apple. The only fault we see in it is its color, which, of course, is a serious one in an apple that is chiefly wanted for dessert purposes.

A WEEPING APPLE TREE.—Mr. Robert Moore, of Zurich, Ont., sends to the Ontario Agricultural College, a photograph of a weeping apple tree, which may possibly take the fancy of some people as an ornamental. We cannot, however, see the advantage of a weeping tree of any kind except for special situations because it is the very hardest form of trees to work into a lawn with other trees; and a tree must have something specially commendable to be desirable as a single specimen in a prominent location. An apple tree would scarcely have enough beauty of foliage to be employed in this way, and therefore we see little in this novelty, except that it is a curiosity. Mr. Moore writes as follows: "I mail you a photograph of weeping apple tree which I raised from seed. It grew among a lot of stocks for grafting purposes. This one showed from the first that it was inclined to be a weeper,

and while still young, bore apples on limbs turned down, near the ground. I send you a sample of the fruit which I would like described." The apple is a small, yellowish skinned, fall apple, of fairly good flavor, but inclined to spot. As a fruit, therefore, it does not merit a full description, having no particular value.

RENAUD'S SEEDLING APPLE :—

SIR,—I send you by to-day's mail four specimen apples, which, I trust, wil' reach you safely in due time. The tree from which they were gathered to-day is a chance seedling on the farm of my neighbor, Mrs. Bte. Renaud, and is probably about eighteen or twenty years old, vigorous and healthy, but not large. Six bushels of fruit were picked to-day, and I should say fully equal to half that quantity had lately fallen, owing to high winds. The fruit is at its best after the month of March, and keeps till July. The tree is a heavy bearer three years out of four. The two large specimens sent are from the original tree, the two small ones are from a top graft on Hyslop crab. The difference in size is remarkable.—ROBERT HAMILTON, *Grenville, P.Q.*

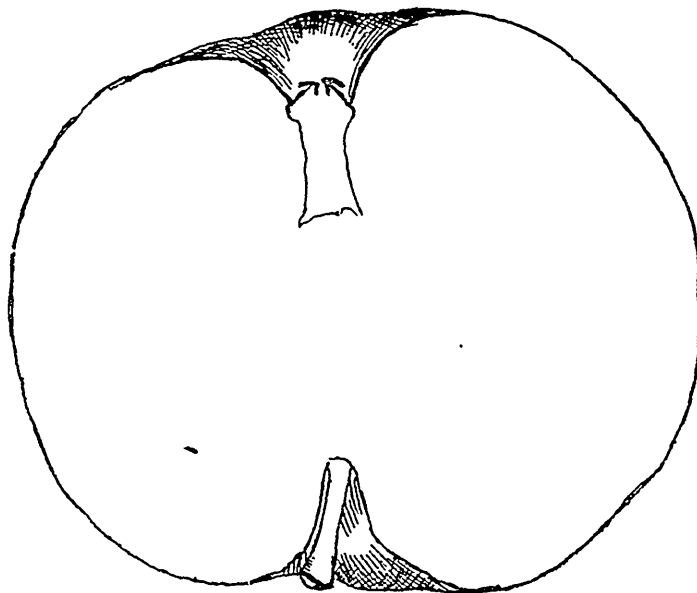


FIG. 75.—SECTION OF RENAUD'S SEEDLING.

This apple well merits description on account of four points of excellence, viz., size, beauty, productiveness and hardiness. Grenville is about north latitude $45\frac{1}{2}$, or on a line with the Parry Sound District, and while we have for this parallel hardy summer and fall apples, we have scarcely any hardy winter apples worth recommending, except the Wealthy, which is not a long keeper.

The difference between the sample grown on the crab stock and that grown on the ordinary apple stock is most marked the former being only about $2\frac{1}{2}$ inches in diameter and the latter about $3\frac{1}{2}$ inches, thus showing plainly how great the influence is of the stock upon the scion with respect to size. The color of the crab-grown samples is much deeper red than that of the other. The apple may be described as follows :—Size, large ; form, roundish, with three or four

more or less prominent ribs ; skin, green, almost completely striped and splashed with bright red ; stem, medium, in a small snug cavity ; calyx closed, in a smooth regular basin of moderate size ; flesh, creamy white, firm, of a pleasant, vinous flavor ; quality, good ; season, March to July.

HENDERSON'S SEEDLING APPLE :—

SIR,—I send you a seedling apple, a winter variety. I showed it to Mr. Holton, of Hamilton, and he advised my sending it on to you, as you are secretary of the Ontario Fruit Growers' Association. The apple is a splendid keeper, and has a delicious flavor. Please give your opinion of it.—G. G. HENDERSON, *care of J. Winer & Co., Hamilton, Ont.*

This is a beautiful sample of an apple, and is as excellent in quality as it is beautiful in appearance. If it averages on the tree anything like the sample before us, it is well worthy a place among our finest winter dessert apples. It may be thus described :—Size, medium ; form, oblate, regular, except that it is obscurely ribbed ; skin, a beautiful creamy white ground striped and splashed with pink, shading into a deep red on the sunny half ; calyx closed, set in a medium sized, somewhat rugged basin ; stem, very short, in a broad shallow cavity ; flesh, snow white, tender, juicy, with delicate aromatic flavor ; quality, best. A winter apple, exact season not determined.

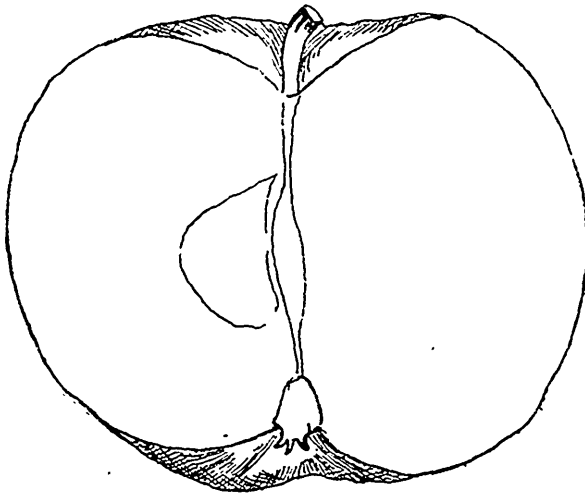


FIG. 76.—SECTION OF HENDERSON'S SEEDLING.

THE GOLDEN WHITE.—We have received from R. Brodie, Montreal, two fine samples of the Golden White, one of the most promising Russian apples. It compares favorably in beauty with the Duchess of Oldenburgh, ripens later in the season, about the first of October, is rather larger in size, and would sell at top prices in our markets. Surely if our friends in the northern sections can grow such apples as Yellow Transparent, Duchess of Oldenburgh, Golden White, La Rue, Wealthy and Renaud's Seedling they have as good prospects for success in apple culture as we, who live in more favored sections. Professor Saunders, Director of the Experimental Farm, Ottawa, describes this apple as follows :—Golden White, from Montreal, said to be

of Russian origin. Size large, $3\frac{1}{4} \times 3\frac{1}{8}$, form nearly round, unevenly ribbed, color reddish yellow but almost concealed by pale red with numerous splashes and streaks of deeper red, in which are many pale dots, stalks short and fairly robust, cavity small but deep, calyx of medium size, partly open in a rather strongly ribbed basin. Highly perfumed. Flesh creamy white with a slight tinge of pink, rather soft and a little coarse in the grain, crisp and moderately juicy, mildly acid and high flavored. Quality good. Core of medium size. A pleasant apple to eat and would no doubt cook well. Ripe latter end of September.

RUSSIAN APPLE BERESINSKOE.—Distributed in 1885. Mr. F. W. Coate, of Cape Elizabeth, Rosseau, writes :—

In 1885 I selected from the Fruit Growers' Association's list of premium plants a Russian apple tree, Beresinskoe. I received and planted the little tree on the 13th May. This year it has borne for the first time, 17 apples. I send you by mail six of them, that you may judge if the beauty and quality of the fruit is worth notice in THE HORTICULTURIST.

This apple is described by Prof. Saunders as follows :—Beresinskoe (?) probably Berezinskoe = Beresina. Size medium, $2\frac{1}{2} \times 2\frac{1}{2}$, form nearly oblong, color pale greenish yellow, with a bright red shading on the part exposed to the sun, and a few dots and streaks of deeper red. Stem long and rather slender, and set in a moderately deep cavity, calyx nearly closed, in a shallow strongly ribbed basin. Flesh yellowish white, more or less water-cored, of moderately fine texture, a mild, nearly sweet, character, with an agreeable but not high flavor. Core large. The specimens are too ripe to admit of accurate judgment as to quality, but it would probably be entitled to rank as good. A pretty apple, would make a nice dessert fruit and would probably cook well.





THE ENGLISH PRIMROSE.

(FOR THE CANADIAN HORTICULTURIST.)

PALE Primrose, with thy starlike face
 Now paler still,
 Dost thou not like Canadian skies
 And winter's chill?
 Thoughts thronging come of early days
 And "scads"* of showers,
 When roaming through the shady lanes
 In search of flowers.
 But Canada's a glorious land
 Of generous soil,
 Thousands, aye thousands, now set free
 From half-paid toil.
 No Proctor 'mong our fields of grain
 May calculate
 How many "tenths" of this and that
 He now may take.
 A retrospect is sometimes good
 To awaken gratitude,
 For daily mercies here enjoyed
 And wholesome food.
 Yet blessings of a higher boon
 To us is given,
 Freedom to worship God alone,
 The God of Heaven.

Owen Sound, 1890.

MRS. DR. MANLY.

*"Scad."—Ask a countryman in Devonshire, Will it rain to-day? The answer is, "Only a few scads, sir."

ARRANGING FLOWERS IN A BOUQUET.

WHERE the stems of flowers are short, or the object is to tie a flat or rounded hand bouquet, how is one to proceed in spreading the blooms? Let us watch the commercial florist tie up a nosegay. In the first place, if any flowers are too slender to be stiffly supported by their own stems, or the stems of which are very short, he supplies a wire to make up the deficiency of nature. Then he commences his bouquet by selecting a good bold flower, such as a rose, lily or camellia, for the centre, which he winds with a strong thread on to a thin stiff twig. Around this centre flower he then places a few leaves, and outside of these, to be an inch or two below the flower he binds sufficient moss, so that when a circle of flowers is added, they will not unduly crowd or overlap the first flower. It is usual to start with smaller individuals or trusses of flowers in this front line outward and place a few light sprays of bloom between them, to stand out boldly above the regular surface, next another ring of moss is bound on the centre stem, after which more green is applied and another circle of flowers and of projecting sprays. In this manner the bouquet is proceeded with until a suitable size is reached, when it may be finished by the addition of an edging of pleasing foliage, as smilax, fern, rose or camellia leaves.

In the making of a bouquet thus, the use of a variety of flowers is assumed. But the style now very much and very sensibly in vogue, is the use of but a single kind of flowers in a bouquet; it may be of roses, sweet peas, mignonette, violets, pansies, tulips, lilies, or other kinds. In this case the course to employ for preventing crowding is not dissimilar from that we quoted. But to avoid a stiff and monotonous appearance in the bouquet, pains must be taken to have some flowers stand out considerably beyond the others and yet not to be crowded, a matter easily effected by the use of plenty of moss back of the inner line of flowers, for keeping the arrangement open.—*Popular Gardening.*

 PLANTS AT REST.

MANY flowering and foliage plants used for decorating the grounds in summer, are kept during the winter in the cellar, or sometimes, with plants of low stature, in a pit. If there is a furnace in the cellar, that will unfit it for keeping plants; but a detached root cellar may be used. With plants in a completely dormant state, no light is needed, but with those plants that begin to grow in very early spring, unless they have some light, the foliage will become blanched. Plants at rest, while they require very little water, the soil must not get dust-dry. Soil in this condition will abstract moisture from the plants and ruin them. During the winter plants thus stored must be examined, and if the soil is "dust-dry," or "killing-dry," water sparingly.—*American Agriculturist for December.*



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

REMITTANCES by Registered Letter are at our risk. Receipts will be acknowledged upon the address label.

SANDY STRAWBERRIES.—The *Revue Horticole* recommends that, when it is desirable to free the berries from sand, they be gently bounced in a piece of damp muslin. By this means the sand will be left clinging to the muslin and the delicacy of the fruit will not be impaired.

THE CONCORD GRAPE is holding its own wonderfully this year, when compared with what are termed "fancy" varieties. It just now (Oct. 9) brings 2½ cents in Toronto when Salem and Niagara, etc., bring only 3¼ to 4 cents and it seems to have an upward tendency, the writer having to-day made a sale of 500 lbs. at 3 cents. When its prodigious fruitfulness is taken into consideration we know of no black grape that can take its place for profit. We have this year gathered five tons of Concord off about one acre, and this judging from the yield of other vineyards, is nothing unusual.

EARLY APPLES.—It has been the custom with many Horticultural writers to say that the fruit grower should avoid planting summer and fall apples. Now this advice may do well for the farmer, who has no time to market summer apples as they should be marketed; but the professional fruit grower who gives his whole time to the handling of fruit will find that the early apples are quite as profitable as the winter varieties. Much of course depends upon the proximity to the market or to an express office, and upon the train connections. But we, at Maplehurst, have found summer and fall apples of certain fancy kinds always profitable, if properly handled. They need to be gathered and packed a few at a time, and graded into extras and

seconds, just the same as peaches are handled. Graded in this way and put in small parcels, there is a ready sale for them at paying prices.

SUCCESS IN PEACH GROWING.—Mr. J. H. Hale, of Massachusetts seem to have had remarkable success in peach growing, in spite of many previous discouragements. He stated before the Nurserymen's Association, his orchard of fifty acres had yielded him last year 17,000 baskets, and he had received for them the sum of \$25,000. Surely this is a satisfactory income from fifty acres in one season. His care in grading was an important factor in getting him the best prices. He employs women of taste and judgment who pack all first quality fruit in new baskets made of white poplar wood, and great pains is taken that nothing goes into this grade, except very large and perfect specimens. He then labels the basket with the quality, and a guarantee that it contains but one grade throughout. As a result, he states he can get a dollar a basket more than those people who place the best on top and the poorer grade below. The best he sold wholesale at from \$2.50 to \$3.50 per basket, and the second grade \$1.65 to \$2.25.

GROWING FILBERTS.

THERE are, no doubt, many lines of profitable horticulture that have never yet been followed to any extent in Ontario, and if some of those farmers who are groaning over hard times, would open their eyes a little wider, they might see something to their advantage. Nut culture has of late been much

written about in some American journals, and it would seem that the hickory nut, the walnut and the chestnut can be grown with greater profit in some places than fruits. Of course the length of time required for the trees to reach a profitable bearing age is the great obstacle, but are there not acres of land on almost every farm, that could be easily spared for nut trees, and could not the owner in this way have an additional prospect of ultimate profit.

We are just in receipt of the following letter from Mr. E. Wardroper, Pelee Island, who has evidently had good success in raising the filbert, or hazel nut, in that section.

"SIR,—I forward you by this mail a can of nuts, called the Kentish Cob Nut. The

seeds were sent out from England, and were planted years ago. We have all sizes, that bear regularly. They are not injured by frost, the cold here seldom going more than ten or fifteen degrees below zero. They are easily propagated either from seeds or suckers."

The nuts are a fine sample, and surely would be a source of great profit, if grown on a large scale for market.

There are in Canada, two varieties of the Hazel-nut, which are natives, viz: *Corylus Americana*, and *C. rostrata*, but neither of these seem to fruit freely enough to be very profitable and the nuts are small. We should be pleased to hear further from our correspondent as to average yield per tree, etc.

Question & Answer

QUINCES FOR THE ORCHARD.

98. SIR,—I am thinking of planting out about five acres of quinces; I have been told that the seedling quinces used by nurserymen for budding bear very good fruit. They are much cheaper than other varieties, being offered me for \$15.00 per thousand.—GEO. J. JONES, *Ruthven, Ont.*

We would not advise our correspondent to buy the *Angers* quince stock, which nurserymen use for budding dwarf pears upon to plant in an orchard for fruit bearing. True, it is a productive variety, and the fruit is a good keeper, but it is small and it is not as good a cooker, as good quality, nor as fine looking as some other varieties. No doubt it could be grown with profit, just as an inferior variety of grape or apple, but we think it always pays to grow only the best, especially since so many quinces are now coming into our markets.

We have grown the *Orange Quince* for market for many years and find it a most satisfactory variety. It is large, roundish, and of a bright golden yellow color, and very productive. There is a seedling of the *Orange* that is a little larger, and in other respects very similar, called *Rea's Seedling*. The *Champion* is a newer variety, and one which has commended itself to us as being larger than the *Orange*, and equally good in quality. It appears to be very productive also and

the fruit is a longer keeper. These are the best tested varieties of quinces, and in a large plantation, it might be well to have a selection of each.

WOOD ASHES FOR SCAB.

99. SIR,—Do you think that wood ashes are a good preventive of the apple scab? My *Fameuse* used to be badly affected by it, but since I applied wood ashes not ten per cent are affected.—W. H. W.

Wood ashes are an excellent fertilizer for the apple tree, and will cause a healthy growth of both wood and fruit, and in this way may help somewhat in enabling the tree to resist the fungus, but it can have no direct action as a preventive of the scab in any other way. We have tried them faithfully on the same variety, year after year, and the fruit is still as badly scabbed as ever. Our hopes are now directed to the copper solutions, as the most probable means of securing clean fruit.

THE ERIE BLACKBERRY.

100. SIR,—Is the *Erie* blackberry hardy and productive?—A. S. CROSBY, *Compton Que.*

We cannot answer for the hardiness of the *Erie* for the province of Quebec, but perhaps some of our readers in that province

may be able to reply through these columns. As grown here, in Southern Ontario, it proves itself a valuable kind, bearing very abundantly; the fruit is almost as large as the Kittatinny, only shorter and rounder. No doubt you can succeed with it by winter protection.

THE BUBACH STRAWBERRY.

101. SIR,—Where can I get the Bubach strawberry? Is it a *siaminae* variety?—A.S.C.

The Bubach is now so well disseminated that you can get it from almost any nurseryman. It is a pistillate variety.

WINDBREAK.

102. What is the best windbreak, so far as hardiness, looks, etc. is concerned, for a small fruit plantation?—A.S.C.

We know of nothing so satisfactory as the Norway Spruce for Ontario, but, if this does not succeed well with you, try some of your native evergreens such as the White Spruce, which, although it is a slower grower than the Norway, is hardier and lives to a greater age. Our native White Pine and our Arbor Vitæ are suitable trees for windbreaks, but are of slow growth.

BEST NURSERIES.

103. Please give me the names of the leading nurseries in the Dominion.—A.S.C.

We must refer our readers to our advertising columns for such information as this.

PROTECTION OF YOUNG APPLE TREES.

104. SIR,—Should young apple trees be earthed up in autumn, and would it be advisable to place evergreen boughs around them?—S. H. PURDY, *Cumberland, N.S.*

It is a very wise plan to heap up a mound of earth about young apple trees in the fall, packing it firmly, both as a protection of the roots from the frost and of the stem from the mice. Great care should be taken to use only fine mould, free from lumps and grass, or rubbish of any kind, else the mice will only work among it to the greater mischief. It would be unsafe to use any evergreen boughs in a place where there are any mice about.

SHALLOW PLANTING OF TREES.

105. SIR,—I planted trees of the King and Ribstone this fall, and wish to give them a fair trial. In order to give drainage and depth of soil, I ridged up the land and set the trees nearly level with the surface. I then mulched them with wheat straw, and manured them in drills for potatoes. Do you approve of my method?—S. H. P.

Your plan of planting on ridges, so as to keep the trees well up from the wet, is an excellent plan in damp soils. Indeed more trees are injured, generally, by planting too deep than too shallow. One of the best orchards at Maplehurst is planted in the manner you describe.

HARDINESS OF THE KING AND RIBSTONE.

106. SIR,—Are these varieties too tender to plant north of the Cobequid mountains in Nova Scotia?—S. H. P.

Would some of our Nova Scotia readers please reply?

A GOOD BUDDER.

107. SIR,—Can you inform me where I can get the services of a good budder?—G. J. J.

It is not easy to secure a good budder just when he is wanted. The best way is to learn the art yourself. The method will be described in this journal, at the proper time, if our readers desire it.

GROWING QUINCE TREES.

108. SIR,—Will quinces grow well from cuttings?—G. J. J.

This is the usual method of propagating the quince, because cuttings of it grow with so little trouble. Suckers with small roots just starting are the surest to grow, and in order to induce these, nurserymen usually set a lot of quince bushes quite deeply, and cut them well back, as stools for propagating from.

ROOT GRAFTING PEARS.

109. SIR,—Do pears do as well root-grafted as budded?—G. J. JONES, *Ruthven, Ont.*

There is little to choose between root-

grafting and budding for the pear tree, so far as the health of the trees is concerned, providing the grafting is done upon whole roots, and the stock is healthy. But many nurserymen prefer raising pear trees by budding, as being more expeditious. Plum trees may also be raised either by root-grafting or by budding. If properly done and cared for you ought to succeed fairly well with the former method; but, as a rule, the best success with the plum is attained by

budding. The pits should be planted as soon as gathered, and planted about an inch and a half deep in broad drill. At one year old they are taken up and the tap-roots shortened, and those which are of a suitable size planted in the nursery rows ready for budding the following summer. The great point to observe is, to do the work as early in the season as the buds are sufficiently well developed, say about the middle of July, or earlier, if possible.

Open Letters

THE VENTILATED BARREL.

SIR,—I learn from Mr. A. McD. Allen, that fruit shipped in the ventilated barrel was cool and in good condition when opened on the 10th day after receipt; while similar fruit in ordinary barrels was very hot and was, in centre of barrel, more or less spoiled, opened on 5th day after receipt.—JOSEPH WILLIAMS, *Goderich.*

LONDON APPLE DELIVERY.

SIR,—We beg to advise you that we have arranged to make delivery of apples for London, *via* Thameshaven, if desired, where they will be discharged and forwarded by rail to the Commercial Road Station, London, and delivered at any warehouse within

a radius of two miles therefrom, at an additional rate of 8-6 stg. per 2,240 lbs, delivery to be taken from the railway station within seven days after arrival; after that regular tariff rates will be charged; or delivery will be made at Covent Garden, London, at an additional rate of 9-6 stg. per 2,240 lbs.

Through bills of lading will be granted by both the railways, including either of the above delivery clauses.

This arrangement will be found of great benefit by exporters, giving them greater facilities for distributing, and equal advantages at lower rates than if shipments are made *via* Liverpool, besides saving considerable time in delivery over that required from the regular London docks.—ROBERT REFORM & Co., *Montreal.*

Our Markets

NEW YORK CITY.

October 27, 1890.

With clear colder weather at the opening of the season, and a general light supply of fruits (especially apples and grapes) there is every encouragement now, at the lateness of the season, to expect a general advance in prices. Selling to-day as follows: *Apples*—Choice Greenings, \$4.00 per bbl.; prime, \$3.50; Spitz, Snow, Jonathan and Ben Davis, \$4.00 to \$4.50 per bbl.; some fancy marks, \$5.00 per bbl.; Baldwins, \$3.00 to \$3.50 per bbl.; Spies, \$2.50 to 3.00 per bbl.; windfalls, \$2.00 to \$2.20 per bbl.; *Grapes*—Concords, 3½ to 5c.; Delawares, 3 to 6c.; Catawbas, 4 to 5c.; Niagaras, 4 to 6c. *Pears*—Beurre, Box, Clairgean, \$3.00 to \$3.50 per keg; Seckle, \$3.00 to \$5.00; Duchess and De Anjou, \$2.50 to \$3.00. *Quinces*—\$5.00 to \$8.00 per bbl. *Export-*

ated apples—13 to 15 cts.; sun-dried, 9 to 11 cts. *Nuts*—Chestnuts, \$3.00 to \$4.50 per bush.; hickory, \$2.00 to \$2.20.

BUFFALO.

October 24, 1890.

Pears—Duchess, No. 1, \$5.00 to \$5.50 per bbl.; No. 2, \$3.00 to \$4.00 per bbl.; No. 1, in kegs, \$2.25 to \$2.50; No. 2, in kegs, \$1.50 to \$1.75; peck baskets, 50 to 65 cts.; other varieties, \$2.50 to \$3.50 per bbl. *Quinces*—Choice, \$4.50 to \$5.00 per bbl.; No. 2, \$2.00 to \$3.00 per bbl.; small and inferior do, \$1.00 to \$2.00 per bbl.; per basket, 40 to 50 cts. *Grapes*—Concords, 25 to 26 cts. per 9-lb basket; Concord, 14 to 15 cts. per 5-lb basket; Niagaras, 35 to 37 cts. per 9-lb basket; Niagaras, 18 to 20 cts. per 5-lb basket; Delawares, 30 to 35 cts. per 9-lb basket

Delawares, 15 to 17 cts. per 5-lb basket; Other varieties, 13 to 18 cts. per small basket. *Apples*—Choice to fancy, \$4.00 to \$4.50 per bbl.; fair to good, \$3.50 to \$3.75 per bbl.; ordinary, \$2.50 to \$3.00 per bbl.; small and inferior, \$1.50 to \$2.00.

PHILADELPHIA.

October 18, 1890.

Apples are in light supplies, and desirable grades are particularly scarce and wanted at top quotations:—Kings, Belleflowers, Jonathans, etc., fancy, per bbl., \$4.25 to \$4.50; Ben Davis, Baldwins, Greenings, 20 oz., etc., per bbl., \$3.50 to \$3.75; Canada mixed cars, choice to fancy, per bbl., \$4.25 to \$4.50; Michigan, mixed cars, choice to fancy, per bbl., \$3.75 to \$4.00; Kansas and Missouri, mixed cars, choice to fancy, per bbl., \$3.50 to \$3.75. If margin offers, we advise *heavy shipments* of desirable stock only, because the *outlook* for such is highly *favorable*.

MONTREAL.

October 28, 1890.

The market remains in a very lifeless condition and the aggregate of trade is unusually small for the season. *Apples* are quiet with sales of winter stock running from \$3.75 to \$4.00 per bbl.; fall apples, \$2.75 to \$3.25 per bbl.; seconds, and the markets is full of them, dull, \$2.00 to \$2.25 per bbl. *Pears*—Very, very dull; sales \$5.00 to \$10.00 per bbl., as to quality; 50 cts. to \$1.00 per basket. *Grapes*—Domestic, stock is almost done and is now in good demand, prices running from 3 to 3½ cts. bulk. Foreign green fruit is now selling much better, the bulk of trade being in oranges, lemons and grapes.

GUELPH.

October 24, 1890.

Grapes—Concord, 2 to 3 cts. per lb; Niagara, 3½ to 4½ cts. per lb.; Rogers, 3 to 4 cts. per lb. *Pears*—40 to 75 cts. per 12-qt. basket. *Quinces*—40 to 75 cts. per 12-qt. basket. *Apples*—25 to 40 cts. per 12-qt. basket; \$2.50 to 3.00 per bbl. *Cauliflower*—40 cts. to \$1.00 per dozen. *Cabbage*—30 to 50 cts. per dozen. *Celery*—40 to 50 cts. per dozen. *Citron*—40 to 50 cts. per dozen. *Onions*—Yellow or red, \$2 to \$2.25 per bbl. *Potatoes*—40 to 45 cts. per bushel. *Cranberries*—Canadian, \$8.50 per bbl.; Cape Cod, \$11.00 per bbl. The demand for grapes is falling off considerable, owing to cool weather and the quality being poorer than they were some time ago.

TORONTO.

October 24, 1890.

Grapes—Concord, 2½ to 2¾ cts. per lb.; Delaware, 2¾ to 3 cts. per lb.; Rogers, 2¾ to 3 to 3½ cts. per lb.; Niagara, 3 to 3½ to 3¾ cts. per lb. Grape market shows a firmer feeling, and if receipts the coming week do not exceed the demand we look for an advance in

prices. *Pears*—De Anjou and Clairgean, when marketed in good condition, are selling at 65 to 75 cts. per basket, or \$6.50 to \$7.00 per bbl.; Duchess 60 to 70 cts. per basket; common varieties from 25 to 50 cts. per basket, according to quality and condition. *Apples*—On fall varieties, unless of very fine kinds and quality, market is dull, only fancy re-shipping kinds being in demand. Winter fruit is quiet and most receipts are being put in store for future shipment, as there is very little enquiry by the local trade. We quote fall fruit: Snows, when clean bright fruit, \$2.00 to \$2.25 to \$2.50 per bbl., anything inferior in quality is hard to dispose of at any price; Culverts, Jenningts, etc., \$2.25 to \$2.50 per bbl.; St. Lawrence are about out of market; Blenheim Pippins, Ribston Pippins, Twenty Ounce and other fancy fall varieties, \$2.75 to \$3.00 per bbl. *Quinces* are in light supply and demand; choice clean bright fruit selling at 75 to 85 cts. per basket. Inferior, undersized, poor colored fruit is hard to sell at any price. *Crab apples* have been in good demand until the last three or four days, and now there is scarcely any enquiry; offering at \$3.00 to \$3.25 to \$3.50 per bbl. according to quality to-day. Receipts are rather in excess of demand.

LONDON, ENG.

October 4, 1890.

American and Canadian apples are now coming forward in small quantities, and good brands realize good prices. We quote; Baldwins, 18s. to 25s. per bbl.; Greenings, 17s. 6d. to 23s. 6d. per bbl.; Kings, 27s. to 31s. per bbl. Market now bare of plums, and as the bulk of the Continental apples has been cleared, enhanced prices for good American and Canadian stock are expected. Immediate shipment of good sound parcels of apples advised.

GLASGOW, SCOT.

October 6, 1890.

Choice Kings as high as 36s. or \$8.75; choice Baldwins as high as 21s. or \$5.10, to 24s. or \$5.80. Ordinary qualities at proportionately less prices.

October 20, 1890.

Northern Spies, 17s. (or \$4.12) to 19s. (or \$4.60).

LIVERPOOL, ENG.

October 20, 1890.

Baldwins, 18s. (or \$4.37) to 22s. (or \$5.53).

NOTE.—Markets reported for us by G. S. Palmer, 166 Reade St., New York City; Pancoast & Griffiths, Philadelphia; I. C. Houghton, Liverpool; Messrs. Jos. Lindsay, Glasgow; H. Walker & Son, Guelph; McWilliam & Everist, Toronto; Vipond, McBride & Co., Montreal; I. B. Cairncross, agent, London; Chas. Richardson, Buffalo.

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Oct. 31.

The Ontario Fruit Growers' Association

Will hold its Combined Annual and Winter Meeting in the CITY HALL, HAMILTON,
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18th DECEMBER, 1890.

The annual meeting for the election of officers will take place on Tuesday evening, and the general public meeting for discussion of fruit topics will begin on Wednesday at 10 a.m. The public are invited, whether members of the Association or not. A detailed programme will be published in our December number. Suggestions, papers, questions, etc., received by the undersigned at any time. Reports of plants tested in various parts of the province, and any other notes from the various counties concerning fruits will be accepted for publication in the Report, whether read at the meeting or not.

L. WOOLVERTON, SECRETARY,

GRIMSBY, ONT.

AMOUNT OF APPLES EXPORTED TO EUROPE

FOR WEEK ENDING OCTOBER 18, 1890.

STEAMER.	Liverpool.	London.	Glasgow.	Various.	TOTAL.
FROM MONTREAL.					
NEVADA.....	Bbls. 358				358
TEUTONIC.....	25	500			525
AURANIA.....	738	95			833
CITY OF ROME.....	951	110			1,061
STATE OF INDIANA.....			1,319		1,319
GELLERT.....			Hamburg, 100		100
NEW YORK.....	3,072	705	1,319	100	4,196
MONTREAL.....	3,414		4,697		8,111
BOSTON.....	895				895
THIS WEEK.....	6,381	705	6,016	100	13,202
SAME WEEK LAST YEAR.....	17,036	1,099	12,443	52	30,630
THIS SEASON.....	31,606	11,395	18,757	340	62,098
LAST SEASON TO DATE.....	56,470	14,517	33,445	2,422	106,854
SHORT.....	24,864	3,122	14,688	2,062	44,736

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SS. Circe 3,000 "	SS. Warwick... 3,000 "

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