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GRAND DUKE.

One of the handsomest of all the European varieties ; has been sufficiently tried in this country and can be recommended as one of the best in every way.

THE
Canadian Horticulturist

Vol. XVIII

1895.

No. 4.



THE GRAND DUKE PLUM.



WHEN once our ten Fruit Experiment Stations are in full operation we hope to be able to introduce to our readers only such new fruits as have been well tested at these stations, and proved to be worthy of notice. Our Plum station in the Georgian Bay district, at Clarksburg, will this year be furnished with a full list of varieties, and among them the Grand Duke, which is being introduced to Canadian fruit growers by the frontispiece in this

number.

The Grand Duke Plum comes to us from England, and is thus described by the celebrated horticulturist, Mr. Thos. Rivers: "A seedling from the "Autumn Compote." A very large purple plum, ripening October 10th to 20th. Flavor very fine, and will prove a very valuable addition to late plums, either for the market or the private garden."

This plum has been grown largely by Mr. S. D. Willard, Vice-President of the Western New York Horticultural Society, and in reply to an inquiry, he writes, under date 19th Feb., 1895: "Now as to Grand Duke plum. It so far has shown itself entirely hardy here, is a great producer of beautiful fruit, even and large in size, and which, by reason of its appearance and lateness of season sells well at outside prices, but the tree with us is such a poor grower in the nursery that it will scarcely become popular with the tree dealers, who, really now control the sales. And purchasers expect that every variety will show the same habits of growth as the Lombard, hence this, as well as many other valuable varieties will not be grown to any extent by nurserymen unless it develops better growing qualities elsewhere than here."

We have also to record the experience of a noted Ontario plum grower with this variety, viz., Mr. J. K. Gordon, of Whitby, who writes as follows:

"Though my experience in the growing of this plum has not been fortunate, I am inclined to regard it very highly. In 1888, on seeing favorable mention made of it by Messrs. Ellwanger & Barry, I received from them a few scions, from which I propagated several fine trees and grafts, but lost all of them but two grafts—one of which was inserted in a bearing tree, and the other in a small seedling which was protected by the snow—by the severe weather of December, 1892, and of January and February, 1893. The graft on the bearing tree, though apparently dead, also revived the following summer, and bore about twenty-five plums, which, though much shaded by surrounding branches, attained a good size and appearance, and a sample of them I exhibited in two of my collections of plums which took first prizes last year at the Industrial Fair at Toronto, and at which the judges, I was informed, regarded my Grand Dukes with much favor. In appearance, quality and size it resembles the Bradshaw somewhat, but I think its color, when grown in a more favorable exposure, will be darker than that variety. It ripened ten days before the Peach plum. Messrs. Ellwanger & Barry reported it exempt from rot, but I did not find it so, as several samples decayed very badly."

Mr. John Craig, Horticulturist at the Central Experimental Farm, Ottawa, writes on the 15th ult. as follows: "I can give you very little in the way of personal experience regarding Grand Duke plum. It was discussed at the meeting of the Western New York Horticultural Society, Jan., 1893, where Mr. S. D. Willard included this variety in a list of twelve best plums. It was included principally on account of its lateness and handsome appearance, as well as good quality. It was not included, however, in a list of the six best plums, offered by the same gentleman. The tree, in common with most other varieties of *Prunus domestica*, has failed at the Experimental Farm. I may say that it is being planted to a considerable extent, partly, I suppose, on account of judicious advertisement, in the Annapolis Valley, N.S. I have always been impressed with the handsome appearance of the fruit."

THE HOWEL PEAR.

In the October number of the HORTICULTURIST of 1893, I was much pleased to see a beautiful cut of the Howel pear. Having had a remarkable experience with it, I relate it for the benefit of others. About 30 years ago I planted 75 pear trees, mostly standards. There were about 15 varieties, and among them the Howel. In 10 years one half had blighted and died, in 20 years there were only five left and in 25 years every one was dead but Howel. It is still living and bears a full crop of perfect pears almost every year. The tree is not large, it has borne so very heavy that the growth of wood has been slow.

The soil is a gravelly loam; about three feet below the surface is a bed five or six feet deep of dry open gravel, just above the gravel there is ten to twelve inches of pretty stiff clay.

St. Marys.

S. H. MITCHELL.

CANADIAN ASHES FOR CANADIAN FARMS.



THE agricultural papers are well supplied with standing advertisements of dealers in Canada hardwood ashes, and to us at a distance the question occurs, "Where do all these ashes come from?" Not from the marts of trade, because the fact that they are ashes indicates a large destruction of the products of the soil of Canada. They must come from the farms of Canada, but one can hardly understand why the Canadian farmers should thus sell for present advantage the fertilizing elements from their soil, which sooner or later they must buy back at a much greater cost. For although the Canada ashes cost the consumer at a distance far more than their percentage of potash is worth, we are told that the price received by the Canada farmers for these ashes from collectors is very low. We once bought a car load of these ashes, which analyzed much higher than the samples now offered for sale. They were delivered to me for \$15 per ton. With the freight taken off, the actual price paid to the importer was not over \$5 per ton, at which price the actual potash they contained was cheap enough. But if the importers were satisfied to get this price, for how little a sum must the Canada farmer have parted with the fertility of his soil, for the expense of the collection and storage and importation of these ashes must be very heavy. So I have figured out in my mind, that the Canada farmer got, not over two cents a pound, for the actual potash sold in his ashes, to say nothing of the lime parted with. Now when he finds his cultivated soil getting deficient in potash, as he invariably will, he must buy back that potash at four and a half to five cents per pound. At the same time the purchasers of the Canada ashes, as now sold at a guarantee of five per cent. potash, pay exceedingly dear for the whistle. It looks to me like a hard bargain for the farmers on both sides of the line. The farmer on this side can buy his potash in the form of potash salts much cheaper than in the ashes, and the Canadian farmer is parting with his potash for less than half what he or his children must pay to get them back. In selling off these mineral elements of fertility, lime and potash, the farmer sells what he *must* buy back in some shape. We lose enough of the matters in the crops we sell, which is unavoidable, but when we add to this the sale of the products of combustion, by-products, that should go back to the land, we are burning our candle at both ends, and will reach the point of exhaustion sooner. Canada farmers as we look at it, cannot afford to sell these ashes at the price they are paid for them, and American farmers can buy their potash at vastly cheaper rates. Out of the difference the importers grow rich, while the farmers pay the bill. While we have had good results from the use of these ashes, we have become satisfied that we got the results at a far greater cost, even considering the value of the lime, than we could have gotten the same results by purchasing lime and potash in

other forms. When these things are transported by rail long distances the freight becomes the chief item of the cost. We once freighted ten tons of ashes at a cost of \$80, and got 1,200 lbs. of actual potash (more than the average amount). We could have freighted 10,000 lbs. of potash in the shape of muriate from a nearer point for half the money. And this is the very point we would like to impress upon the producers of potash on the other side of the Atlantic, the immense saving of the cost of potash to the American farmer living far from the sea coast, by relieving him of the necessity for freighting so much useless material to get the potash he is after. They should send us more of the concentrated article, for the freight over the Atlantic is but a small part of the inland freight in very many instances.

W. P. MASSEY.

SOWING SEEDS IN DRY WEATHER.

A frequent source of complaint is the fact of seeds failing to germinate during long-continued dry weather, and it is very important that the gardener should always apply common-sense to his work, and not simply follow routine, for what will suit for one condition of *soil* or atmosphere would be unnecessary, or even wrong, for another. I will give a case to illustrate. About the 5th of May of 1871, I sowed a large patch of open ground with celery seed, and another with cabbage seed. The soil was in fine order, and the beds, after sowing, were raked—the celery with a fine steel rake, the cabbage with a large wooden rake, which covered the seed of each to the regular depth. The weather was dry, with indications of its continuing so, and after sowing had both the cabbage and celery beds rolled heavily, leaving, however, a strip of each unrolled, so that I could clearly show to some of my young men what the result of this omission would be if dry weather continued. Had a heavy rain fallen within a day or two after sowing, it would have compacted the soft soil and produced the effect of rolling it. But we had no rain for three or four weeks, and a burning hot atmosphere, passing through the shallow, loose covering of the seeds, shriveled and dried them up so that it was impossible they could ever germinate. This little experiment resulted exactly as anyone having experience in seed-sowing knew it must; our crop of celery and cabbage plants were as fine as need be on the rolled bed, while not one seed in a thousand of the celery, and not one in a hundred of the cabbage, started in the strips where the soil was left loose.—American Agriculturist.

Watering the Cyclamen.—Mr. Wm. Bacon, of Orillia, who wrote the article on the Cyclamen in our March number, writes: "When watering the cyclamen exercise care so that you do not let a lot of water settle into the clustering leaves and buds, as a constant dose of this kind would induce rot."

THE PLUM SCALE.



Here repeat an engraving showing the plum scale from page 311 vol. xvii. It was there called *Lecanium cerasifex*, but scientists are not quite settled upon its exact name. This, it is observable, is quite distinct from the San José scale, described on page 64. Early in March we found some samples of this scale on a Glass seedling plum tree, to our sorrow, for it means another destructive insect enemy. Near Burlington instances have been found where it is very numerous indeed.

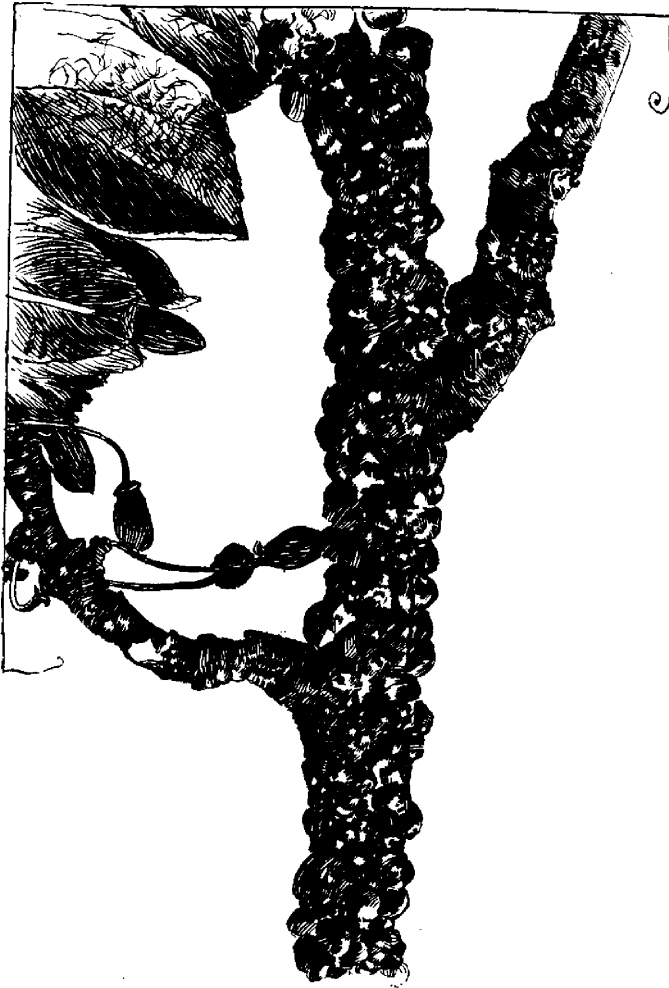


FIG. 745 — PLUM BRANCH WITH SCALE.

The number of eggs laid by a single mother is often from 1,000 to 2,000, so it is evident how rapidly they will increase if neglected. About July 1st they issue forth from the mother shell, and seek the leaves. Just before the fall of the leaf, the majority of them seek the undersides of the smaller branches, and thickly congregate together. It is estimated by Prof. Slingerland that there are 20,000 plum orchards in New York State, harboring millions of these scales. As this scale is a sucking insect, it can only be cured by contact with an insecticide, as for example, kerosene emulsion. For some insects the stock solution is diluted with 20 parts of water, for others with 9, but for this only with 4 parts of water. During the summer little can be done to destroy it, but when the trees are leafless, from November 1st to April 1st, the spray will be most effective. The work must be done thoroughly, as only those scales will be destroyed which are hit by the emulsion.

NUMBER OF TREES ON AN ACRE.

30 feet apart each way.....	50	10 feet apart each way.....	435
25 feet apart each way.....	70	8 feet apart each way.....	680
20 feet apart each way.....	110	6 feet apart each way.....	1210
18 feet apart each way.....	135	5 feet apart each way.....	1746
15 feet apart each way.....	195	4 feet apart each way.....	2725
12 feet apart each way.....	300	3 feet apart each way.....	4840

RULE.—Multiply the distance in feet between the rows by the distance the plants are apart in rows and the product will be the number of square feet for each plant or hill: which, divided into the number of feet in an acre (43,560), will give the number of plants or trees to an acre.

The Value of Trailing Growths for fences is not appreciated in this country as it should be. In Germany the Virginia Creeper is put to simple and effective use for this purpose in urban public grounds. A light, low fence is made of stakes and connecting wires; the Virginia Creeper is trained up each stake, and made to form graceful festoons between. Its employment in some such fashion would do good service on a place like the Cambridge Common, for instance, now a bare, unattractive expanse, having a sort of kinship with the New England rustic burying-ground. It is surrounded by a fence composed of unhewn granite posts with squared rails of wood between. Virginia Creeper, Japanese Ampelopsis, and perhaps other twining or climbing plants, might convert this old fence into a thing of beauty. In public parks the requirement for protection of the borders sometimes necessitates guards of wire and stakes along the paths. These are often great disfigurements, and their offensive aspect, in places where they seem to be required permanently, might be at least mitigated by the use of Virginia Creeper after the German fashion.—Garden and Forest.

GRAFTING THE GRAPE VINE.



GRAFTING grape vines is quite essential in vineyards where old or worthless varieties have by accident been raised. In a very short time the worthless vines can be made to produce an abundance of superior grapes. Grafting yields many other results that must be considered by every owner of vines. In testing new varieties of grapes the easiest and quickest way to do it is to graft them on the old vines. The new scions can be made to fruit the first year, and by the second year a good crop can be obtained. Many varieties that cannot be produced very readily from cuttings, will grow rapidly and successfully when grafted on to old vines. When properly performed the grafter's art can be made to increase the fruitfulness of the vines. Finally, and not the least important of all the benefits derived from grafting, this has been found to be the only successful way of fighting the phylloxera in California.

The method of grafting grape vines should be about the same in all localities, but the time of year best suited for the work naturally differs. Usually the spring of the year, from the first of April to the first of May, is the most suitable period for this work. The sap of the vines should be in rapid motion at the grafting so that the union will be made at once. The best wood of last season's growth should be selected for the scions. The cuttings should be selected early in the season, and then be buried in bundles until needed for grafting. Frost will injure them, and they should be perfectly free from all exposure to it. The scions should be about the size of a lead pencil, short-jointed, firm and of well-ripened wood.

The grafting is usually done at or near the surface where the vigor of the old vines is the greatest. Cut the stock off square at about one inch and a half above the joint, or half way between two joints. If the stock is a large one make a slight split in it with the knife or chisel, press a wedge down to pry it open, and then insert a scion on each side. The scions must also be cut to a sloping point just below an eye. Push the scions down firmly, but be sure to make the bark of the scion and stock meet. When the wedge is withdrawn the bark of the two should meet firmly together, and if they do not the grafting is not a success.

If the grafting is properly done, and the union made perfect, no bandaging is necessary. This is only an excuse to cover up poor workmanship. Some light earth should be pressed firmly into the split, and all around where there is any opening. This dry earth will prevent the graft from drying out. If there is any doubt about the work, a bandage of cloth and dirt after the old style can

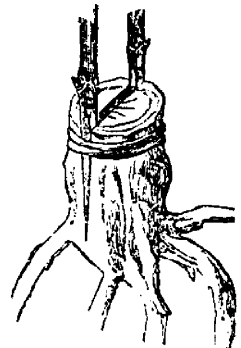



FIG. 746.
GRAFTED VINE.

be wound around the graft. To make graftings more successful, it is well to cultivate the stocks carefully beforehand so that a vigorous growth will be had at the time of grafting. The scions should also be strong, well-selected twigs, taken only from good stock that will produce a thrifty growth.—Rural Canadian.

IMPROVED METHOD OF LAYING OUT AN ORCHARD.

N laying out land for orchard planting, the use of a wire marked with solder gives far more accurate measurement and is more time-saving than a measuring pole and stakes. A light galvanized wire is best, and the drops of solder that mark the distance required for the trees, or vines, should be prominent enough to be seen readily when the wire is on the ground. In taking the wire from the coil it should be unrolled, not pulled out from the end, as in the latter case the wire is more liable to take short kinks that interfere with its accuracy. About 100 yards is the limit of length of wire that can be readily handled by two men on fairly level land. On undulating land a third man will be needed at the middle of the wire. The ends of the wire are made fast to the middles of two short,

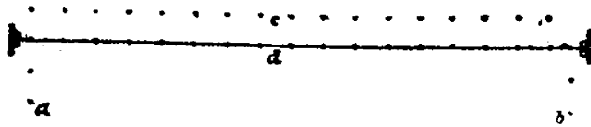


FIG. 747.—IMPROVED ORCHARD CHAIN.

stout sticks which serve as handles in moving the wire. When the wire is stretched on the ground for marking, it is held in place by pegs set against these handles. In marking off the orchard, the first step is to run a base line *a*, as seen in the sketch, along one side of the field. The wire is stretched tight and straight where the tree row is wanted, the handles are pegged down and then each solder mark has a peg put down beside it. The wire is then carried to the opposite side of the proposed orchard—if that be not more than a wire's length distant,—and again stretched exactly parallel to the base line, *b*, and each solder mark pegged as before. This is a guide line, merely. The distance from the base line is not material, but it is material that it be exactly parallel. Now the actual work of laying off the orchard begins. The wire is stretched along the side of the field, at right angles to the base line, *c*, the first solder mark touches the first peg on the base line, the wire touches the corresponding peg on the guide line, is made tight and straight, fastened down, and a peg placed at each solder mark. Then the wire is moved down the field a peg, *d*, and the operation repeated. If all has been done with care and correctness the pegs will range straight both ways and any number of diagonals may be sighted, greatly to the pleasure of the lover of exact work.—American Agriculturist.

TOMATO CULTURE.

CHAPTER VI.

GROWING PLANTS FOR MAIN CROP.

Seed for main crop may be sown from two to five weeks later than the first early. Usually the largest quantity will be soon enough, sown the first week in April. At this season they can be aired more and may be sown somewhat thicker, but care must be taken not to sow too thickly. If they come up too thickly, thin them out with a bold hand; always bearing in mind that one good plant is worth more than two or three poor, drawn ones, and will yield more profit. This lot of plants may be treated the same as the first early ones, only they may be planted out of the boxes directly into the open ground where they are to fruit. The boxes and pans that have been emptied when filling the forcing frames can be filled again out of this lot of plants.

If many plants are wanted for main crop several sowings of seed should be made up to the tenth of April. Out of the plants grown from seed sown in April, cold frames are to be filled. The frames may be prepared the same as those for the earlier plants except that they may be placed as close together as it will be convenient to work the glass, and no manure used. The objection to the use of manure is, that it causes the earth around the roots of the plants to crumble off when the plants are to be lifted; and also when the roots of the plants strike a lump of manure the plant does not start readily.

The south board of the frame should be only ten inches wide; the soil should be very fine, all small stones or rubbish of every kind should be carefully raked out. The soil should then be packed down pretty solid. These beds should be prepared only when the soil is dry and in good working order. Take good strong plants out of the seed beds and dibble them in up to the seed leaf, eight inches apart each way.

Water moderately and cover close with sash as fast as planted, keep them close for about two days, until the plants are well started. If the sun is bright do not open them but shade the beds sufficiently to keep them from over-heating. At the same time remember that a heat of eighty or ninety degrees is not too much for them until they are rooted and started to grow; growth should take place in two or three days.

The best, cheapest, and most convenient shade, may be made as follows: Take two pieces of pine seven feet long, and two inches square, nail on these pieces of lath $3\frac{1}{2}$ feet long and leave one inch space between each lath; also leave 5 inches at each end without lath, for convenience in handling. These will shade the beds sufficiently and at the same time admit sunlight enough to heat the beds in clear weather. They should always be taken off in cloudy weather. As soon as the plants are fully started, let them have all the sun and

open the sash to keep down the heat. Give air as required, aiming always to keep up sufficient heat to make the plants grow rapidly, and at the same time to give air enough to keep the plants from drawing.

CHAPTER VII.

VARIETIES OF SOIL AND THEIR PREPARATION.

The best soil for tomatoes is a rich, deep, sandy loam. The next best, is a deep, rich, gravelly loam, but if the gravel comes too near the surface, the crop in dry seasons will be light. Such soils are usually dry and well drained in their natural condition, and take in the heat of the sun more than heavy soils. Muck soils may sometimes grow good crops of tomatoes if well drained; but they are apt to grow too much vine, and the fruit does not set early and freely, so that the crop comes in late, and, consequently, is seldom profitable. Clay loam may be made in fair condition for a crop by good under-drainage, using three-inch tile, put in three feet deep and not more than thirty feet apart.

Heavy clay soils should be avoided, as they will not be profitable to grow tomatoes on. Those who have no other soil, and wish to grow good tomatoes for family use, should choose as dry a piece of land as they have, and mark out the size they require. Then draw on four square yards of medium fine sand to each rod of land, also a load of well rotted manure, and, if it can be obtained, a load of muck. Spread evenly over the piece, and work it in with a horse-cultivator, 8 or 9 inches deep; plow it up and work again with harrow and cultivator until the soil and other material is perfectly mixed. Use the same land every year, and work it a little deeper each year until it is worked 12 inches deep, adding more sand if necessary; about half sand on such a soil would not be too much when well mixed in.

But the question asked will be, will it pay? I answer yes, and pay well. The first crop may not pay; but it should be remembered that a piece of land so prepared will last any length of time, as the sand will not wear out or rot away. All that will be required after the first year is a coat of manure each season. And tomatoes can be grown on the same ground any length of time, and the plot will each year improve.

The cost of a rod prepared as above will be about as follows:—

5 yards of fine sand at 50c.....	\$2 50
1 load manure, 50c., 1 load muck, 50c.....	1 00
Work, mixing to the depth of 9 inches.....	50
16 extra early strong plants.....	1 00
Hoeing and tending.....	50
	<hr/>
	\$5 50

The average crop should be about as follows :—

1 bushel extra early tomatoes.....	\$3 00
1 " " medium, " "	1 00
2 " " late, " "	1 00
1½ " " green " "	50
	<hr/>
	\$5 50

After crops will cost about as follows :—

Half a load of manure.....	\$ 25
Preparing soil.....	25
16 early large plants.....	1 00
Hoing, training and picking.....	1 00
	<hr/>
	\$2 50

Profit, \$3.

Having chosen suitable soil for main crop, plow ten inches deep in the fall. Then, the following May, cultivate and harrow down smooth; draw on twenty-five cords to the acre of good well-rotted manure; spread and plow the manure under, six inches deep, two weeks previous to planting time, say about the middle of May. When ready to plant, harrow well till smooth. The harrowing will kill most of the weeds which will have started up after the plowing.

CHAPTER VIII.

PLANTING MAIN CROP AND PROTECTING FROM FROST.

When ready to plant, mark out the lapd with a hand marker; set so as to draw straight lines five feet apart; make the marks from north to south; then, with a Planet Junior cultivator, with only a double moulding steel in the centre, or a light double mouldboard plough, turn out a furrow five inches deep, straight along the mark. This furrowing out should be done only just as wanted, so the soil will be fresh and moist for planting in. For planting, choose the *very hottest weather*. If the plants are prepared as directed, bright, hot, sunny weather is the best. Even though it may be quite dry, it is all right so long as the earth is moist where the plants are to be set. Avoid cold, wet weather, if possible. It is the worst weather you can have for planting; the ground being cold and wet and no sun to warm it up. It is better to defer planting a few days, or even a week, until you can get warmer weather. Wet weather will not hurt, if the weather is only warm enough. Do not water or shade the plants when set out, they are better without it.

To prepare plants for setting out, they must be watered sufficiently to wet all the earth as deep as the roots; and the watering should be done three or four hours before the plants are wanted, so they will have time to drain. If put out

immediately after watering, they will be too soft and muddy. Boxes are best watered by dipping them entirely under water, sufficiently to cover the earth, and hold them under until the air stops bubbling out of them. Then lift them out and lay them on their sides to drain till wanted. To take the plants out of the boxes, use a small steel spade; the blade should be thin and without rivets four inches long, three and one-fourth inches wide at the bottom, and three and three-fourth inches wide at the top; with handle about two feet long. The bottom and two sides should be ground to a sharp knife edge. With this spade begin at one end of the box and cut out one plant at a time, with all the earth attached to it. If the plants are to be taken out of cold frames, knock the frames to pieces and commence at one end with the small spade; open up a face along the side of the plants, then run the spade down squarely on the other three sides; then run the spade in flat under the plant and lift it out. The lump of soil at the root should be about four inches square at the top and about three and a-half inches square at the bottom, and about five inches deep. If cut larger the earth will be too heavy to cling to the roots. Set them close together in a flat broad box, to be wheeled or drawn to the planting ground. When they are taken out to plant, care should be taken to avoid, as much as possible, shaking the earth from the roots. Set the plants in the furrow prepared for them, three feet apart. If the land is very rich, or contains considerable muck, set the plants three and a-half feet apart. Lay the plants down on their sides, with the tops leaning to the north. Now raise the plant partly up, and, with a hand hoe, pull in enough earth under the plant on the north side. Then drop the plant, no matter if it does lay on the ground, and fill the soil around the roots until the lump at the root is about one inch below the surface. Press the soil firmly around the roots with your foot and the work is done. An acre of land planted 5 ft. x 3 ft. will take 2904 plants.

As the above way of planting has not been practised by anyone (as far as I am aware) but myself, it is only right and fair that I should give my reason for the practice.

(To be continued.)

St Mary's, Ont.

S. H. MITCHELL.

Pickling Onions.—Take none but the small button variety, and select them as nearly one size as possible. First throw them into warm water; this will tend to fix the volatile principle, and prevent the eyes being affected while peeling them. As fast as they are peeled place in a strong brine, to which has been added a very little alum; this will shorten the fibre, rendering them very brittle, without affecting the taste in the least. Allow them to soak in this solution for twenty-four hours, then place on the fire and boil one minute. Another good plan is to throw them into milk and water as fast as peeled; from this they are drained and placed in a jar, pouring hot brine over them; cover up close, and allow to stand twenty-four hours, then drain and dry in a cloth, and place in cold vinegar containing a few blades of bruised ginger, some peppercorns, a little mace and horse-radish. Keep always covered with vinegar, cork or cover the jar close, and keep in a cool, dry place.

✧ The Garden and Lawn. ✧

THE LEADING IDEA IN PLANTING.



N any scene it is plainly a mistake to introduce plants which, however beautiful in themselves, contradict the leading idea. Instead of this, we should carry out the central thought in every possible way. If we have a natural ledge of rocks we can encourage native ferns to grow in its crevices, wild vines to trail over its face, and native shrubs and grasses to grow at its base, and thus emphasize its natural aspect and make an artistic picture at the same time. Where the surroundings of the ledge are rough, it may be the best practice to clear away only the inhospitable thickets of brambles and allow Nature herself to weave a tracery of vines upon the rocks, and encourage wild flowers to blossom among them. In planting our native trees in a natural landscape we should use them in such positions as they usually affect, not only because a willow will be healthy near the water while a chestnut will thrive on a gravelly hill, but because we are accustomed to see these trees in such places. Stretches of green turf always enhance the effect of trees, but where our object is to preserve as far as possible the wild beauty of an individual spot and bring out the idea of remoteness, the borders should be broken by capes and bays of foliage, and outstanding single

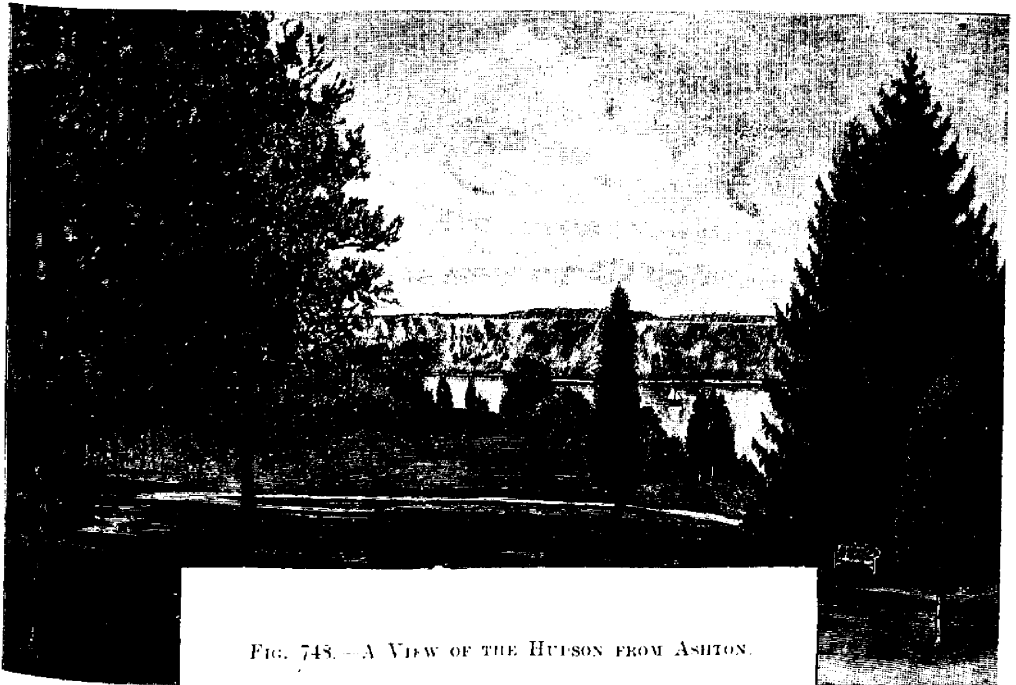


FIG. 748. — A VIEW OF THE HUDSON FROM ASHTON.

trees and masses of shrubbery informally disposed. If the key-note here is solitude, retirement, the idea of escape from convention, nothing like formality or rectilinear primness should be permitted. This attempt to imitate the quiet of an unsettled neighborhood the English delight in producing in their great parks, through which one may drive for miles before reaching the castle with a refreshing sense of seclusion and unmolested nature. It is this idea which adds

the final charm to the great beeches, with their wide-stretched arms, and the oaks which have remained undisturbed for centuries. They add significance and force to the idea of quiet permanence in an unvexed domain.—Garden and Forest.

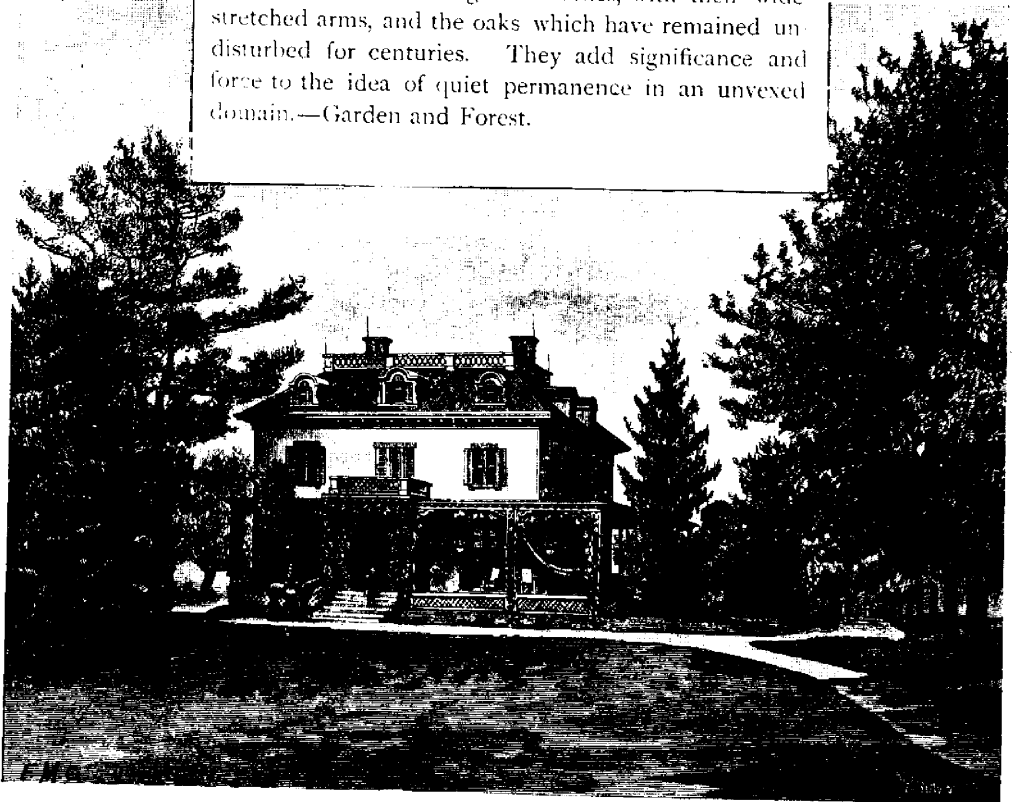


FIG. 749.—ASHTON, AT YONKERS, N. Y.

Distances for Planting.—Standard apples—30 feet apart each way. Standard pears and strong growing cherries—20 feet apart each way. Duke and Morello cherries—18 feet apart each way. Standard plums, apricots, peaches, nectarins—16 to 18 feet each way. Dwarf pears—10 to 12 feet apart each way. Grapes—Rows 10 to 12 feet apart; 8 to 12 feet in rows. Currants—3 to 4 feet apart. Raspberries and blackberries—3 to 4 by 5 to 7 feet apart. Strawberries for field culture—1 to $1\frac{1}{4}$ by 3 to 4 feet apart. Strawberries for garden culture—1 by 2 feet apart. Gooseberries—4 by 6 feet apart.

A MODERN SUBURBAN LOT.



LARGE places are not liable to be neglected. What we need is to have the almost universal small places made useful and attractive by true art. No place with a few feet of ground is too small to be improved and made to exert a pleasure-giving and refining influence. Too often we see a house in the centre of a lot, with neither tree, shrub, vine or other plant to indicate that the house and grounds do not belong to the highway. Good taste is not a difficult matter to acquire. Truth and simplicity are its foundation, but it does require a little common sense. Places are laid out with a view to their use and enjoyment.

With this in mind let us consider what are some of the principal features desirable in a small place. Let us imagine a small, inexpensive house upon an averaged sized suburban lot, and near its northern boundary, that as much as possible of available ground may be in one area on the southerly side of the house. The living rooms should be in the southern part of the house, on account of the warmth in winter, the pleasant southern breezes and the beauty of the western sky at sundown. The entrance is upon the north side. Should the ground slope considerably toward the south, the material excavated from the cellar is formed into a terrace, on which the house rests. A small plant-room, built out from the dining-room, is entirely enclosed in winter, but in summer the sashes are removed from the sides, and awnings fixed upon the parts supporting the roof, converting the place into a tea room, adorned with vine-covered lattices. On the east of the terrace is a flower garden enclosed by a low fence of spruce poles, covered with vines. On the lawn side of this are masses of shrubbery to break the monotony of the fence line. The garden design is a quadrangle. A straight path runs round it, eight feet from the boundary; of this space, six feet in width, is filled with all the old-fashioned flowers. The clear space within the surrounding path is a grassy lawn, in which a few beds are cut and kept filled with bright-colored plants, furnished from the border, the highest growing kinds being in the central bed. To relieve the flat effect of the garden, six pyramidal arbor vitæ are planted, one in each corner, and one in the centre of each long side. Their dark foliage gives fine contrast to the bright flowers, and in winter saves the garden from desolation.

The lawn runs up to the terrace, at the base of which are two or three masses of shrubbery, varying in height. Vines run over the terrace wall, partly hiding the stones. Except the lawn tennis portion, the lawn is modelled into gentle undulations. If an unsightly object in the neighborhood is obtrusively visible, the ground near the boundary in that direction should rise in a decided swell, be thickly planted with shrubs, and at their rear several poplars push

up their pointed heads, the whole forming a perfect screen. The turf of the lawn is mostly encompassed with bushy foliage, so planted as to form little bays, in one of which may be placed a covered seat that may be concealed from the house by an isolated mass of shrubbery, which arrangement adds greatly to the effect of distance. The shrubs are planted thickly together; the effect is generally better and more immediate. Thinning must be practised as needed. The tallest growing are placed next the boundary, the lower ones next, graduating them down to the creeping varieties at the very front. The sky line of planting varies; in some places high, in others low; in some thick growing, in others thin, but graceful; but altogether forming a harmonious whole. The laundry yard should be out of the general view. If necessary a lattice fence covered with Virginia creepers and honeysuckle would conceal it.

Such in general are a few of the principles which apply to the arrangement of the house and grounds of small places; and when such homes become nearly universal, the art of gardening will have accomplished much for the happiness of man.—Rept. Mass. Hort. Soc.

Cannas grow best out-of-doors in summer, either in large tubs, pails or pots, or planted in the border. They require a large space for root room. They



FIG. 750.



can be grown in the house in winter as easily as flowering bulbs. Put in five or six-inch pots, give good drainage, place in a warm window, and water freely, giving full sunlight. When the pots are filled with roots, shift into eight or ten-inch pots. They will bloom freely in these and may remain until spring when they should be planted in the border where they will get the full sunlight. They will recover their vigor and be ready to bloom next winter. The soil to pot cannas in should be very rich and light, one-half well-rotted manure is not too strong for them, for they are gross feeders. Cannas like warmth, sunlight and moisture. Try some

cannas in the window garden and you will not regret it for they will afford you great pleasure in the dreary months that are to come. The Star of '91, Madame Crozy and Crown Jewel are good varieties.

CLEMATIS CULTURE.*



Y excuse for offering a few remarks on the cultivation of the Clematis is that, in my opinion, this class of plants does not receive the attention it deserves, for, considering its cheapness and ease of culture, I know of no plant that is as certain to give such a wealth of beautiful large blossoms every season, I cannot do better here than quote from the "Gardener's Chronicle." "Taken for all in all, the hardy varieties of clematis form the noblest and most useful of recent additions to out-door gardening. They are inexpensive, they are hardy, they grow freely, they adapt themselves to almost any condition, and may be made useful in an infinitude of ways. Their foliage is ornamental, they bloom profusely, and for a long period, their flowers have beauty of form, and beauty and variety of color, and even perfume is not wanting." And yet with all these qualities how few homes are adorned with these lovely climbers? Perhaps one reason is that it has been difficult to get information regarding them. A nurseryman's catalogue may contain six or eight with name, color and price given, but out of that number there may be, and generally are, two or three varieties or types different in habit, yet it seems to be considered sufficient to label them all Clematis. And yet in the same catalogue the roses will be carefully classified as Hybrid Perpetual, Tea, Noisette, Moss, Polyantha, etc. Messrs. Jackman & Sons, Woking, Surrey, England, the noted growers and hybridizers, have done more for the improvement and dissemination of the clematis than perhaps any other firm. By the introduction of a race of hybrids, of which Jackmani is the type, they at once placed the Clematis far ahead of all other hardy flowering vines: their classification is as follows:

1. MONTANA TYPE.—Climbing winter and spring bloomers, with medium-sized flowers in aggregated axillary clusters on the old or ripened wood. Few, if any, of these are grown in Canada.
2. PATENS TYPE.—Climbing, large-flowered spring bloomers, flowering from the old or ripened wood. Of this class the following and others are grown here, "Fair Rosamond," "Lady Londesborough," "Miss Bateman," "Standishii," and the "Queen."
3. FLORIDA TYPE.—Climbing, large-flowered summer bloomers, flowering from the old or ripened wood. The following are grown here and all bear double flowers, "Belle of Woking," "Countess of Lovelace," "Duchess of Edinburgh," "Fortunei," "John Gould Veitch," and "Lucie Lemoine."
4. LANUGINOSA TYPE.—Climbing, large-flowered summer and autumn bloomers, flowering successively in short lateral summer shoots, the flowers dispersed. This is a large class, the following and others are grown here, "Alba

*A paper read before the Waterloo Affiliated Horticultural Society, by the President.

Magna," "Beauty of Worcester," "Fairy Queen," "Henryi," "Lanuginosa Candida," "Madame Van Houtte," "Modesta," "Otto Froebel," and "Paniculata."

5. VITICELLA TYPE.—Climbing, large-flowered summer and autumn bloomers, flowering successionally in profuse masses on summer shoots, but less continuously than the next section, 6.

This is a small section, and I know of only one being grown here, "Viticella Rubra Grandiflora."

6. JACKMANNI TYPE.—Climbing, mostly large-flowered summer and autumn bloomers, flowering successionally in profuse continuous masses on summer shoots. This is a large class and the most suitable for this climate; the following are the ones mostly grown here, "Flammula," "Jackmanni," "Jackmanni Alba," "Madame Grange," "Mrs. Baron Veillard," "Lady Redcliffe," "Rubella," "Star of India," and "Velutina Purpurea."

Then there is another class of shrubby herbaceous plants, of which "Davidiana," "Erecta," "Integrifolia," and "Stans," are examples, and are quite hardy here but do not resemble the climbing varieties at all.



FIG. 751.

Now, while all these different varieties can be grown here, yet it is almost impossible to save the old wood over winter. To leave them on the trellis is certain death to the parts exposed; to lay them down without breaking their slender stems is almost impossible, so that all should be cut in fall to within six inches of the ground, and will bloom on the new wood, but, of course, those whose habit is to bloom on the old wood, will not give such profusion of bloom as those of sections 4, 5 and 6. I have seen a "Jackmanni" at St. Catharines blooming in spring from the old wood left on the trellis all winter. There is a slight gain in earliness of bloom in this, but with fewer blooms later on, for any plant to force sap through a partially dead or dry stem is a waste of strength and injurious, so that I would advise all here

to confine their selection to the *Lanuginosa*, *Viticella* and *Jackmanni* types, as certain to give satisfaction. Clematis will grow in any good, deep garden soil; it cannot be too rich if the manure is well rotted, any plant that for months gives hundreds and hundreds of flowers from four to eight inches in diameter must be well fed, and have plenty of moisture. Lime or chalk or potash is said to be necessary; the first can be given in old lime, rubbish pounded fine, which will also help to keep the soil porous, the latter can be supplied by unleached ashes, and every fall give a coating of six inches thick of manure, not so much for winter protection (they are very hardy) but that the snow and rain may carry the nourishment to the roots and prevent heaving by frost. In purchasing get pot-grown plants, and have the ball of earth kept entire. This is very essential for the roots of young plants are easily injured, but if the ball is not broken success is almost certain. Propagation is mostly from seeds or by grafting, but as it is not suitable for us amateurs we will not discuss it. Old, well-established plants with good roots can be divided safely, if done in spring as soon as growth has commenced; transplanting should always be done in spring, layering in late summer or fall is easily done, then leave them alone the next summer and they will throw up shoots and root readily—and in this way a plant can be extended as far as there is room. Regarding situation, Mrs. Lambert, of New Edinburgh, an enthusiastic amateur, and probably the best authority on clematis in Canada, says they must have the morning sun, and, while this is very essential, it is not absolutely necessary, and being unable to get the best of everything we must make the best of what we have. You all know my house faces the north-west, and is very much exposed, yet I grow excellent clematis on the front verandah, where they do not get the sun until 3 p.m., and the frost remains there in spring long after other places, but only the hardiest succeed, "Jackmanni," "Jackmanni Alba," "Lady Redcliffe," and "Modesta," thrive there, but are at least two weeks later than those in more suitable positions, but I had to remove "Miss Bateman" to a more congenial situation. This will serve to show, that even if our situation is not the best, with a knowledge of the differences in varieties, care and intelligence, we may still be successful. As to which has been the most satisfactory, the purple Jackmanni has long been considered the standard, and is a grand plant, but "Modesta," a little lighter in color than "Jackmanni," has really been the best grower and a more profuse bloomer. "Lady Redcliffe" as a bloomer is not easily beat, but the flowers are of a lighter color than "Jackmanni," are a trifle smaller and do not open out so flat, incline to be a little cup-shaped. "Mrs. Baron Veillard" is a grand plant, and its color, a lilac rose, makes a fine contrast to the purples, blues and whites, "Rubelia" is an excellent plant, a dark, velvety claret, while "Velutina purpurea" is the darkest of all, a rich, blackish mulberry, and "Viticella rubra grandiflora" is the nearest a red, but the flowers are small. Of the whites, the "Jackmanni alba" is a good grower, the flowers are smaller than the purple variety, about half the flowers have two rows of petals, the inner row much smaller than the

others. "Miss Bateman" has the largest and finest flowers of any clematis I have seen, perfectly flat, of the purest white, with chocolate anthers, but being of the "Patens" type, is not as floriferous as others. "Henryi" is another excellent white, a good grower. "The Duchess of Edinburgh" is, with me, a rampant grower, but being of the "Florida" type is not a free bloomer; flowers white and double, frequently the tips of the outer row of petals are green, it is said to be fragrant but I have not discovered any perfume. The new Japanese clematis, "Paniculata," which has been all the rage in the United States for the past three or four years, is a splendid acquisition, hardy as an oak, rapid grower, foliage clear shiny green, commences blooming very young, and in September is one sheet of small white fragrant flowers on long sprays, fine for cutting. Of the shrubby, herbaceous kinds, I grow "Davidiana," or "David's Clematis," and there are few more satisfactory shrubs, but not at all like the climbing varieties, dying down in winter. The stems grow every year from two to three feet high, the flowers are blue, exactly like a single blue hyacinth, with precisely similar perfume, the flowers are in whorls on long stems, and are fine for the centre of a vase of cut flowers. What is known as the clematis disease, originally brought from Belgium, is sometimes found here, and is causing a great deal of trouble in the United States, some nurserymen being unable to sell plants, especially "Jackmanni," on this account. It is of a fungous character, commencing at the junction of stem and root. With me it has only appeared the first year of planting out; a plant may be growing strongly, perhaps commencing to bloom, when it dies off suddenly: if there are two stems, one may die and not the other, but mine have all started again the following spring and remained healthy. So far no complete remedy has been found, although sulphate of copper (blue vitriol) and other fungicides have been tried. A correspondent of "Gardening" two years ago recommended as a preventive, one-fourth sulphur, one-fourth soot and one-half tobacco dust, but this has not in all cases proved a complete preventive; still this is cheap and worth a trial till something better is found. I used it last year and noticed an improvement in the health and vigor of the plants, and mean to continue it, and I think it would be well to use it around the roots of all young plants.

And now in conclusion, let me urge all who can to plant at least one of these beautiful vines. If you have a porch over your door, a piece of blank wall on your house, an unsightly structure to hide, plant some clematis. Galvanized wire netting is cheap and makes a good trellis. If you have a fence to cover and don't want to wait for an evergreen hedge to grow, plant the new Japanese clematis "Paniculata" say six feet apart, and the second and each succeeding year in September, you will have a hedge of snow-white fragrant blossoms, in reality a thing of beauty and a source of delight. There is no home but will be made brighter, more beautiful and home-like by the addition of some of the many kinds of these lovely plants.

Waterloo.

JAMES LOCKIE.

ROSES NEEDING PROTECTION.



N replying to question No. 3, by "Novice," in the January No. of the HORTICULTURIST p. 40, I beg to say that the yellow Austrian and Persian briars, Harrison's semi-double, and the single-flowering varieties, are the only yellow roses that are hardy enough without winter protection in Central Ontario. The latter, although single, is really beautiful when in blossom; the foliage has also the Eglantine scent of the old-fashioned sweet brier (*Rosa Rubiginosa*) of England; it is a botanist's as well as a florist's flower, and deserves a place in every flower garden. Any variety of the moss rose requires artificial protection in Central or Southern Ontario; in Northern Ontario this may not be necessary, the snow-fall being deeper and the winter not so variable there, natural protection being adequate.

Ever-blooming roses, which are only indigenous to the southern parts of the north temperate zone,—such as Teas, Bengals, Bourbons, Damascenes, etc., may be designated as Remontants, and hybrids of these are named hybrid perpetuals; all require culture under glass. There is another class of Remontants which are hardier, also termed hybrid perpetuals, which are suited for outside culture; these are produced by cross-fertilizing the ever-blooming varieties named above and the annual-flowering or June roses, indigenous to the central and northerly parts of the north temperate zone.

Remontant scarcely applies to this last class of hybrids when grown in Ontario, many of them called semi-annual only flowering twice during the season. Non-remontants may describe the June or annual-flowering roses which comprise the finest and sweetest-scented varieties in cultivation. The greatest troubles the rose grower has to contend with during the summer season are the slug and the thrip; these require vigilant watching. The slug is a small greenish slimy insect which appears on the upper surface of the leaf, and, where numerous, will quickly spoil all the foliage. This pest is readily destroyed by dusting, either with white hellebore, fresh slaked lime, or dry wood ashes, or, what is best of all, to sprinkle or spray water in which tobacco has been soaked. The thrip is a minute whitish fly or midge, usually found on the under surface of the leaf, and not so readily detected as the former; the whitish appearance of the leaf about the midrib reveals its presence; tobacco water is the best remedy, but must be ejected upwards, so as to reach the under surface of the foliage. Handy appliances for this purpose may be obtained at any of the seed stores. N.B.—Do not use Paris green, if possible to avoid it.

Berlin, Ont.

SIMON ROY.



THE LANGUAGE OF FLOWERS.

HAT droll things are to be met with in *Gardeners' Gazette*, or in *Half-hours with Horticulture*, or in *Conservatory Chronicles*, or in whatever other blue-apron and pruning-knife journal falls under the non-technical eye! Here is a peep into one of them, just to show its fruits of learning and flowers of speech. In it we read of an orchard-home in full swing; of a stage in a conservatory; of melons having a collar; of a primula getting a habit; of gloxinias wanting a shift; of all plants requiring to be dressed; of peaches forming elbows; of potatoes having well-ripened eyes; of currants having spurs; of pines wanting hot-water pipes under their beds; of specimens being starved to rest; of roses being impatient; of sap being inclined to rush away; of azaleas not liking tobacco-smoke; of figs running riot; of grapes that can stand sulphur-fumes, that are well out of the way, that are no end of trouble, that may not be left to themselves, that will not be hurried, that can get rusty, that are grass-habited, that dislike to be buried, that refuse to be finished off, that rob one another, stone themselves, have warts, and can color, and smell, and bleed, and start!

Gardeners also are directed to do dreadful deeds. They are to pinch the vines, to stake the carnations, to strike varonicas, to behead winter-greens, to turn out bonvardias, to reduce climbers, put endive into cold-pits, prick out celery, and stick peas! The territories in which all this is to be done are as uninviting as possible. They are full, so we read, of red spiders, green-fly, ear-wigs, mealy-bugs, wire-worm, caterpillars, carrot-grubs, onion maggots, mildew, snails, ants, slugs, scale, club and cats. Nor are the weapons with which war is to be waged against these any sweeter to the imagination. Gardeners are to arm themselves with clay, tar, chalk, soot, lime, bran, sulphur, sweet-oil, wood-ashes, gas lime, resin, soap suds, soft soap, nicotine, soap, tobacco dust, tobacco paper, guano, guassia, paraffin, hellebore powder, fir-tree oil, brewers' grains and red lead. In such perpetual battle against garden pests—as they are called—the one pleasant thought is that all seems to be greatly in favor of the gardener.—Selected by THOS BEALL from Chambers' Journal, January, 1887.

Watering Growing Plants.—During late winter and spring, when indoor plants are making active growth and blooming freely, supply water freely. The soil should not be kept muddy, but just moist. No rule can be given except to water when it is needed, be it twice a day or twice a week. Plants raised in pots without saucers are almost certain to suffer from lack of water. If a plant does not thrive, turn it out of the pot and very likely the lower part of the soil will be dry. Do not water all plants because a few need it, neither let a few suffer for want of water because most of them are wet enough.

✧ The Vegetable Garden. ✧

ASPARAGUS CULTURE.



THE Massachusetts Ploughman gives these hints on the culture of this popular vegetable: The best soil is a deep, fine sandy loam; any soil that is well-drained and free from stones will answer if not too poor and sandy; but asparagus will thrive on very poor land if well manured. Stony land will not answer at all, as the stones make the sprouts grow crooked and worthless. The soil is best prepared by cultivating in corn or potatoes for a year or two previously, and taking especial care to clean out the couch grass, sorrel and other perennial weeds, which are a great nuisance in the asparagus bed. Plow the land early in spring, working in a good coat of manure if you have it, or if you have none to spare, you can grow first rate asparagus on commercial fertilizers, indeed many prefer them as they bring in no weeds, but don't be afraid to manure liberally. A ton per acre of good standard fertilizers is none too much to begin with, and a mixture of ground bone and wood ashes, or fine ground Carolina rock and wood ashes is as good as anything.

Set out the plants early in May, the earlier the better, even in April if you can get ready; use good one-year-old plants of the Moore's Giant variety, set out the roots in rows, four feet apart, and fifteen inches between the plants, and set them in the bottom of a deep furrow made by running a large plow three or four times in the same place, some even shovelling out the bottom of the furrow so as to get the roots well down, but this is hardly necessary. Cover the roots an inch deep at first, and gradually during the season level off the earth in hoeing them so that they will be quite level. A crop of carrots or other roots may be grown the first year between the rows of asparagus, as they do not shade the land much the first year.

In the autumn of every year cut out by hand, and carefully burn every plant that bears any berries; otherwise their seed will over-run your bed with a crowd of small plants worse than weeds.

The second year the bed should be cultivated and hoed, but not cut till the third year, when a light crop may be taken, and afterwards a full crop for many years.

The cultivation consists in going over the field early in spring with a spading fork, striking the butts of the old stalks so as to break them off under ground, they are then raked into heaps and burned. The ground is then dressed with about 500 lbs., per acre, each, of ground bone and wood ashes, and the surface worked fine by repeated use of the disc harrow or cultivator. This is to be done as early in April as the soil can be worked, and before the asparagus starts into growth. After the sprouts are up the cultivator can be run only between the rows till cutting is over, which will be about June 15 to 20,

when green peas are preferred in the market. The surface is then thoroughly harrowed over, and afterwards the cultivator used between the rows a few times till the "grass" is too thick.

Cutting for market must be done every day in warm weather, and if you wish to rest on Sunday you will have to cut twice on Saturday. Various kinds of knives are in use for cutting, but I have never seen anything better than a common butcher's blade, ground sharp and filed near the point with six saw teeth. This tool will cut for two hours without sharpening, and injures few of the underground buds.

A man in cutting usually takes two rows, laying down each handful as he goes along, and a boy follows with a wheel barrow and barrel or box to pick it up. It is a tedious job to cut and bunch it, though not severely hard work.

The grass when it comes in from the field, is usually at once dumped into a tub of water, and washed, if dirty, or, if dry, bunched at once; the stems can be tied tighter when it is slightly wilted.

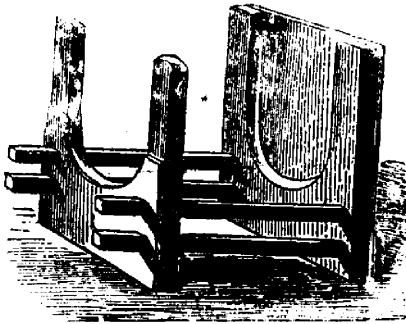


FIG. 752.

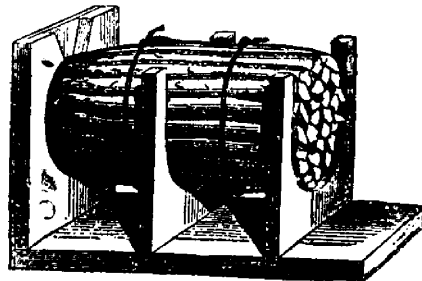


FIG. 753.

Much depends upon the skill of the buncher in making attractive bunches and tying tightly, so as to make no trouble with loose bunches. A small frame is used for gauging the proper size of the bunches, the butts being trimmed off square after tying. Boston market bunches are of size that three dozen just fill the ordinary bushel box full.

The Asparagus buncher is shown in Fig. 752 and Fig. 753; engravings copied from Robinson's "Parks and Gardens of Paris."

A California Enterprise.—The California State Board of Horticulture has recently imported parasites to destroy the fruit-pest known as the white cottony cushion-scale. They survived the long voyage, and are now said to be thriving in their new home, in San Mateo County.—The Garden.

CAULIFLOWERS FOR THE HOME GARDENS.



HE delicious cauliflower, although highly prized by many, is yet too seldom met with in the home gardens of our State. Possessing many of the good qualities of the cabbage, it is to a certain extent lacking in the peculiar rank flavor which renders the former disagreeable to many people. In a general way, the culture is the same as for cabbages. Early varieties should be started in the house or hot bed as soon as the first of April. Handle as needed and set in the open field as early as possible—say the 20th of May, setting the plants about two by three feet. The best soil is a rich, moist, but well-drained, loam. Like the cabbage, the cauliflower is a gross feeder and demands intense culture. If growth be stopped, from any cause, the heads are liable to “button,” or form small sections interspersed with leaves, worthless for market purposes.

Frequent cultivation is necessary, and it is probable that in case of very dry weather about the time of heading, irrigation would be a profitable means of securing a crop, at least for home use. When the heads are about three inches across, the outer leaves should be brought together and held in place by means of a piece of twine, or raffia, that the heads may be well bleached. Handling the plants in pots previous to setting in the open field can be recommended, since the indications point to an increased percentage of good heads as a result of such practice. In one of our tests, the foliage of one lot of each of the five varieties, was reduced by one-half, while duplicate lots were left without trimming. As a rule, the per cent of heads formed was greater from plants not trimmed. There was practically no difference in the earliness of the two lots, nor was there a marked difference in the size of the heads, consequently we cannot recommend the practice of trimming cauliflower plants severely at the time of setting in the field.

Great variation is found in the different varieties and strains of the same type, as regards earliness, percentage of heads formed, and the character and quality of the heads, but nearly all the earliest varieties produced a high percentage of marketable heads, while the late sorts were anything but satisfactory. Most of the late varieties were checked by the dry weather and showed a tendency to “button” or go to seed.

Among the best sorts we have Alabaster, a small, early variety, of erect habit, thus permitting of very close planting; Autumn Giant, a very large, late variety of excellent quality—should not be started so early as most other sorts; Best Early (Burpee’s Best Early), small, but one of the earliest surest heading varieties; Dwarf Erfurt, one of the most popular early varieties; Early Danish, of the Erfurt type, forming a medium sized head, very firm and good, one of the best; Kronk’s Perfection, a very fine strain of the

Erfurt type, of medium size, early, uniform, and, in our plantation, among the best; Landreth First, of vigorous, erect habit, but having a short stem, heads of medium size, white, and rather remarkable for uniformity, one of the best; Livingston's Earliest, one of the earliest, small but uniform in date of maturity—a valuable consideration in a market variety; Long Island Beauty, a valuable second early sort. Only two cuttings were necessary, and every plant produced a marketable head; Snowball, a moderately vigorous variety; forming small but very solid heads; Thorburn Gilt Edge, not quite so vigorous as the parent, the leaves being slightly smaller and very dense, while the stem is shorter, heads small but of good form and solid, usually one of the most reliable; Danish Snowball differs little from Snowball mentioned above, very early and a sure header.—W. M. MUNSON, Maine State College, in Bulletin 10.

Culture of the Cauliflower.—In a general way, the culture is the same as for cabbages. Early varieties should be started in the house or hot-bed as soon as the first of April. Handle as needed, and set in the open field as early as possible. The best soil is a rich, moist loam, but it should be well drained. Like the cabbage, the cauliflower is a gross feeder and demands intense culture. If growth is stopped from any cause, the heads are likely to "button," or form small sections interspersed with leaves, worthless for market purposes. Frequent cultivation is necessary, and it is probable that in case of very dry weather about the time of heading, irrigation would be a profitable means of securing a crop for home use at least. When the heads are about three inches across, the outer leaves should be brought together and held in place by means of a piece of twine, or raffia, that the heads may be well bleached.—Maine State Agricultural Experiment Station.

Early Peas.—Usually the advice is given to postpone sowing vegetable seeds until the ground is in first rate order. This, though safe to follow for all other vegetables, should not apply with full force to early peas. The extra early smooth varieties, such as Dan O'Rourke, Philadelphia, Alaska, Rural New Yorker, etc., (all good for the purpose), are quite hardy, and not too fastidious as to soil conditions. The sooner you plant them, even if the soil is yet a little sticky, or if cold weather happens to come after planting, the sooner you will have green peas, one of the great luxuries of the garden. We select our patch, a dry, sun-exposed spot, in autumn, and put in the seed just as soon as we can have the land plowed and harrowed in spring, even if yet a trifle wet. We want the ground in good condition. Plenty of manure makes good foliage and large pods well filled with sweet, tender peas. On poor soil the foliage is thin, the pods only partially filled, and the peas not of best quality. Peas on rather thin land are one of the crops which usually pay well for the application of mineral fertilizers.—American Gardening.

HOW TO GROW ONIONS.



ONIONS delight in a rich sandy loam, not too light but porous and friable and free from stones. The preparation of an onion field should begin in the fall. Put on good dressing of stable manure and plow it under and leave it until next spring. How much stable dung to be used cannot be defined here. It depends on the nature and quality of the land. It is well enough to say let the application be liberal, yet there is a limit, when an excess of it may do no harm, neither will the crop be benefited thereby. The following spring, as soon as the ground can be worked, plow again, but shallow. Broadcast some special fertilizer, about 1,500 pounds to the acre. Mix it well with the surface by harrowing thoroughly, and finish with a smoothing harrow to make it as even as a board. If the land be stony, the stones must be raked off by hand. If it be intended to follow onion growing as a special crop, it will be well to buy a regular table seed drill, one that will sow two rows at a time. The one I have reference to sows the rows twelve inches apart. The seed cups are placed between two wheels, which are six inches from the centre of the cups, the wheels thus serving as markers. After sowing roll down the seed. As soon as the seeds are sufficiently up to show the rows, go through them, either with a shuffle hoe or a wheel hoe. I prefer the former. When plants are large enough to handle, thin out to one or two inches. It is not necessary for me to say to keep down weeds, which is best done by going through them with the hoe after every rain.

If sown early enough the onions should be ready to pull in the forepart of August. Should they not ripen fast enough, hasten them by breaking down with the back of a wooden rake. When you are satisfied that the onions have stopped growing, do not delay to pull them, which is best done during a dry spell. Lay them in long rows and leave in the field until perfectly dry. Give them an occasional stirring, and house as soon as dry enough.—Farm and Home.

Potting Cacti.—When potting cacti, all dried roots should be trimmed off; use plenty of sand and charcoal, but little or no water, and roots will form soon. Plenty of sunshine and very little water is the treatment cacti like. February or March is the most suitable time for re-potting, although this may be done at all times of the year. The soil should neither be damp nor dust dry. When the plants are turned out of the pots, shake most of the soil from the roots. See that the roots are spread out and the pots well drained. A handful of sand put directly under the plant will be found very beneficial. Use pots large enough to hold the roots comfortably for all globular varieties. Larger pots are necessary for rapid growing sorts, such as cereuses. Many cacti fail to bloom for a season after re-potting.—Farm and Home.

CELERY CULTURE IN MAINE.

Our method is as follows: We prepare our hot-bed about the last of March or first of April, putting three or four inches of steaming hot manure under a little more than that depth of rich fine soil, covering with sashes and allowing it to heat a little for the next twenty-four hours. The sashes are then taken off and the soil thoroughly stirred. It is then smoothed and pressed down firmly with a short piece of board. The seed is then sown quite thickly on this surface, and a very thin covering of rich loam sifted over it, which in turn is pressed down firmly.

Now a covering of thin cloth is laid over it, thus preventing the seed washing out in watering. When the plants make their appearance, this cloth is taken off, and the outside of the sash daubed with whitewash or mud. The sashes are allowed to remain a little longer, airing freely while the sun is shining on them. Great care is exercised at this point in their growth as they will die if kept too dry, and if kept too wet they will damp off. When the plants are about an inch in height they are transplanted into a bed that has been used in growing lettuce or radishes. About 350 plants are allowed for the space occupied by one sash. The sashes removed, and the plants kept shaded from ten to three for a few days.

All that is necessary is to keep them wet from this time until the 15th to 20th of June. They are then set out in ground that has been heavily manured and fined, in rows six feet apart and one foot apart in the row.

Until the middle of August we cultivate between the rows, and keep the plants clean by hoeing occasionally. After this time we bank up what is needed for the local market. After the first of October we begin to bank up what is to be housed for winter. We begin taking it into the house the 25th of the month.

Most of the writers on celery neglect to speak about the importance of keeping out of the celery while the dew is on. If handled in this condition it is liable to rust.

* Novelties. *

Conrath Raspberry is said to be a seedling of Gregg. The R.N.Y. reports it comparatively tender; but has stood a temperature of 20°. Berries black, with some bloom. Quality better than Gregg, though seeds are too large.

Alice Grape.—On trial with R.N.Y. since 1887. Will keep a long time and finally raisin instead of rotting. So says the originator, Mr. Gunn.



The Canadian Horticulturist

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

✦ Notes and Comments. ✦

THE WATERLOO HORTICULTURAL SOCIETY has been organized with 65 members. Mr. Jas. Lockie is President, and W. A. Raymo, Secretary-Treasurer. By resolution, passed 12th Feb., every member was made also a member of the Fruit Growers' Association of Ontario.

COLUMBIAN EXPOSITION AWARDS.—Constant inquiry is made for these long delayed medals and diplomas. The Director of the United States mint states the medals will be ready about June 1st proximo. The diplomas will be completed about April 1st. The medals and bronze are made at a cost of about \$1.25 each. The diplomas are about 22 x 18, and are to be a beautiful work of art. One medal and diploma was awarded our Association for her exhibit of bound volumes of THE CANADIAN HORTICULTURIST, under the head of Horticultural literature.

CANADA RED.—An apple has been grown for some time in Ontario and Quebec, under this name, the identity of which is now called in question. So well has the apple succeeded in the Province of Quebec that the Montreal Society is desirous of distributing it among their members this spring. Mr. J. C. Plumb, of Milton, Wisconsin, to whom samples were sent, declares that it is the Baltimore of Downing. Certainly the description of this variety does closely coincide with the apple in question, but no Canadian pomologist seems to remember the Baltimore having ever been introduced into Canada. Possibly these are but two names for the same apple, the differences being due to locality and other conditions of growth.

PROFS. CRAIG AND FLETCHER paid a visit last month to the Niagara peninsula, addressing large gatherings of fruit growers on spraying for fungi and insects. For *peach rot* and *leaf curl*, the formula recommended by them was 3 lbs. copper sulphate and 3 lbs. lime to 40 gals. of water. Three applications, 1st, just after blossoms fall, and the second and third at intervals of ten days or two weeks.

FOR PEAR SCAB the early spraying was advised as the most important; indeed, two applications before bloom being of more importance than three after the bloom falls.

CURRENTS, at the experimental farm sprayed with Bordeaux mixture for the shot hole fungus, first, about one week after picking the fruit, and afterward twice at an interval of about three weeks, kept growing the whole season.

DEATH OF MR. JOHN J. THOMAS.—We chronicle with sincere regret the death of that eminent horticulturist and pomologist, Mr. John J. Thomas, of Union Springs, N.Y. He is best known to us in Canada as the author of *The American Fruit Culturist*, a book still more in demand than perhaps any other among Canada fruit growers. Though first published fifty years ago, it has been so often revised that it is still one of the most useful books of its kind. A new edition was almost completed by its author before his death, and will soon be published.



FIG. 754.—J. J. THOMAS.

Personally, Mr. Thomas was a man of great simplicity and sincerity of character, combining sturdy integrity with a rare refinement, gentleness and unflinching charity.

Mr. Thomas died at his home on the 22nd of February last, at the age of eighty-five years. *The Garden and Forest* says of him: "From his father, who was a naturalist and explorer of distinction, he inherited the power of original research which led him to investigations and experiments which have been useful in so many branches of horticulture. Nine volumes of miscellany, entitled *Rural Affairs*, which are selections from the *Country Gentleman*, of which he was an associate editor, and another interesting work on *Farm Implements and Machinery*, were prepared by him, and they rank among the most useful manuals for a

SIZE OF FRUIT BASKETS.—A committee appointed by a fruit growers' meeting in Grimsby last February prepared the following report on sixes of fruit

baskets—it being understood that these sizes do not apply to fancy baskets in crates, but only to ordinary fruit baskets. The names given them are only to distinguish them ; the sizes are supposed to be the same for each number, no matter what fruit is put in them. Taking wheat of standard weight as a medium to determine the capacity of packages, the sizes of fruit baskets should be as follows :—

	lbs.	oz.
No. 1 (pint berry box) should (contain of wheat.)	..	12½
No 2 (quart berry box) “ “	1	9
No. 3 (half peach basket) “ “	11	4
No. 4 (10-lb. grape basket) “ “	13	14
No. 5 (12 qt. peach basket) “ “	22	8
No. 6 (16 qt. grape basket or 20-lb. grape basket) should contain	30	..

Your committee considers that the above is the simplest and most practical method of determining the capacity of fruit packages.

E. J. WOOLVERTON, *Chairman.*

THE GOVERNMENT OF TASMANIA has agreed to guarantee the freight on 30,000 cases of fruit to the London market, and is making every effort to encourage large export trade in apples to Great Britain. One condition is that no apples be forwarded less than 2¼ inches in diameter. We cannot see why our own Dominion should not do as much for her fruit industry, for it is one of greater magnitude than that of Australia. We need cold storage on ship board ; we need a Canadian market in London ; and if there is an opening for our apples in Australia markets in certain months of the year, we need to have the freight guaranteed us on a good sized trial shipment, until we gain confidence in the possibilities of such a distant market.

The Farmers' Boy.—Let the areas set apart for the boy be sufficiently large to ensure returns fairly commensurate with his hopes and ambitions, and cheerfully accord the profits to him. Shorten the hours of the day's work and give room for rest and recreation. Furnish your sitting and dining rooms with the best rural pictures of your province, and make the homestead worthy of a new view as often as you can. Take the farm and fruit papers published at home, and add to the library such current literature as will awaken and sustain fresh interest and dignify your work. Again I repeat, make business men of your boys on the farm in a wide knowledge of every market available, and expert method in reaching it. While you may have excellent land, use good varieties and care for the orchard, giving utmost care to assorting and packing, and always use clean packages. The effect of your reputation and demand for your fruit will influence the boys. Education should be well laid in a full and extensive knowledge of all that relates to agriculture. How plants live and grow, or the evolution of plants with the origin of varieties or the history of soils ; the theory of tillage and yield of crops, etc. Youth is the time to acquire familiar knowledge of details near and remote —W. C. ARCHIBALD, Wolfville, N. S.

✧ Question Drawer. ✧

Grafting Wax.

713. SIR,—How do you make your grafting was? What materials do you use and in what proportion?
JOHN DYNES, *Caledon, Ont.*

A good recipe to make wax for out-of-door grafting is as follows: Resin, 4 lbs.; beeswax, 2 lbs.; tallow, 1 lb. Melt together and pour into a pail of cold water. Then grease the hands and pull the wax until nearly white.

Cankered Limb.

714. SIR,—Could you explain what is the trouble with the apple limb I send you? Will it spread, and can it be cured?
W. B. MITCHELL, *St. Marys.*

The Gravenstein, according to Mr. Craig, not unfrequently becomes flat limbed, like this sample. The blight of the bark is probably simply the result of some injury, though it is something like the canker, which is a disease well known in England. It is probably a fungus, and may be cut out, and thus kept from spreading.

Pruning Grapes.

715. SIR,—Is it safe to prune my young grape vines, set one year ago?
J. R. EVERETT, *Ont.*

The sooner the pruning of the vine is finished now, the better, whether young or old. A still better time is in the months of November and December. Vines one year planted should be cut back to two buds.

Horticultural Exhibitions.

716. SIR,—What is the most suitable flower or flowers for distribution among the members of a Horticultural Society in order that a good showing may be had at their first exhibition?

D. W. MCKAY, *Sec. Port Colborne Society.*

Reply by Mr. Thomas Beall, Lindsay,

The answer depends upon whether the exhibition to which you refer is to be for *money prizes*: or for *honorary prizes*. If the former, I have no advice to offer, as any exhibition of that nature will lead into difficulty, and quickly ruin your Society, just as it has wrecked almost every Horticultural Society in the Province which has adopted such exhibitions. On the other hand, if your exhibition is intended to be a contest between your members, having for its object a friendly and healthy stimulus to greater exertion for excellence in

horticulture, and for honorary prizes only, and is to be held in connection with one of the meetings of your members, which meetings should often be held for your mutual encouragement and advantage, then I would say that any flowers that may be in season when such meetings are held will be the most suitable.

Varieties of Plums.

717. SIR,—In planting an orchard of, say 200 plum trees, what four or six kinds would you recommend as being the most profitable and salab'e? Soil, clay loam.

J. A. TIDEY, *Norwich.*

We always dislike to answer questions on varieties, because no settled reply can be given. The varieties which are most profitable or the most productive one season are the least so another season; or some new variety may have supplanted an old one, or the tastes of consumers may have changed. Thus a different reply might be given each year, and each be correct from the standpoint of the person replying.

The following are six good market plums: Bradshaw, Lombard, Glass, Yellow Egg, Pond's Seedling, Coe's Golden Drop.

Sickly Geraniums.

718. SIR,—Will you please answer, through the CANADIAN HORTICULTURIST, the cause of geraniums casting flowers and buds. They were in full bloom up to severe weather in December, when we had to put extra fire on, and in three days all flowers and buds were destroyed; the leaves did not appear to be affected with heat. We have a brick flue, which when made very hot gives out a disagreeably sulphury smell. Can you name remedy at small cost; they were not frozen and were all double ones?

WM. SPENDLOW, *Billings Bridge, Carleton Co., Ont.*

Reply by Messrs. Webster Bros., Hamilton.

The injury results from gas. It is evident that the flue is leaking. A careful examination must be made, and all cracks carefully closed with mortar well worked in. It is just possible that the chimney is not sufficiently high to insure a sharp draft, or it is possible that the flue is foul and needs cleaning.

Red Raspberries.

719. SIR,—How long will red raspberries thrive and bear well, if properly attended?

THOS. H. ALTON, *Woodbank, Ont.*

The black caps, which are increased by tips, and which send up the new canes from the same root year after year, will not continue productive more than eight or ten years; but the red caps, which send up new shoots from suckers, may be continued for an almost indefinite period by good cultivation and manuring.

Pruning Raspberries.

720. SIR,—Is it advisable to cut out the old wood in red raspberry bushes in September?
T. H. A.

Yes, this work may be done any time after fruiting season, for the old canes have then finished their life work and will gradually die in any case. They had better be removed in September, and the young canes thinned out.

Ashes and Lime.

721. SIR,—Is wood ashes, or lime, a good fertilizer for berry bushes? If not, what is good?
T. H. A.

Wood ashes is one of the best of fertilizers for a fruit plantation, especially on light soils. Potash is one of the chief elements entering into the constitution of both plants and fruits. Lime is frequently valuable, because it sets free other elements, but is not in itself of much value.

Spraying.

722. SIR,—If grapes need spraying after the grapes are formed, what would you use? When should plum trees be sprayed, and with what? What would you use for mildew on grapes or gooseberries?
T. H. A.

See the Spraying Calendar in March number.

The Wilson.

723. SIR,—Would you recommend the Wilson strawberry? If not, what is better?
T. H. A.

Yes; where the foliage is not subject to rust, it still stands among the most productive and profitable of strawberries.

If we were to choose four others, they would be Williams, Bubach, Haveland and Saunders.

Pruning Grapes.

724. SIR,—How late in winter may grape vines be pruned?
T. H. A.

Grape vines may be pruned any time from the fall of the leaf in autumn, until the buds begin pushing in spring. It is usually thought best to complete the pruning not later than April 1st, to avoid too great loss of moisture through the wounds. Whether this really affects the productiveness, is a question for our stations to solve.

Scraping Trunks of Apple Trees.

725. SIR,—Should the rough bark be scraped off the trunks of apple trees with a dull hoe, and when? T. H. A.

When a tree is growing vigorously, it will throw off the old bark without assistance. The only object in scraping it off is to remove some of the hiding places of insects and fungi. A favorite covert for the oyster-shell bark louse is under old loose portions of bark, and there they are protected from the effect of kerosene emulsion spray. So to thoroughly rid the tree of this tiny but most destructive insect, it is necessary to scrape off the loose bark, before washing or spraying the tree. A dull hoe is as good an instrument as any.

Lime or Ash-water for Apple Trunks.

726. SIR,—Which is better to use as a wash for apple tree trunks, lime-water or lye-water? T. H. A.

Whitewashing trees with lime is of little use, simply making an orchard look hideous and to no especial purpose. Ashes and water, or lye water, or any other alkaline solution is destructive to the bark louse and other insects. If applied about the 1st of June it will best destroy the bark louse.

The Borer.

727. SIR,—How can you tell when borers are in a tree, and how would you kill them? T. H. A.

The presence of borers in young apple trees may usually be detected by a dark discoloration of the bark, which sometimes becomes so dead as to crack open. Besides these some castings may usually be seen protruding from the point of entrance. They must be cut out with a sharp knife to save the tree; or a wire may be inserted, if the larva is near the surface, and the borer destroyed. The best plan is to prevent the depositing of the eggs in the trunk, by washing with strong soap suds in June and July, when the parent beetle is flying. This will drive it away.

Worms on Currant and Gooseberry Bushes.

728. SIR,—What would you use to kill the worms on currants and gooseberry bushes? T. H. A.

Spraying or sprinkling with Paris green water when the saw fly first appears is most effective; but when currants are formed, hellebore should be used, either dusted on dry, using a glass goblet with a leno cover as a sprinkler; or in water, one ounce to three gallons, applied with a watering can.

Rich Ground for Strawberries.

729. SIR,—Do strawberries require extra well manured ground? T. H. A.

Yes. You can scarcely make the soil too rich for strawberries. Nothing is better than plenty of barn manure.

Cultivating Time.

730. SIR,—When should you stop cultivating among the berry bushes, with the cultivator? T. H. A.

Not so long as weeds grow, or ground is inclined to become baked.

Fruit Farms.

731. SIR,—What is the usual price per acre of fruit farms about Grimsby (1) when well set out in fruit trees, but not yet of a bearing age, (2) when in full bearing? What may be regarded as the highest yield per tree of (a) peaches, (b) pears, (c) plums? What may be regarded as the highest yield per acre of small fruits, as (1) currants, (2) raspberries, (3) grapes?
REV. MR. FERGUSON, *Grimsby*.

Such questions as these are very difficult indeed. We are constantly receiving them, but hesitate very much in making any definite replies, because there are so many different results in fruit growing, according to the amount of experience and knowledge which one brings with him into the business.

1. The usual price per acre for fruit farms about Grimsby, when first set out with fruit trees, but not in bearing, is about \$150 per acre, and when in full bearing it is valued all the way from \$300 to \$500 per acre. This will depend, however, upon the profitable or unprofitable nature of the fruits which occupy the land.

2. Peaches often yield about seven or eight baskets per tree. Pears yield so variously according to the aid of trees, that it is difficult to make any definite statement. A common outside yield would be about twenty baskets per tree, but some varieties would not yield half that amount. Plums yield about the same as peaches.

3. Currants and raspberries will yield somewhere about two or three thousand quarts per acre, but the yield may far exceed this amount under special conditions. Grapes, like all other fruits, vary in yield according to the varieties planted, some kinds being very productive, and others very scant bearers. Concords and Niagaras often yield from three to four tons per acre, while some varieties, as, for instance, the Delaware, would not yield half that quantity.

Irrigation.

(Reply to Question 697.)

Prof. Taft, of the Michigan Agricultural College writes: "Answering your correspondent, I would say that if only a small amount of water is required and if the conditions are suitable, the simplest and least expensive method of lifting the water to the height mentioned, will be by means of a ram. As next to this I would place the gasoline and hot air pumping engines, but if a large area is to be irrigated there is nothing that I know of that will approach, in efficiency and cost for the work performed, a good steam pump."

Fall vs. Spring Planting in the North-West.

(Question answered by Mr. John Craig, Ottawa.)

Replying to your letter of the 8th inst. regarding the advantages of fall and spring planting of small fruits in the North-West Territories, I may say that our experience at Indian Head and Brandon has been entirely against fall planting of small fruits, as well as all other fruit and forest trees. One of the difficulties that a planter has to contend with in the North-West lies in the fact that there is in the autumn a very slight amount of moisture in the soil, and if the trees and plants are not injured by winter—as they usually are—they suffer from drought and the drying-out effect of the winds. There is not sufficient moisture in the soil to start the initial processes of growth in roots of even currants or gooseberries, and in the North-West there is usually not enough snow to protect them from cold, unless well rooted. It is very much safer and altogether more advisable, the plants having been secured in the fall, to bury them completely in the soil, and plant in the spring upon summer-fallowed ground.

* Open Letters. *

Experimental Work.

SIR.—I have a small experiment station on a private scale in my own garden, consisting of 28 varieties of plums, 12 of pears, 12 of apples, 4 of peaches, 4 of gooseberries, several strawberries and a few currants and raspberries, planted from one to three years. You will hear from me occasionally when they come into bearing, whether of success or failure, by the way, I might mention last year's success with 12 Lombard plums, planted May, 1891. I picked 5½ bushels of beautiful fruit, and 107 quarts of Downing gooseberries from 13 bushes planted same time, sprayed twice during the season, which I believe saved my fruit entirely from rot, and partially from the little Turks ravages.

WM. JUDGE, Orangeville.

Inarching.

In the November number of 1894 there is a cut given on Arch-grafting. I have a young pear tree with a fork similar to the cut drawn. I should like to perform the operation of arch grafting on it while it is yet young, if some kind friend would give me some simple directions how to proceed, through the CANADIAN HORTICULTURIST.

JOHN FURSEY, *Cedar Dale.*

Inarching, sometimes called grafting by approach, is performed by uniting a scion to a stock without separating either from its root until the union is complete. In the case before us it would be necessary to train a small branch to go across the crotch, and, after cutting back a little of both, so tie them firmly in position that their barks would unite, and in time grow firmly attached. We have had cases of natural union in our trees of this kind, and the cordon training of apple trees in England is on this principle.

With young pear trees, it might be better to remove one on the branches entirely.

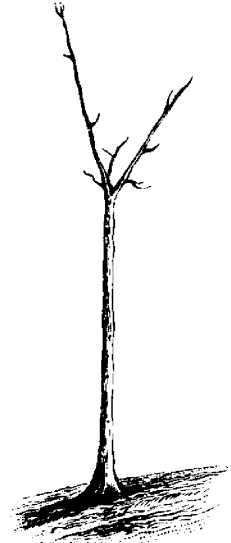


FIG. 755.

Prunus Simoni.

(See *May No.*, page 190, 1894.)

These plums should be scalded in hot water and the skins quickly removed before tanning. You will then find them most excellent fruit. A friend of mine who tried this way last fall on several jars, is buying more trees of this variety to plant out this spring.

E. W. S., *Woodstock.*

Industry Gooseberry.

SIR,—My daughter in England writes me about a large yield from four Industry gooseberry bushes that averaged sixteen quarts each. She said the bushes are about sixteen years old and from six to seven feet across. They have since been destroyed, as the land was used for building purposes. This was near Morpeth, where the Industry originated. My daughter has sent me a bundle of cuttings from these bushes. The wood is the stoutest I have ever seen.

W. E. BROOKS, *Mount Forest.*

News from our Societies.

SIR.—Our Secretary is forwarding you his list of names to-day. I hope we may be able to keep up the enthusiasm, which is strong just now. We are ordering 1,200 gladiolus bulbs, 60 cannas, 60 single and 60 double tuberous-rooted begonias. When each member gets 20 gladiolus bulbs, 1 canna, 1 single and 1 double tuberous-rooted begonia, we expect it to be a surprise and delight to them; and we will add other things. I read a paper on Tuesday evening to the Society on "Clematis Growing."

JAS. LOCKIE, *Waterloo.*