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The

Canadian



ORTICULTURIST.

JOURNAL
DEVOTED TO
FRUIT
CULTURE
AND
HORTICULTURE
EDITED BY L. WOOLVERTON, M.A.
PUBLISHED BY

RULES
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ADVERTISING

THE FRUIT GROWERS ASSOCIATION OF ONTARIO

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For 1889 may have this Journal Free for the balance of the year '88. Those paying now may choose No. 5, the package of Winter Flowering Bulbs, which must soon be withdrawn. The list of plants now offered is, we believe, more valuable than usual. See page 237 of this number.

THE ANNUAL REPORT FOR 1887 is now published and is free to all subscribers. It is a fine volume of nearly 200 pages, full of needful information concerning the cultivation of apples, plums, grapes, strawberries, etc., and containing President McD. Allan's valuable address on Shipping Apples.

GOOD OFFERS.—Anyone sending in names of new subscribers, accompanied by the usual member's fee for each, may have an additional choice of plants for each new subscriber in place of the usual commission. A FREE COPY of the CANADIAN HORTICULTURIST for one year to anyone sending in five new subscribers and five dollars. A BOUND VOLUME for four new names and four dollars. Back Numbers can still be furnished.

THE CANADIAN HORTICULTURIST,

Grimsby, Ont.



BIGNONIA

FOR THE CAUCASIAN ISLANDS.

THE
Canadian Horticulturist.

VOL. XI.

1888.

No. 10.



THE TRUMPET CREEPER.

FOR the more favored portions of Ontario the Trumpet Creeper is one of the most desirable of climbing vines. We have tested it at Grimsby for twenty-five years, and although while young the fresh growth was killed back so that it appeared to make very little progress, yet every year the main stem gathered strength until at length it became a thing of beauty upon the lawn. In one retired nook, several of these vines have sprung up without care, and twined themselves about the trunk of a Norway spruce tree to the very top, some twenty-five or thirty feet, and a more interesting and attractive plan could not have been devised. The little graceful shoots clothed with pinnate leaves, so beautifully contrast with the stiff background of spruce foliage; and the great showy trumpet-shaped flowers, borne in ter-

minal corymbs on the young shoots in August, delight one the more because quite unexpected in such a situation. Another beautiful specimen almost conceals one end of a neighboring stone house; and, climbing by its tiny rootlets, has even surmounted the roof, and almost hidden the great stone chimney which it decks with its scarlet trumpets.

The variety referred to is known as *Técoma radicans*, according to Gray, although nurserymen have propagated and sold it under the name of *Bignonia*, a name now confined by botanists to another species of woody climber, belonging to the *Bignonia* family. It may also be interesting to notice that the *Catalpa*, so much prized of late as an ornamental tree, is another species of this same family. For the most part the *Bignonias* are tropical plants,

and will not succeed in Canada, but with a little protection little difficulty need be experienced by any one with the *Técoma radicans*, *T. atrosanguinea*, or *T. grandiflora*. These varieties differ little except in the shade of color of their flowers, and it will be observed that our painting for this number represents the latter of the three.

The Trumpet flower is found growing wild as far north as Pennsylvania, and

in some of the Southern States it may be found climbing to the tops of the loftiest trees, clothing them with wreaths of green, red and orange. The tubes of the flowers are usually three or four inches in length, and sometimes five or six inches.

In 1640, this climber was introduced into England, and it is there highly esteemed.

FRUIT PACKING.

THE packing table described in September number is being used in our apple orchards with the greatest satisfaction. By means of it one man can pack for three pickers, and that with the greatest comfort. We would not again return to the old custom of emptying out all the fruit upon the ground and then gathering it all up again; it is too troublesome and expensive at the prices for which apples are usually sold. We have instructed the packer to make three classes of fall apples; No. 1 includes the perfect samples, free from spots, worms, knots, etc.; while No. 2 includes good cooking apples, but imperfect, and No. 3 those which are fit only for cider. No. 1 goes to a foreign market, No. 2 to a home market, and No. 3 is thrown upon the ground, to be utilized at the close of the season.

Of such choice winter varieties as King and Northern Spy we purpose making an additional class of "*extra selected*," for which the largest, finest, and best colored of the No. 1's will be selected, and packed in half-barrels.

Our first shipment for the British market was made on Thursday, the 13th ult., and shipments will continue weekly till the end of the season.

We will report results for the benefit of our fellow fruit growers, and hope to have something favorable to say concerning the "cold blast" and the "port ventilation" provided for us by the Beaver Line. By reading the market reports it will be seen that the prospects for an export trade in apples are favorable this season, and therefore, notwithstanding the very heavy Canadian crop, growers may expect good prices for all prime apples fit for export. The great point to be observed is to pack honestly, so that the grade represented shall be faithfully preserved through and through each barrel. It seems too much to expect that all packers will be uniformly honest, and thus establish a national reputation, but each large grower and shipper can do this for himself if he chooses, and so establish a personal reputation that will be of the greatest possible advan-

tage to him, whether in a home or a foreign market. The practice of branding the head with the name and address of the grower, is a proper thing, and that which every honest man will willingly do.

While packing our apples and pears this season we are more than ever convinced of the great benefit of spraying our orchard with Paris green. In some portions inaccessible to the wag-

tree always bore knotty fruit previously, but since being treated to Paris green its fruit has been perfect. The Bartlett pear is especially subject to produce knotty specimens, due to the work of the curculio, and other insects. Indeed, fully half the crop has to be thrown out for seconds on this account. But for two seasons now, we have sprayed them carefully, and as a result, have had comparatively few knotty

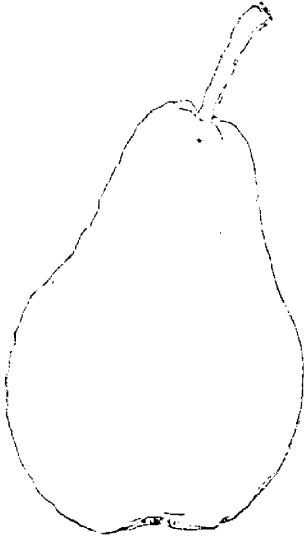


FIG. 75.—SPRAYED BARTLETT, $\frac{3}{4}$ NATURAL DIAMETER.

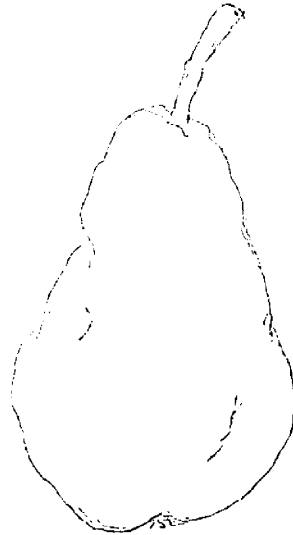


FIG. 76.—UNSPRAYED BARTLETT, $\frac{3}{4}$ NATURAL DIAMETER

gon, this treatment was neglected, and as a result, an immense crop of Codling moths is being harvested, and innumerable apples wasted; while those trees carefully treated are almost free from this mischief-maker. And that is not the only benefit; indeed, quite as important is the perfection of form of the sprayed fruit. A Duchess apple

pears. The editor of *The Country Gentleman*, in a recent number, gives his experience in spraying Bartlett pears, and it corresponds with our own as given above. We copy outlines of two specimens, showing the effect of the treatment as described above, but with us the disfigurement has averaged greater than is here represented.

A LIST OF HARDY APPLES FOR THE COLD NORTH.

WE frequently receive enquiries concerning the most reliable varieties of apples for the colder portions of Ontario and Quebec. Having experience chiefly with such varieties as are adapted to Southern Ontario, we have to depend upon the experience of others with regard to those best suited to the Northern portions. Such kinds as the Baldwin, Greening and Northern Spy, which we grow for the export trade, would be wholly unfitted to withstand the severe winters of

list of the best apples for the extreme north, prepared by Dr. Hoskins, of Vermont, who has given years of patient study and experiment to this particular branch of pomology.

For summer.—Yellow Transparent, Tetofsky.

For autumn.—Duchess of Oldenburgh, Alexander, McMahan's White, St. Lawrence, Switzer.

For winter.—Wealthy, Scott's Winter, McIntosh Red, Fameuse, Bethel of Vermont.

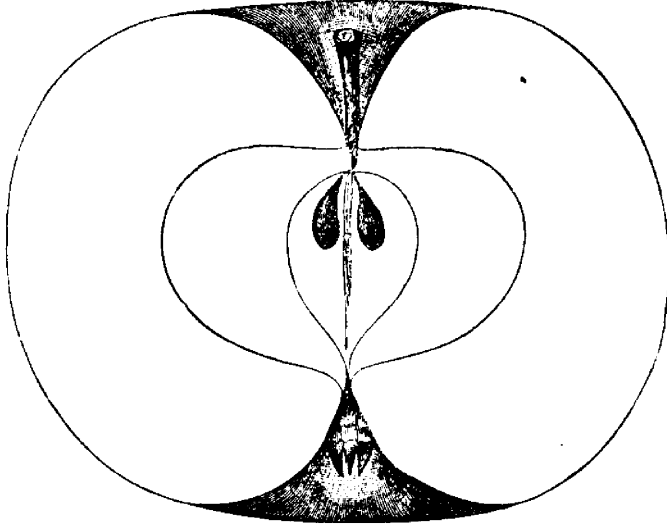


FIG. 77.—McMAHON'S WHITE.

those parts, and therefore others, possibly less valuable in our markets, must be substituted. Indeed it is a great boon to farmers residing in localities where orcharding was previously regarded as wholly out of the question, to find that there are apples, of fine quality and appearance too, which may be successfully grown. Some of these apples have been introduced from Europe, and some have originated in the Western States.

For the benefit of our members so situated as to be interested, we give a

Many of these varieties have been tested in Canada and reported upon through these pages. In January, 1887, a colored plate of the Yellow Transparent was given our readers, and the previous year the tree was included in our plant distribution for general testing. A large number of trees have been top grafted with it and other Russians at Maplehurst, and this year the first specimen of the Transparent was produced. It was in

quality and waxy lustre, everything claimed for it.

The Duchess of Oldenburg has established its reputation for excellence in all parts of Ontario. There is no more beautiful apple in its season, and it is deservedly popular both for home use and for market; indeed, no apple except the Red Astracan can compete with it as a fancy apple, in Toronto and Montreal markets, and even that, beautiful as it is when fully colored, must yield the palm to it.

McMahon's White is a new variety from Wisconsin, very similar to the Golden White, No. 978, of the "Department Russians." At the meeting of the American Pomological Society at Boston,

in 1887, Mr. Hatch, of Wisconsin, spoke highly of it, saying, "It has stood the temperature of 40° below zero; nothing in my orchard has equalled it in this respect. For severe climates it stands head and shoulders above every other apple. It may, however, blight in extremely rich soil; but in other soils it does excellently." Dr. Hoskins says it is the first out of many apples which he has received from Wisconsin which has sustained its reputation for thorough hardiness. He describes the apple as large, well-shaped, greenish white, occasionally red-cheeked, and is an excellent market fruit for culinary use. It bears young, and is vigorous and healthy in tree.

THE JAPAN IVY (AMPELOPSIS VEITCHII.)

BY D. W. BEADLE, ST. CATHARINES, ONT.

I WISH that your readers could visit some of the cities where this beautiful climber has been planted long enough to cover the walls, and in sufficient quantity to be one of the features of the place. The engraving will help them to some conception of its charming effect, but neither engraving or description will be able to impart any adequate impression of the exquisite grace which this plant imparts to the various objects over and around which it clammers. One needs to see the great walls covered with its bright leaves, which overlap each other like the tiles on a roof; to see the turrets wrapped in its green folds, and the windows wreathed in its shining foliage, to be able to appreciate its beauty.

Ivy-clad walls and battlements form some of the most charming pictures in the old country landscapes. Unfortunately the ivy-green of England can but poorly battle with the extremes of our rude winters, but the Japan Ivy, with the same power of clinging to the surface as its old-world cousin, by dropping its

foliage when severe winter frosts set in, passes safely through our colder winters. Not suddenly, on the first approach of frost, do the leaves fall, but the dying foliage puts on gorgeous hues and glorious tints, imbuing each passing day with some new colour;

"Each purple peak, each flinty spire,
Is bathed in floods of living fire."

Could they but realize the charm which this little climber gives to the home, how it relieves the monotony of bare walls, and as it clammers over things that were else unsightly, gives to the whole a nameless grace, they would surely plant it freely. Were it rare and costly they might feel that its loveliness was beyond their reach, but, on the contrary, it is easily procured, and comparatively inexpensive.

When young it needs some care, like all things else in early youth. One does not hesitate to bestow care upon young stock, nor feel it a burden to care tenderly for the young "olive plants round about the table." So then, in the early youth of the Japan Ivy, do not suffer

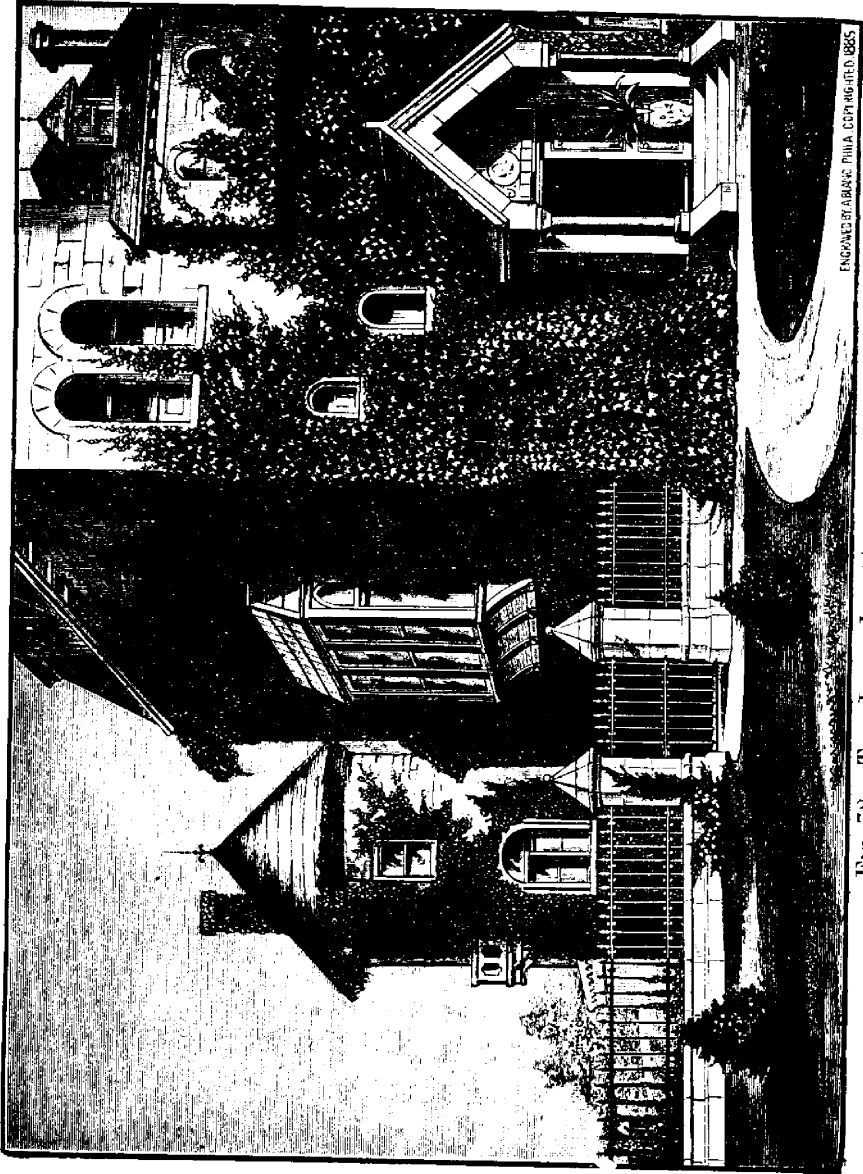


FIG. 78.—THE JAPAN IVY (AMPELOPSIS VITICIDA).

ENGINEER BARRETT, PHILA. COPY-RIGHT 1885.

it to be choked with weeds or grass, nor its growth to be stunted through lack of nourishment; and during the first winter throw a few inches of coarse litter about the stem and over the roots. This care will be abundantly rewarded by its vigorous growth the following season, and soon it will clamber away,

on and up, never losing its foliage near the ground, but by its continual growth maintaining a pleasing variety of shades of colour between the young leaves and those more mature until the chill nights of autumn change the green to crimson and gold.

HORTICULTURAL NOTES.

By J. L. BUDD, IOWA AGRICULTURAL COLLEGE.

THE September number suggests the following notes:

RUSSIAN WINTER APPLES.

Dr. Hoskin's note, on page 198, has this closing sentence:—"So far, however, very late keepers are very scarce."

This is true, when the large number of varieties from west and north Russia is considered. But our collection from the interior provinces of central and south Russia is showing a very large per cent. of varieties, later than Wealthy or Grimes, Golden, and a few varieties as late as Willow or Scott's Winter. From the varieties started in orchard prior to our visit to Russia in 1882, we have now on our table the following varieties, which are harder and cruder than Wealthy, Grimes, Golden or Jonathan, viz., 4 m., 5 m., 8 m., 15 m., 24 m., 30 m., 42 m., 57 m., 75 m., 89 m., 105, 190, 224, 236, 240, 316, 324, 327, 410, 413, 424, 585 and 599. Of this partial chance list now before me, 5 m., 8 m., 15 m., 89 m., 316, 410 and 599, are incomplete in growth the middle of September, as the Willow, and with the same care should keep about as well.

If we should tell the story of the few specimens as yet grown in the state of the varieties more recently imported from Arel, Voronesh, and other points in South Russia, we could make a much better showing as to per cent. of late sorts, and the size, beauty, and quality of the fruits.

My only surprise has been that some of the extreme northern varieties should mature so late on the 42nd parallel. For instance, the Striped Anis of the Upper Volga is now laden with fruit fully as hard and crude as the Wealthy beside it. Again, the Striped Winter of North Russia, is proving a showy and profitable fall apple here, and a prime winter apple on the 44th parallel.

TRANSPARENT FAMILY.

In connection with the belief expressed by Dr. Hoskins that the Yellow Transparent will prove a short-lived tree, permit me to say a good word for the *Blushed Calville*, another member of the family. (1) It is ready for home use or market as early as the Transparent or Thaler, but its season is longer as it does not become dry and mealy when over-ripe. (2) Its blushed cheeks make it attractive in market, and the quality of the fruit for dessert or cooking is better than that of any member of the family I have tested. (3) In no case have I known the tree to be attacked with blight, its stem to be sun-scalded, or its cell structure injured by our test winters.

This is exceptional praise, but so far the *Blushed Calville* seems without faults at the west, even where the Yellow Transparent utterly fails by blight or winter killing.

CERISE DE OSTHEIM CHERRY.

There appears to be some confusion in the use of the name "Ostheim."

The Ostheim we first sent out for trial was the Ostheim of Minnesota, introduced from Germany. This we soon found was not identical with the Ostheim of Kansas and Missouri, and still later we found that neither of the above was identical with the Cerise de Ostheim we imported from Poland and North Silesia.

The Minnesota variety we have found to mature its fruit very late,

and to be smaller than Early Richmond.

The Kansas and Missouri variety is earlier, larger and better in fruit; but the tree is not hardier than Montmorency Ordinaire. The Cerise de Ostheim of Poland we find hardy in tree, round-topped and even drooping in habit, early in coming into bearing, and fully equal to the Missouri variety in earliness, size and quality of the fruit.

FRUIT EVAPORATING.

Points from an Expert.

FRUIT evaporating is a business requiring careful study and experience to be successful, as I have found after a number of years of faithful study. Our grafted varieties of apples yield from six to eight pounds of the evaporated fruit to each bushel of fifty pounds of green apples, according to the care and management the fruit gets during its preparation and drying. The best paring machines are none too good, and until 1886 there was not a worthy one to be had. But now several very practical machines are in use. I prefer machines that pare, core and slice at the same time, though I used to think a separate slicer necessary to get the greatest production. But I can now get eight pounds to the bushel by the use of the combined Taylor machine. Two girls with this machine can prepare thirty bushels of apples in ten hours, and they work for sixty cents per day each. To save fruit, paring machines must have the best of care. The knife guards, knives and coring tubes should always be ready for exchange, and a machine without interchangeable parts is practically worthless.

A popular sentiment is rising against the use of so much sulphur in bleaching fruit. I am glad to see it, but bleaching of some kind will be followed for

some time yet. Apples and peaches should be introduced to the bleach as soon as pared, as after that a good color cannot be had, as they turn red by delay. A good way to preserve the fruit for the bleacher is to run it, as soon as pared, into a vat filled with water made brackish with salt, being careful not to add too much salt, as then the fruit, when dried, would gather moisture and damage its marketing quality.

Spread the fruit for drying on trays made of No. 5 galvanized wire cloth. I prefer steam heat for drying, because by it much more work can be done by one fire than by the furnace system, and insurance rates are lower. Care must be taken not to leave the fruit in the evaporator so long as to turn it brown. I take out the fruit rather early and spread it about ten inches deep on a curing floor, where it lies for ten days or two weeks, and is shoveled over once or twice before packing. In this way one can take fruit from the dryer while it is still quite damp, saving fuel and increasing the working capacity of the machine. We also get a more marketable quality of fruit, for the color will be better. But I am not advising packing fruit before it is thoroughly dried, which is bound to cause shrinkage; and so much of this has been done (especially on bleached fruit,

that will keep in quite a damp condition) that commission merchants have got into a notion that all packages of evaporated fruits must be docked for shrinkage.

No machine is yet made that will do good work on peaches ripe enough to be of rich flavor, so they must be prepared by hand. They must be bleached like apples and spread on trays with the flat side next the wire, to keep the peaches in nice shape. Peaches are packed in twenty-five pound boxes, and a nice facing is laid next the cover. Considerable care is necessary in drying blackberries and black raspberries, particularly to see that they don't dry too much. I hardly dry them enough, but spread them in my curing room, six inches deep, and shovel them over a few times until they are thoroughly dried; four pounds of the black raspberries will make one pound of dried fruit, and a bushel of peaches will produce eight to ten pounds of the dried article.

Evaporated apples in ring slices are packed for Eastern markets in boxes holding fifty pounds. Two pieces of paper are placed in the boxes next the cover and laid so that they will fold back each way from the centre, lapping down on the side of the box, and then the ring slices are laid in rows on the paper with one half lapping so as to make a nice facing; then the box is filled from the bottom, and if the fruit is thoroughly dried a press is necessary to get fifty pounds into the boxes commonly used.

So much depends upon proper management and experience, that it is difficult to give accurate estimates about the business. One may make a failure out of the same run that another would turn to a profit. But I will make two estimates. The first is on a business of drying three-hundred bushels of apples per day of twenty-four hours, reckoning at the low rates we may expect for this season, as the crop is general:

300 Bushels of apples at ten cents per bushel.....	\$30.00
28 Girls to run the paring machines, at sixty cents per day.....	16.80
2 Men to handle apples, at \$1.25 per day.....	2.50
2 Men to attend the evaporator, at \$1.25.....	2.50
2 Boys to attend the bleaching, at seventy-five cents.....	1.50
2 Men to attend to the fires.....	2.50
Fuel.....	4.50
Incidental expenses.....	5.00
Total expenses.....	64.50
Credit by 1800 lbs. dried fruit at six cents per lb.....	108.00

Net profit per day..... \$33.70

On an evaporator of seventy-five bushels' capacity in twenty-four hours, such as the large fruit grower wants who handles his own crop, the showing should be like this:

75 Bushels of apples at ten cents....	\$7.50
5 Girls day and evening at seventy-five cents.....	3.75
2 Men at \$1.25.....	2.50
Fuel and incidental expenses.....	4.00
Total expenses.....	17.75
Credit by 450 lbs. dried fruit at six cents.....	27.00

Net profit per day..... \$9.25

These figures allow only six pounds of dried fruit to the bushel of green apples, whereas good management may increase the proportion. The estimates for labor are very close, but from these two statements, fruit growers can readily figure out whether they can make any money in evaporating or not. My statements are made on the supposition that the whole business is managed closely, and that apples are not allowed to rot or machines to take care of themselves; nor have I allowed for the waste. Drying waste does not pay at the present prices. But if you use steam, you can make the waste into vinegar stock worth about \$3 a barrel, if the buyer furnishes the barrels. After the pomace has lain about six days, it can be pressed again, and gives about a quarter as much juice as at first, after which the pomace may be burned for fuel in any boiler furnace with a good draft, especially if a little coal or wood is added.

I do not think the many little cook-stove evaporating devices can be recommended at the present prices, as sun-dried fruit can be prepared quite as rapidly and brings very nearly as much as evaporated. Well-organized evaporating houses are the only reliable means of gaining a profit at this business, and one must be very sure of being right before going ahead. Our Western New York markets are now offering six cents per pound for evaporated apples of prime quality, at the evaporator, in sacks furnished by the buyer. This is as good as eight cents in New York City, as there is no packing freights or commission.—S. W. LOVELL, *New York, in Am. Agriculturist.*

How and What to Evaporate.

IN any process of evaporation the great desideratum, says the *American Garden*, is the application of intense heat in the first stage of drying, except in the case of grapes and similar fruits, where extreme heat will burst the skin and allow the juice to flow out—as the great heat will, by affecting the outer surface of the substance, form an impenetrable external coating, thus retaining the flavor and other desirable qualities of the fruit.

The best arrangement is to subject the material to a continuous current of hot air. This current cannot be made hot enough to scorch or burn the fruit, if it be kept in brisk motion; but let it become stagnant for a short time and the product will undoubtedly be ruined by the intense heat.

Raspberries we have found to be very profitable, as three quarts of the fresh fruit yield one pound of the evaporated, and this has a ready sale at a paying price. So, in case the market price for fresh berries is down, it is an easy matter to put them in such a shape that we can command better figures.

Corn, properly evaporated, makes a dish fully equal to that just cut from the cob, at a cost of about fifteen cents

per pound. Half a pound is sufficient for a family meal.

Pumpkins also make a good article, when evaporated,—fully equal to fresh ones for making pies, thus extending the pie season through the entire year.

Many other fruits and vegetables, which can readily be dried, have not taken a place in the market, or are not known in this condition to commerce. Among these are dried sweet potatoes, which those who have tried them like very much. When thus preserved, they are safe from frost or other contingency, and, although not in condition for being baked, are excellent for stewing.

How to Sulphur Fruit.

CONCERNING the use of sulphur in bleaching fruit the following information, from the *California Fruit Grower* is of interest.

The sulphuring box or closet must be tight jointed all around, with the door well battened at sides, top and bottom, the only opening being a vent hole about six inches in diameter in centre of the roof. Without the vent there is no current of air, and consequently no even distribution of the sulphur fumes. A slide to regulate the draft should be set in the vent hole. The width and depth of the sulphuring box should be adapted to the size of the trays in use in the drying field. For height, eight feet is as great as can be worked conveniently.

Burn the sulphur outside the box in a charcoal stove, such as is used for heating flat-irons, covering the top of the stove with a sheet-iron hood tapering to about four inches in diameter, where a pipe of four feet length can be slipped on and off. This pipe should lead into the bottom of the sulphur box at the centre, where the fumes will be delivered at proper temperature to save scorching the lower trays of fruit. The hood should have a door to take the sulphur pan in and out. To ensure

a good draft from the stove through the sulphur box, the stove should be set below the level of the box, and if the pipe trends upwards the draft will be increased proportionally.

For sulphuring, the fruit contained in a box 8 feet high by $3\frac{1}{2}$ feet square, two heaping tablespoonsful of powdered sulphur sprinkled upon a live coal and burned on a pan set in the stove, with lower draft open and hood door closed, is sufficient. Good results have been obtained from burning a mixture of two-thirds powdered sulphur, and one-third powdered charcoal. From twenty to thirty minutes is as long as fruit could remain exposed to the sulphur fumes to avoid deposit of metallic sulphur, and yet produce bleaching effect. Practice will train the eye to this, keeping in mind that the greener the fruit, the longer the exposure that is necessary.

Where large drying operations are in progress, a row of three sulphuring boxes can be served from one stove, operating them successively and having pipes made with sheet iron caps to cut off the communication with all but the one box which is being sulphured. Caps are better than dampers, as they entirely cut off the connections, although involving the slight trouble of unjointing the pipe to put the caps on.

Sulphuring preserves for a long time the bright, rich color of Apricots and Peaches, and the whiteness of Apples and Pears, and, when practiced as above described, not only imparts no bad flavor to the fruit, but actually enhances it by preventing fermentation; on the other hand, over-sulphured fruit, however beautiful, retains the sulphur taste to an offensive degree, proportioned to the extent of the over-sulphuring.

CIDER AND VINEGAR MAKING.

THE demand now is for a sweet beverage retaining the flavor of the fruit and beneficial to health. It is necessary then to keep cider sweet, and to do this, sound, ripe fruit is a necessity, for it is impossible to make first-class cider out of poor fruit.

The apples must be reduced to a fine pulp and pressed through cloths which retain all the pomace. The product then, after filtering, is ready to be stored in the cellar in barrels scrupulously clean; to sum up, good cider depends upon sound, ripe fruit, clean handling, clean packages and the best machinery.

Fermentation. Before taking up the process of preserving cider in its sweet state, let us consider the cause of fermentation. According to the germ theory of fermentation, certain microscopic spores that exist in the air, come into contact with the cider at the very

first step of its manufacture, it rots and the cider undergoes fermentation. Now in the case of using rotten Apples, which being filled with these organisms that have already induced decay in fruit, it is folly to grind them up with sound fruit and expect the product to remain sweet. These spores excluded in the rotten fruit, we find it easier to control the dormant spores that are in the cider. The racks and cloths, if sour, contain these active spores, and hence the necessity of steam or boiling water to destroy them, keeping the utensils entirely sweet and pure.

Fermenting spores apparently are much more numerous during those days described as "muggy"—close or sultry. On such days as these cider will ferment sometimes before it leaves the press. Clear days, therefore, together with cool temperature, are best for successful cider making. Hence,

we should plant varieties of fruit that can be made into cider late in autumn, or early winter; cider made in winter keeps sweet better than that made in early autumn.

Keeping Cider Sweet. The best and only method of preventing fermentation in early-made cider is by heating to 175° Fahr., and placing in an air-tight package and sealing up while hot, following the usual method of canning fruit. Cider put up by this process I have kept through the second summer, as sweet as when it ran from the press. The objection to this method is that it changes to some extent the flavor of the cider, and when opened for use it ferments just as does canned fruit. A method of preserving late-made cider is to add some antiseptic, advertised in the cider journals, which has, as its active ingredient either sulphur or salicylic acid, the latter being the most used. One ounce of the acid to thirty-two gallons of cider being the rule; the quantity being so small as not to be detected, and not injuring it for vinegar making.

Vinegar Making. One after another method was laid aside as useless or in-

expedient, and I have gone back to barrel manufacture, but have decreased the length of time over the old process in a very simple manner. The cider for vinegar made and barreled, the barrels are elevated into an upper story, and on the approach of winter one-third of the contents of each barrel is removed and placed in other casks, leaving the barrels two-thirds full. Then I leave the barrels and allow the frost to do its work, with no danger of bursting, as there is room for expansion.

In the spring, when thawed out, the barrels are rolled over in order that the contents may again be intermingled, and then allowed to stand. By May or June, almost every barrel so treated is excellent vinegar, while if they had been placed in the cellar over winter, many barrels would not become vinegar within two years. Do not, however, leave vinegar already made exposed to the frost. One object in having the vinegar in an upper story is to escape that pest of the vinegar-maker, the barrel worm.—H. M. DUNLAP, before the *Central Illinois Horticultural Society*.

THE EARLY PURITAN POTATO.

BY S. F. SELLECK, MORRISBURG.

SIR—You wished me to write you in regard to the Early Puritan Potato. I purchased a peck from Messrs. Henderson & Co., this spring, and planted one half of them giving the rest away to some of my friends. They are an oval potato in shape, white, and you can hardly notice any of the eyes. I cooked some when not quite ripe and found them much better than either Early Rose, Bliss' Triumph or Vicks' Extra Early. They came in blow five days earlier than Early Rose, and one week earlier than Bliss' Triumph or Vicks' Extra Early, and ripened about

the same time ahead of them all. The stalks stand very straight and firm when green and do not fall over until quite ripe. I planted them on May 10, and on August 10, they were ripe. This season has been a very hard one here, especially on early potatoes, as just the time the potatoes were setting we had a dry spell and, in consequence, potatoes are not much over half a crop, that is, early ones. The late potatoes are looking nice and green yet, and as we have had plenty of rain lately why they may do better. I planted Early Rose, Vicks'

Extra Early, Bliss' Triumph and Early Puritan, side by side, in my garden. The yield from nine hills of each, dug on August 27, was as follows—the potatoes in each case being cut into single eyes, and two pieces put into each hill: Vicks' Extra Early, nine hills, ten pounds two ounces; Bliss' Triumph, nine hills, fourteen pounds six ounces; Early Rose, nine hills, sixteen pounds six ounces; Early Puritan, nine hills, twenty-four pounds. The ground was not fitted up in any way extra. The only thing, I put a little salt and ashes in each hill, not with the seed, but after a little earth had been hauled on to the seed. I am very much pleased with the Puritan and think it will pay any one to get the same as soon as they can. I have not had time to weigh up the net amount of potatoes from the half peck yet, but I intend doing so and will let you know in another number. If there are any of the readers of the HORTICULTURIST, who would like to know anything more about this potato I will be pleased to answer any questions, through the columns of the HORTICULTURIST. I am going to plant all I raised, next season, and plant no other potato. I had one drill each of Puritan and Rose side by side—the potatoes in each case being cut to single eyes and put in ten inches apart in the drill. The drill was made six inches deep, the seed partly cov-

ered and a little salt and ashes put on the ground on top of the seed, then more ground hauled in. The yield from thirty feet of drill was: Puritan, thirty pounds two ounces; Early Rose, twenty-one pounds seven ounces. My soil is a heavy clay loam, but next season I am going to plant in a piece of sandy loam and see how they will turn out. The potatoes, Puritan, are much larger than the Early Rose and the eyes are not nearly so deep. I can give you an account of their keeping qualities near spring, and will cook some about the middle of March or April and report on them again. I think by this time your readers will say, let up on the Puritan potato and give us something new. I will do so and begin with a novelty in the tomato line called Tree Tomato. I sowed the seed in a box in the house about the first week in April. When about three inches high, transplanted it into the garden and at the time of writing one of the plants (of which I had three out of a package of seed) has one tomato on, wrinkled and about one and a half inches across. If they do no better other places than here I would say, don't squander any money on Tree Tomato seed. I have grown this season for the first the Cinnamon Vine and am delighted with it. It has made about twelve feet of growth and is a very pretty climber.

MISCELLANY.

Fraudulent Apple Dealers.

A Montreal gentleman now on a trip to England, writes to the Montreal *Witness*: I would hardly have been induced to send you even a few lines so early but for one reason, one which I feel is of some importance to at least one interest in Canada—the exportation of fruit. I am not at liberty to give the name of my informant, but the

facts can be implicitly relied upon. The importations to Liverpool, by the several lines of steamers, of Canadian apples, is fast becoming one of the big booms, because for some time honesty was down to the bottom of each barrel, but last year some of the Canadian growers caught the Yankee infection, and thousands of barrels, when opened on the dock or on the market, were

found to contain one layer of fine pickled fruit on top and rubbish or rottenness beneath! No doubt our Montreal exporters were cheated too. It is not the custom of Montreal merchants to do such business. It is done in the orchards, and I would suggest a thorough inspection of the fruit, and the imposition of some punishment, if possible, for such fraud. My informant says he saw buyers, who were twice caught, insisting upon the Liverpool dealer turning out the apples, and on many occasions not one barrel was found to contain anything like the fruit bargained for by the purchaser, except in one deceptive layer on top. It will ruin the Canadian trade in apples if it occurs once more."

Our President's Trip West.

MR. A. McD. ALLAN, President of the Ontario Fruit Growers' Association, is on his way to Manitoba, the Northwest, and British Columbia to make observations with regard to fruit-growing in our western possessions and to judge and report on its capabilities. Mr. Allan is an experienced horticulturist and acted as fruit commissioner at the Colonial Exhibition in London. He says from what he has heard he has great faith in the capabilities of our Northwest as a fruit-growing country, and thinks that good might come of engrafting the wild fruits of the prairies with our tame varieties in Eastern Canada. He will stay over at Winnipeg and all the prominent places in the Territories to gather data and collect specimens of shrubbery, the forest and flora indigenous to the country, paying particular attention to the water courses. From thence he will proceed to British Columbia, and may probably visit California and make comparisons. Mr. Allan expects to be away four or five months. He is not on a government mission, but is going personally as one interested in the fruit industry of the Dominion for, if possible, more

enlarged information. He has hopes that his mission will be able to supply information that will be valuable to all fruit-growers, in Ontario as well as in the Territories. Mr. Allan will study the soil, the climate, and all that pertains to the capabilities of the Northwest and British Columbia.—*Globe*.

Healthfulness of the Grape.

"THE quantity of sound grapes," says Dr. Irving, "one may eat with impunity is something astonishing. Persons at the Continental Grape cures consume from six to twelve pounds daily. Grapes constitute a perfect nutriment which includes in remarkable proportions the nitrogenous albuminoid and respiratory principles indispensable to a good alimentation. According to the analysis of a French chemist, a striking analogy exists between the juice of the grape and woman's milk. Some of the affections which the grape may be used for, as a reparative medicinal agent of great value are those arising from troubles in the digestive function, diseases of the liver, etc. In fact by using the luscious but inoffensive grape, you can re-establish the physiological conditions of clear thoughts and correct expression."

Fruit for Luncheon.

Few people, I find, realize the benefit to be gained from a free use of fruit. Now, I would suggest that the child, rather than the mother, be held responsible for the preparation of the daily lunch, but instead of sending him to the pantry for bread, meat, cake, etc., I would suggest that he be sent down cellar or out into the field for some ripe apples, pears or grapes. A moderate supply of sound, ripe fruit, together with one or two graham gems, make a luncheon far more healthful and appetizing than most of the lunches that find their way into the baskets of many of our school children.—*Ex.*



THE CULTIVATION OF THE PANSY (COMBINED).

BY HERMANN SIMMERS, TORONTO.

IN the August issue of *THE HORTICULTURIST* mention was made of the different modern sections into which the Pansy is classified, also a general outline. In this issue I purpose giving some points as to the best mode of cultivation. I would have liked this to appear in the September, as it would have suited the time of sowing better, but even in the first mention of the subject, some of the general growers will have been reminded of the fact that they should start the seed in August.

Sometimes people leave their old hot-bed frames remaining in the place where they have been started, and I could not suggest a more convenient bed in which to start their seed. After cleaning the weeds and such old plants that may, perhaps, be remaining, you proceed to sow the seed about three-quarters of an inch deep, in rows of four to six inches, or very similar to the way the annuals have been started. Again, with such seeds as have been sown in the hot-bed during Spring, afterwards when the bed has been nicely dampened, you may cover it with hot-bed sashes, allowing a good deal of air during daytime. Keep the bed so covered until the seed has commenced to germinate, then gradually removing the sashes so that the plants may become gradually hardened off. Sometimes the glass is either whitewashed or a canvas cover is tacked over the glass, to keep the intense heat off the young plants. I might here add that the months of July or August would be the best to sow seed so that the plants may be sufficiently strong to stand our extreme cold winters.

After removing the sashes, great care must be used not to do this too quickly, as the plants will burn very quickly; but this may be done by each day gradually lessening the number of hours that you allow the sashes to remain on. When you have successfully accomplished this care, and when the plants have got as far as their fourth, fifth, or sixth leaf, plant out on some cloudy day to any medium shady place in the garden. They may then be said to have arrived at a sufficient stage to stand the winter and allowed to remain there until spring; a very light covering of litter is all that is necessary to protect them during winter, do not put too much on, as it is pretty sure to rot the plants. The period from sowing until transplanting time should not be longer than six weeks. Sometimes it may take longer to develop plants, but not, on an average, with good care. After removing the litter in spring, and having found the plants to have stood the cold, again take up your plants and transplant to the place you would wish them to flower in, when I am certain you will have plants flowering freely the whole summer.

Some people may fancy this is rather a long way to start pansies, but I have plants grown in this way that are flowering just as freely now and almost as large a flower as when they were started in the spring, and the plants are strong and healthy and probably will throw quite a considerable number of flowers next year; try this and you will be more than repaid for your extra trouble. Pansy seed may also be started in the greenhouse or conservatory during the months of January

or February, and grown in boxes similar to other annuals, that is, pricked out after being strong enough, then transplanted to open border in spring; but the plants rarely have the same subsisting power as those have that were planted in the fall. This stands to reason, as the frequent transplanting and the longer growth gives the plant much more time to properly develop itself. A point that was overlooked, and which is valuable to any person wishing to raise large flowers is that by picking off all the flowers, that appear in the fall and allowing the plant to develop, the flowers will be very much larger the following season, and this larger flower will also be more lasting. The Pansy is such a universal favorite and oftentimes people will sow without these precautions being gone into, that they have found sowing pansy seed an

unsuccessful pleasure; but follow the plan of sowing in the fall and no person need be dissatisfied with the result. Many amateurs may say we have been so much disappointed by our attempts at growing that we would sooner buy the plants, but right here is where the error lies, for with but a few cents seed can be bought, so many hundred plants may be raised, and so much more pleasure, whereas in buying the plants the expense is so much more, people are checked in growing the quantity they would desire to have.

I trust many will take advantage of the method of growing the seed in the fall, when I feel confident they will be as well repaid in the pleasure in having a larger quantity of this really beautiful flower as I have in endeavoring to be as explicit in the cultural directions.

ROSE GOSSIP.

BY F. MITCHELL, INNERKIP, ONT.

THE present, or lately passed season, has been one of the best that Canadian rose-growers have ever known. The wood of even the most tender kinds of out-door roses came out in the spring uninjured by frost to the very tips of the branches.

The display of bloom in the latter part of June was such as could not be excelled in what are considered as more favorable climates. Since the first profuse blooming the display of bloom has been very meagre. This is, I think, chiefly owing to a disease which is new to this locality, and which first made its appearance about the end of June. Black spots appear upon the leaves, and the affected leaves quickly lose their vitality and drop. At the present time my bushes are denuded of leaves, excepting a few at the top of each branch.

If this disease or blight does not quickly terminate it will seriously

affect the preparation of roses from cuttings for this year. Propagation with me has been almost a total failure so far this summer.

As I have before stated, I am becoming very cautious in recommending or denouncing any particular variety of rose. I find that almost every variety succeeds better, (or worse), one season than another. Last season the Baron de Bonstetten was far ahead of any other very dark variety. This season Jean Liabaud eclipsed every other rose of its color. In rose-colored varieties Gabriel Tournier (which last year did not open well) has this season given a profusion of beautiful, perfect blooms, unexcelled perhaps by any other variety. Madam Noman among whites has this year not been up to its usual high standard. I will digress here and mention that this variety, (as the Hon. Mrs. Lambert remarks in her very excellent paper in the May number of THE HOR-

TICULTURIST) is very difficult to procure. As it is difficult to propagate, and a poor grower, such nurserymen as are not very careful of their reputation, or very sensitive in conscience, generally supply something else nearly of the same color, usually something of the Coquette des Alps type, which is very easily grown.

Her Majesty has bloomed with me this season for the first time. It is a fine, large, bold and very double flower.

Puritan has also bloomed with me. It is not quite as large a rose as I ex-

pected to see, but in all other respects exceeded my expectations. It is apparently a valuable addition to our small list of good white roses.

One of the latest arrivals of all, Mrs. John Laing, has bloomed freely with me. It is a thoroughly good, free-blooming rose, somewhat similar to Francois Michelon, though not quite so deep colored. The new tea rose, Meteor, has also bloomed with me. The color is good, but the blooms as yet have been small, and the fragrance not as strong as could be desired.



THE CLIMATIC RANGE OF TREES.

BY FORESTER.

ONE of my friends, lately removed from London, Ont., to the Capital, said: "It is just as cold in London as in Ottawa, only there is more snow here." "Wait," say I, "just see the difference in the trees." "Well, that is one way to look at it," said he, and abandons the argument.

When the fruit grower finds the peach will ripen west of Toronto, but not east, even on the lake shore, he will see there is a very slight, but still some difference in the climate, not perceptible, and perhaps not of a kind to be learned altogether from the meteorological reports—a tree planter, as well as the fruit grower, will tell from the success of his varied stock, all the diversities of temperature, moisture as well as wind and soil.

For practical success in either, a careful study of the native trees and fruits is the safest guide. After a little experience is gained, it will be of profit to try many other trees, not yet known

to be hardy in the locality; and persevere in the experiment, as frequently a variety a little more hardy than its nearest relatives, may be found.

I cannot say that for profit it is desirable to plant any trees not known to be native to the locality, or near it. In this country new plantations are yet in their infancy, and offer no results to guide us, and in the meantime we must go on planting what we are sure of and experimenting with all others we have any hope of. The Catalpa is a foreign tree, of doubtful hardiness, though I have seen a good tree raised from seed grown at Hamilton, Ont. I have not been far enough south yet to find a Catalpa on which the tip of every limb was not frozen back more or less, and I think it took an experimenter, Dr. Warder, many years to find a variety that was hardy in Ohio. The Catalpa Speciosa introduced by him seems to answer there, and is worth trying in Ontario, but there is a great

difference between Ohio and Ontario. The Ailanthus has run wild in Ohio, but freezes like a tender rose in Ontario. The Sweet Potato is a main crop there and a curiosity here. Ohio seems to have been the home of the Black Walnut—its soil and climate exactly right for it, though the tree grows well from Ottawa to the Gulf of Mexico. The Ash is another tree of great range, moves all over North America without trouble. The Pine seems equal to storms of the north as well as heat of the south, but all trees, like any other emigrants, do not like to move too far at once, and a variety of any tree may be found quite hardy in Canada West, when brought from a northern limit of its natural growth, when the very same variety from Southern seed will fail. Within a still shorter range some individual trees may come out hardy, (like persons with a good constitution) yet all others grown from the same lot of seed may fail; nurserymen take advantage of this to propagate by grafting from the hardy individual instead of sowing seed. A good deal of disappointment about the Russian mulberry has been caused by a neglect of this care. It certainly grows in colder countries than Ontario, and has been introduced at high prices in small lots here to all fail in a year or two.

Nurserymen seeking novelties, and urging them upon the inexperienced, have done a great injury to the fruit interests, as well as to forestry and tree growing. I have a bill of complaint against the largest nursery in Ontario for sending me a lot of trees at seventy-five cents each, which they

knew could never grow here. Well, they lost money by it as well as myself, and I know better now.

For purely ornamental planting the choice of trees may be very extensive, and may include almost any tree, not tropical, in so many places in cities or near houses. The temperature never falls to the real level of the latitude and even one of these unusual trees is a great improvement to the collection; but alas, how few lawns or parks in Ontario can boast of a collection of trees of any kind. Is there one where any good reason can be found for the choice or position of even one tree, or even for the shape of the land on which it grows. This leads me to think of the size, color, growth, season and life of trees, and what can be done either in a park or plantation with the native trees of Ontario only, and hope that someone may find enough even for one lawn and go and try it.

NOTE.—Forester writes from Northern Ontario, and from his point of observation is correct in his statements concerning the Catalpa, but in Southern Ontario this tree thrives well. Even the Southern variety, *Catalpa bignonioides*, succeeds at Grimsby, a favored spot on the southern shore of Lake Ontario; the writer having a tree some twenty-five years planted, and perfectly hardy. The hardy *Catalpa, C. Speciosa*, is reported successful at Goderich and Collingwood; it was distributed for testing in the spring of 1885, and the members of our Association should now be able to report upon it from all sections, and we hope they will do so. The Chinese *Ailanthus* is also perfectly hardy at Grimsby.

ARBORICULTURAL.

Moving Large Trees.

A CORRESPONDENT of the *Country Gentleman* writes inquiring the best method of moving some swamp maples eight to ten inches in diameter, from a swamp to his lawn, a distance of 1,000 feet, with roots intact. Believing the reply to be of interest to many of our Canadian readers we give it in full :—

“There are two modes of removing large trees, represented by the accompanying cuts. Fig. 79 shows the way in which it is done by lifting the tree from the ground in an erect position, drawing it on wheels to its place of destination, and dropping it into the hole previously made for it. The tree is first loosened by digging, then lifted with the lever *b*, the trunk being wound with carpet or sacking, or with straw, to prevent bruising by the chain, which raises it to the hinder wheels of a common farm wagon, run up to the tree from behind. Chains attached to the axle then enable the horse (or horses) hitched to the whiffletree *a* to draw it. This mode applies well to the removal of evergreens as well to deciduous trees, the branches of which need not be disturbed on account of the erect position. In either case, the tops should, however, be made lighter by cutting in the branches so as to present an even natural top. The other mode is represented by fig. 80, and applies mainly to deciduous trees. The tree is first entirely loosened by digging, and the two wheels (with the tongue) are run up against it. The top is tied into a compact shape, and the tongue of the cart placed erect against it, and both tied securely. They are then brought down horizontally, thus lifting the tree quite out of the ground, and it is then drawn to its desired place, and lowered in the same way that it was lifted. We cannot promise our correspondent so vigorous a growth for the trees as he desires. However careful and well-conducted the removal is effected, there will be a great

check given. Trees six inches in diameter and twenty feet high, have thrown out their roots at least twenty feet in every direction, thus occupying a circle forty feet in diameter. A very small part of this broad circle of roots can be secured and carried with the

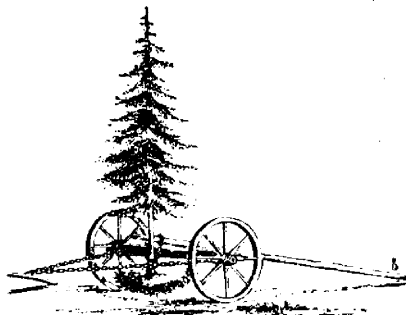


FIG. 79.

tree, and a considerable check must be given. The tops of the trees must be lightened by pruning, retaining a symmetrical form, to correspond in part with the necessary mutilation of the roots. Trees of the size mentioned should have a removed circle of roots eight or nine feet in diameter, and the soil above the roots may all be taken off down to the mass of the fibres to lessen the load. Those from a sheltered swamp

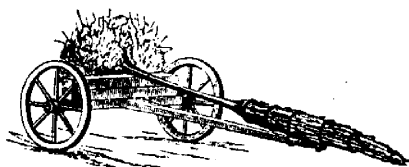


FIG. 80.

would be too much exposed to the winds of winter if removed this fall, and the work should be left till spring. Trees two or three inches in diameter may thus be removed with comparative ease ; but with a diameter of half a foot, the labor and difficulty are greatly increased.



The Canadian Horticulturist.

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.

Notes and Comments.

RELIABILITY OF COMMISSION HOUSES.

—We sometimes receive inquiries respecting the reliability of commission houses advertising in this journal. We shall use great care to admit to our columns only those whose standing is first-class, and so soon as we hear anything unfavorable concerning any of them we shall lose no time in giving notice to our readers. We shall thank any of our readers for information in this line which may prove of general benefit. Regarding the standing of Messrs. Pitt Bros., advertising in the September number, we have so far failed to secure any satisfactory information.

THE WINTER MEETING AT HAMILTON.

—Our friends of this "Ambitious City," seem much pleased at the prospect of another meeting of our Association there; and will, we doubt not, do everything in their power to make our meeting one of unusual interest and profit. Should the proposed Dominion Convention of Fruit Growers take place as proposed at Montreal on the 7th of January, our meeting at Hamilton will

be held in December; otherwise in February.

The first session will be held on a Tuesday evening, when the retiring President, Mr. A. McD. Allan will deliver his annual address, and the election of directors and officers will take place. The Wednesday and Thursday following will be devoted to discussion of topics which may be classed under the head of fruits, flowers or forestry. We shall be much pleased to receive, at once, lists of subjects, or questions for the meeting, so that they may be entered upon our printed programme.

THE PLANT DISTRIBUTION for next spring is, we think, an unusually valuable one, and although primarily intended only for general testing and reporting upon new varieties, is indeed no mean advantage to be considered by those who are invited to become members of our Association. Now is a good time for securing a list of new subscribers in every town, and we will cheerfully send sample copies and blank forms to those applying. In place of commission for the trouble of securing new names, the club raiser may take

from the list below one choice for each new subscriber.

1. *The Vergennes Grape*.—Colour, light amber; productive; fine for winter use; one year old.

2. *The Winter St. Lawrence Apple*.—Supply limited.

3. *The Princess Louise, or Woolverton*.—A most beautiful Christmas dessert Apple, rivalling the Maiden's Blush in beauty and excelling the snow apple in quality; new; one year old.

4. *A Hardy Rose Bush* either *Gabriel Tournier*, a comparatively new standard, deep rose coloured variety; *Baron Bon Stetten*, maroon; or *Paul Neyron*, the largest variety in cultivation.

5. *A package of Winter-flowering Bulbs*.—(To be sent out in November, 1888). Containing one Polyanthus *Narcissus*, *Grand Monarque*; one *Hya-cinth*, *Crimson Belle*; and one *Anemone*, double.

6. *Two Chinese Primroses*.—Different colours.

7. *Package containing Japan Ivy* (*Ampelopsis Veitchii*), the most beautiful of all creepers for a stone or brick wall, needs no support, colors gorge-

ously in autumn; and *Geranium*, double scarlet or double white.

8. *Four Strawberry Plants*, viz:—Two Logan and two Itasca. Two new seedlings, produced by J. H. Haynes, of Indiana. The Logan is claimed to be very productive, excellent in quality, and for keeping and shipping unequalled. The Itasca is a seedling of the Manchester. Our hope is to see a general effort all along the line, to extend our membership, so that we may feel justified in carrying out our plans for the improvement of this journal for the year 1889.

MR. GEORGE CLINE, of Winona, is a successful plum-grower in the Niagara district. He has now 3,500 trees planted out in an orchard for market purposes, a portion being now in full bearing. His soil is largely clay loam, and in parts sandy loam, and seems well adapted to plum culture. We value highly such information as grows out of practical experience, and have prevailed upon Mr. Cline to open the subject of "Plum Cultivation for Home Use and Market," at our winter meeting at Hamilton.

QUESTION DRAWER.

Grape Vine—Leaf Hopper.

100. By to-day's mail I forward specimen of a vine leaf infested by a species of white midge, the leaves of which look brown and die. Some years since my rose trees were affected, year after year, in the same manner, so much so that I dug up a fine collection. On touching the leaves, the pests, which are innumerable, fly off. Can you inform me of any cure, and oblige. THOMAS SUBBALD, *Sutton West, a member of the Fruit Growers' Association.*

The insect referred to in this question is the Leaf Hopper, referred to on pages 148 and 151 of this volume.

Books on Fruit Culture.

101. WOULD you please inform me where I could obtain Downing's work on Fruit, and at what price?—JOHN E. RICHARDS, *Apluer.*

For this and other Horticultural and Agricultural works, write to the office of the *American Agriculturist*, 751 Broadway, New York.

A Proposed Bill to Regulate Fruit Packages.

102. DEAR SIR,—It seems to me it is time something like the annex were on our statute books. This is a rough, off-hand draft, and doubtless could be amended to meet the demands for honest dealing. An Act ever so stringent will commend itself to honest fruit packers, like the members of the Fruit Growers Association, and it will also to the better buyer. I hope we soon will have some protection.—G. FAWCETT, *Ottawa.*

An Act respecting the Packing of Green Fruits.

All fruit shall be sold by measure or weight.

When it is expedient for transportation purposes, to use bands, crates, boxes, baskets, or other package, such shall be of uniform size of its kind, and shall hold a specific quantity, which shall be stamped upon the package in such a way as to be easily seen by the purchaser.

Barrels containing apples, and pears or other fruit shall be of such size as to contain two bushels and one half-bushel. Baskets shall be of such size as shall contain one and a half pecks.

Boxes containing strawberries, raspberries, blackberries, cherries, and other such fruit shall contain one quart. Each measure shall be Imperial.

Fruits sold by weight shall have the net weight legibly stamped on the package.

The name of the packer shall be stamped on every package.

All fruit shall be sound and healthy.

Apples shall be sound and of uniform size and kind.

Any person selling, or offering for sale any fruit in contravention of the provisions of this Act, shall be liable, upon conviction before a court of competent jurisdiction, to a fine of twenty dollars and forfeiture of all the fruit so sold or offered for sale, for a first offence, and \$100 and forfeiture for a second offence, and so on, for each offence.

No doubt there is just ground for such complaint as Mr. Fawcett makes, on the part of consumers of fruit, and the proposed Bill, with some amendments, can do no harm. We do not, however, see the necessity of making an absolute size for any package, providing the number of bushels, pecks, quarts or pounds is stamped upon it; the one would surely suffice without the other. Nor should a size different from that now generally used, be made compulsive. The apple barrel now used in Canada holds $2\frac{3}{4}$ bushels, and nothing would be gained by making it smaller. An imperial quart might be a proper size for a basket to contain strawberries, blackberries and cherries, but it would certainly be too large for raspberries.

That all apples in a barrel should be sound when offered in the market would also be *ultra vires* so far as legislation is concerned, for fruit leaving the orchard in a sound condition might be very much decayed by the time it reaches its destination, especially when shipped as ordinary freight. We have shipped pears perfectly sound to Mont-

real, and a week's delay upon the road turned them to mush by the time they reached that city. Neither should the grower be prohibited from packing more than one variety in a barrel, else often a barrel of apples would be unmarketable just for want of enough of one sort to fill it.

That the package should be uniform in size and quality with the *face appearance* should, however, be insisted upon, for deceptive packing is as hurtful to the best interests of the grower, as it is deceiving to the buyer.

Seedling Plum.

103. I ENCLOSE to your address a small sample of a seedling plum, raised by Mr. R. Topham, of Elora. This is the fifth year of bearing, and it has not showed any sign of Black Knot, Curculio, or any other disease the plum is liable to. It is a strong, healthy tree and a good bearer, and we would like your opinion of it.—W. GAY, *President Elora Horticultural Society.*

The plums came to hand in such bad condition we can scarcely give a decided opinion, or description of them; but aside from the good qualities mentioned above we see nothing in the plum to commend it. It is a comparatively small green plum, smaller than Reine Claude, and inferior in quality to it or to Coe's Golden Drop, and a clingstone. Possibly its immunity from Black Knot and Curculio, and its productiveness may commend it to planters.

Protecting Grapes From Frosts.

QUESTION No. 94 referred to the protection of grapes from September frosts, and the following hint from the *Vermont Watchman* may be of service: "A friend in Northern New England is very successful in growing grapes, and bringing them to full perfection, on the south side of a tight fence. The vines are trained upon wires attached to the fence-posts. Early varieties (Moore's Early, Delaware, Brighton, Salem, Eumelan, Adirondack) are planted. Frosts are not uncommon in September

but by the use of a wide, shelf like, but slightly sloping board, projecting from near the top of the fence, from the edge of which is hung a curtain of any sort of coarse cotton or bagging, the vines are perfectly protected from them until

the succeeding warm days have thoroughly ripened the fruit. The curtain has often to be hung up but once, and never more than three times. The trouble and expense are but trifling."

OUR FRUIT MARKETS.

Covent Garden Market.

SIR,—The ruling prices of apples at Liverpool have been fairly steady, considering that the early fruit does not generally arrive in very sound condition. Up to the time of writing we have not received any Colonial or American apples for sale in this market—and we can well do without them till the beginning of next month at all events. There is no doubt a great desire on the part of shippers to commence shipping the earlier fruit, as we are reported in short supply, but shippers must not be led away with the idea that our market will absorb much of the inferior fruit, especially if the weather here continues more genial, as it has been recently; no doubt a large proportion of the earlier fruit will be wanted, but unless shippers are careful that all "Fall Apples" are sent perfectly sound and hard, and avoid shipping if the weather is very warm, the fruit well picked and packed perfectly dry, our shipping friends will be disappointed with the results, as there is every chance of them arriving in bad condition. Gravensteins or large cooking apples will be much wanted in the earliest part of the season.—J. B. THOMAS, London, Eng., 14th September, 1888.

Toronto.

THE following quotation of prices current from a Toronto daily of Sept. 19, agree so well with our own sales of the same date that we quote them in full.

Fruit and Vegetables—The fruit season is now at about its most active time and this is especially so of peaches. All kinds of fruit are arriving in quantity, but the number of peaches coming in daily is something enormous. The steamer Chicora, from Niagara, brought over 5,000 parcels of fruit to-day and it is safe to say that at least four-fifths of this quantity were peaches. Every deck of the boat was covered and they were piled all over the wharf wherever space could be found for them. The steamer Cibola, which was laid up, left this afternoon for Niagara for a cargo of fruit, so arrivals to-morrow may be counted on as large. Grapes and peaches form the largest supply at the fruit market at present, a good quantity of

the former also coming in daily. Both grapes and peaches are selling lower, and it is not improbable that peaches may still further decline. The price, however has been held up well. Dealers are giving the most of their attention to the peach trade at present.

Peaches—Were very active and plentiful. Of the very large quantity that was offered but few were left unsold at the close of the market. They are arriving in quite good condition. Canadian Crawfords sold at 75c. to \$1 per basket and common at 50 to 75c per basket.

Plums—There was a good supply and a good demand. Common blue are quoted at 75 to 85c per basket and finer at 75c to \$1.

Pears—Preserving pears are quoted nominally at 40 to 50c per basket. There is no great demand for them. Bartletts sold at 60 to 70c per basket and \$5 to \$5.50 per bbl.

Apples—Are slow, and receipts are not very large. They are quoted nominally at \$1.25 to \$1.50 per bbl. for cooking, and \$1.50 to \$2 per bbl. for eating. Crab apples are almost unsaleable at 20 to 25c per basket and \$1 to \$1.50 per bbl.

Grapes—Were plentiful and lower. There is quite an active demand. Concord sold at 2 to 3c per lb., Niagara at 5 to 6c per lb. and Delaware at 4 to 5c per lb.

Tomatoes—Are slow and unaltered at 20 to 25c per basket for Acmes. Few are arriving.

Montreal.

MESSEURS VIBOND, McBRIDE & Co. write under date of Sept. 19, quoting prices as follows:—

Pears—Have been a fearful glut and are only now improving a little. We quote Bartlett's 4 to \$8 as to quality, F. B's 3 to \$5 as to quality.

Apples—All kinds \$1.25 to \$1.50.

Plums—\$1.25 to \$1.50 per basket.

Peaches—\$1 to \$1.50 as to quality.

Liverpool.

MESSEURS GREEN & WHINERAY send catalogue of sale of 132 apples sold in Liverpool on the 3rd September, 1888, for which we quote: Ribstons \$3 to \$3.75, Kings \$4.50 to \$5, Black Detroit \$5. Other kinds lower prices.

REVIEW.

The Dominion Illustrated is a new and most attractive illustrated journal, published by G. E. Desbarrats & Son, 162 St. James St., Montreal, 16 pages, folio. The engravings are executed by the new process of photo-gravure, which gives each number the appearance of a collection of first-class photographs. The subjects are chiefly Canadian scenery, or distinguished Canadians. Among recent engravings are "Les Troux Falls," Murray Bay, Victoria Square, Montreal, Public Gardens, Halifax, Sandford Fleming, Chancellor Queen's University, Kingston, Hon. Edward Blake, etc., etc. Such Canadian enterprises deserve the hearty support of all Canadians.

Transactions of the Massachusetts Horticultural Society for the year 1887, Part II., R. Manning, Boston, Secretary.

Thirteenth Annual Report of the Montreal Horticultural Society, 1887-8. W. W. Dunlop, Montreal, Secretary.

CATALOGUES.

Price List for Fall of 1888 of Hardy Bulbs, Winter-flowering Plants, etc.—Webster Bros., Wentworth St., Hamilton, Ont.

The Miami Strawberry.—J. D. Krusche, Box 824, Piqua, Ohio.

Bulb Catalogue.—Fall, 1888, John Lewis Childs, Floral Park, Queen's Co., N. Y.

For the CANADIAN HORTICULTURIST.

MORNING.

By GRANDMA GOWAN, MOUNT ROYAL VALE, P.Q.

DEAR SIR,—I send you a little burst of joy and praise I indulged in this lovely morning. I look on nature with very loving eyes, altho' I am growing very blind and I never use glasses. Ah well, the dear Lord, whom I love, will (I am certain) let me have all my senses till my travelling days are over. I am very grateful for the length of days he has given me. I will be 73 on March 10th next.—GRANDMA GOWAN, GOWAN COTTAGE, Aug. 6, 1888.

HAIL bright harbinger of day ;
 Resplendent orb of light !
 Whose golden beams doth chase away
 The sable shrouded night.

The crystal dew hangs on the flowers,
 How sweet the glowing thorn,
 Ah ! who could waste, in sleep, such hours,
 'The cheerful dawn of morn.'

The feather'd songsters of the air,
 Their matin hymn doth raise,
 The warbling little brooks declare
 The great Creator's praise.

The flowers in ecstasy upfling
 Their fragrant incense high,
 Alas ! that man should fail to sing
 A holy psalm of joy !

Arise, and greet the new born rays,
 And climb the upland lea,
 Join in nature's song of praise,
 In nature's Jubilee !

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