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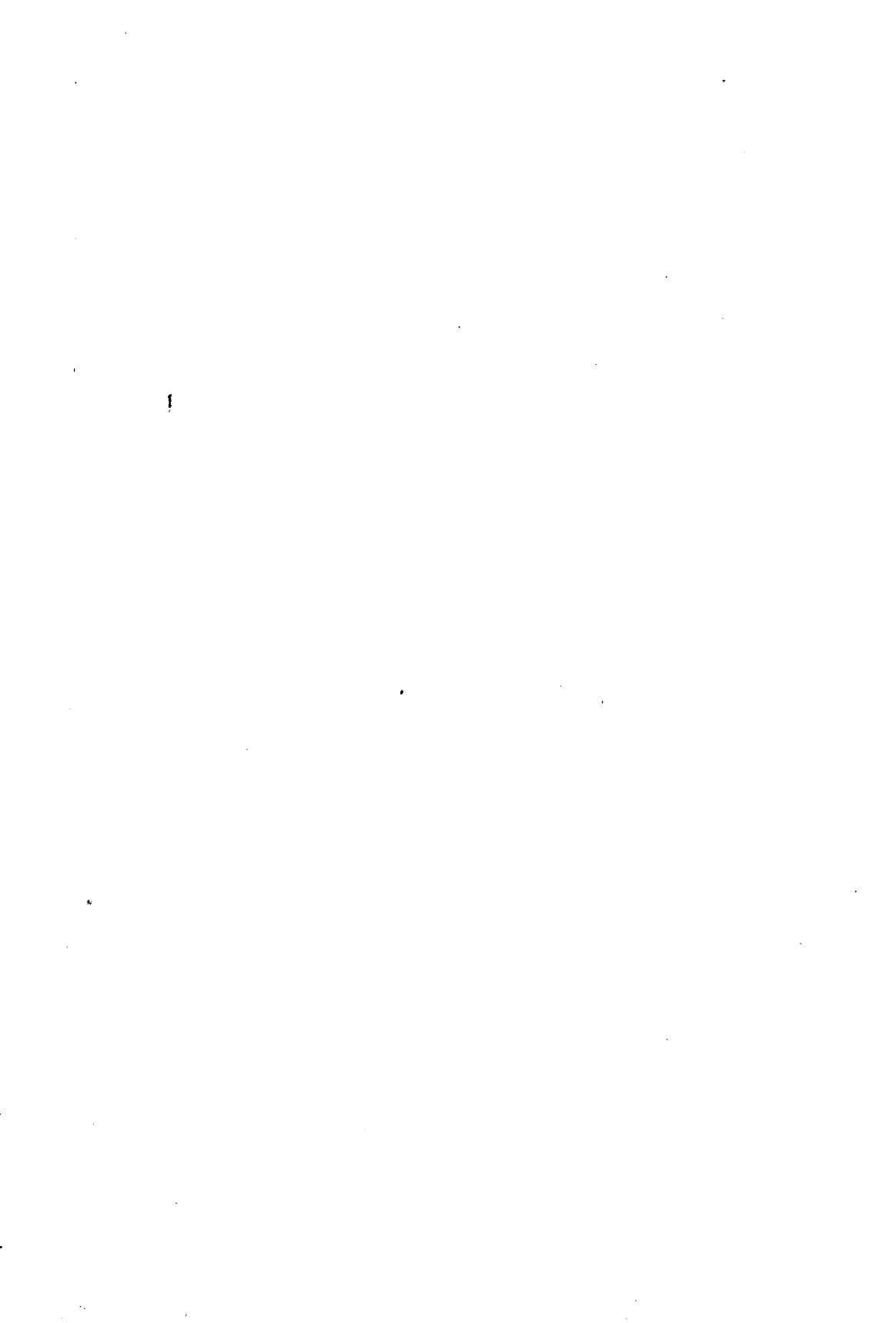
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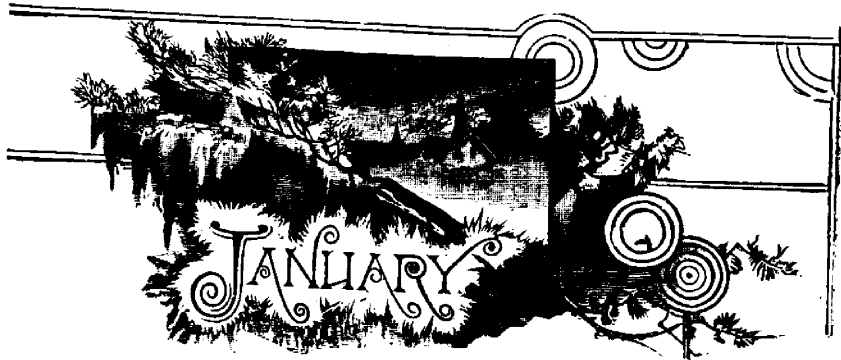
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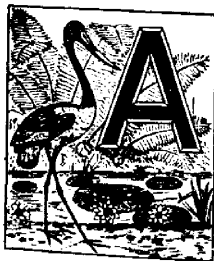
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THE BURBANK PLUM.



A GOOD paper on "Native Plums" was read by Professor Craig, of Ottawa, at the annual meeting of our Association, held in the City of Brantford in 1892. In this paper, Mr. Craig pointed out the value for northern sections, of such varieties of *P. Americana* as Cheney, De Soto, Rollingstone, Weaver, Wolf, Hawkeye and others; at the same time he stated that the Chickasa plums (*P. Chickasa*) such as Newman and Pottawattamie, also the Wild Goose (*P. hortulana*), were not yet proved to be sufficiently hardy for cultivation outside the peach-growing district.

In the August number of this journal for 1892, some reference was made to Japan plums, and one variety was described as worthy of trial in Southern Ontario, viz., the Abundance. We now introduce to the notice of our readers another of equal promise, viz., the Burbank, of which a colored plate appears in this number. At the same time, we desire to caution our readers that this class of plums is tender, and we have no reason to assume that they will succeed outside the peach belt of Ontario. The Burbank, however, has been grown with considerable success in Western New York by Mr. S. D. Willard, of Geneva, who claims that it is a profitable variety to grow for market in that section.

The tree is a good bearer, and is being planted freely in commercial orchards in some sections. It is named after Mr. Luther Burbank, of Santa Rosa, California, who imported a lot of seedling plums from Japan in the year 1885, and, after fruiting them, selected this variety as the most desirable of all.

The fruit is described as of medium size ; form, roundish, conical, tapering toward the apex ; cavity, regular, deep, abrupt, with leather-crack marks ; suture, scarcely perceptible ; stem, stout, half-inch long ; apex, a mere point ; surface, smooth, with very little bloom ; cracks and dots of brown sometimes apparent ; color, dark red or purplish, running into bright amber, with the yellow under-color showing through the patches ; dots, numerous, minute, brown ; skin, medium thickness, tender, peeling easily from fully ripened specimens ; flesh, amber yellow, melting, juicy ; stone, small to medium, and clings to the flesh ; flavor, rich, sugary, resembling other Japanese plums ; quality, best.

### RASPBERRIES, NEW AND OLD.



It is an easy matter to secure enough raspberries for home use from a few plants, but he who grows for the market should give attention to the varieties planted and the berries produced. In color, these may be yellow, red, purple, and black. For yellow, the Caroline and Brinckle Orange are very profitable ; for red, the Marlboro' Cuthbert, and Rancocas ; for purple, Schaffer's Colossal, and for black the Souhegan, Mammoth Cluster, and Ohio. These are all well-tested varieties, which can be recommended for productiveness, covering a period from June 20th to August 1st with profitable pickings. New varieties appear each year and demand some attention from berry growers. Among these the following have been tested at the Pennsylvania Experiment Station :

*Columbian*.—The plants and berries of this variety resemble Shaffer's Colossal. These two are of a type very different from the other raspberries. *Columbian* is a seedling of the Cuthbert, grown near the Gregg, and, therefore, believed to be a cross between the black and red raspberries. It is a prolific bearer and a most vigorous grower ; the canes this second year from planting are erect, and from six to eight feet high, the berries are very large, purple, and in total yield there was nearly twice the weight of berries from the best red or black variety.

*Smith's Prolific*.—Stout canes are produced by this plant, and its fruit is borne in large clusters. The berries are very fine, being of medium size, made up of small drupes which are very black and sweet, possessing a good flavor. When the plants have made a good stand, they should produce a large yield of fruit.

*Thompson's Early Prolific*.—The principal merit claimed for this variety is its earliness, which was not marked in this its first fruiting season. Pickings were made continuously until August 1st. The berries are very large, light red in color, with the prevailing flavor of the red berries.



## THE MEETING AT PETERBORO'.



CONSIDERABLE amount of very valuable matter for our report was elicited at the meeting in Peterboro'. True, the local attendance was comparatively small, but those who were present showed a deep interest in our work. The name of Mr. E. B. Edwards, President of the Peterboro' Association, deserves especial mention, as one who took the deepest interest in our work, and rendered every assistance in his power to make our meeting a success.

*The Kieffer Pear.*—This variety, was spoken of by Mr. Pettit, as succeeding better in the West than in Ontario, but some samples shown by Ontario at the World's Fair were remarkably fine. Mr. Boulter, of Picton, said that the common notion that it was excellent for canning was not borne out in his experience, for it has one fault; it won't stand up through the boiling. Mr. A. M. Smith said he had sold his crop to the canning factory at Grimsby who wanted all they could get. Quite a difference of opinion was also expressed regarding its quality, and all this goes to show how valuable to us all will be properly conducted experimental work.

*Spraying for Insects and Fungi* is another important line of experimental work, and many questions are yet unsettled. Prof. Hutt, the newly appointed Horticulturist at Guelph Agricultural College, said he had been visiting the fruit farms of Messrs. Maxwell Bros., at Geneva, N. Y., and though they have large plum orchards they do not spray, but capture and cremate the curculio in the old-fashioned way. The curculio and stung fruit are gathered in a sheet ten or twelve feet in diameter, made like an inverted umbrella, and supported on a light two wheeled barrow. A slit in the sheet, opposite the handles allows the tree to enter to the centre. The limbs are jarred with a padded bumper, and everything on the sheet rolls into a tin drawer at the bottom."

Mr. Geo. Cline, of Winona, Ontario, said he had been spraying his plum orchard with Paris green for about twelve years past, and has thereby succeeded in procuring a fair crop almost every year. In parts where he omitted spraying, the crop had failed.

Mr. W. M. Orr, of Stoney Creek, reported having sprayed his Flemish Beauty pear trees with Bordeaux mixture for the scab, and had failed to rid them of the evil, and felt discouraged.

Prof. Craig called attention to samples of the same apple grown without

being sprayed and with it, and the marked difference between them ; and the Secretary instanced the fine Green Newton Pippins shown at Chicago by the State of New York, which had been cleared of scab by the use of the Bordeaux mixture.

In view of the various results obtained by various experiments the importance of more careful and extended experimental work was plainly indicated.

At a subsequent meeting of the Board it was decided to continue urging upon the Minister of Agriculture for Ontario, the advisability of instituting experimental stations in the interest of fruit growers.

*Kerosene Emulsions.*—Prof. Fletcher gave some good hints for exterminating injurious insects, such as lice on plum trees. He said that the formula recommended by Prof. Cook, reduced the amount of kerosene too much. Prof. Riley's formula was best, which required two gallons of kerosene, one gallon soap, and one of water. The kerosene was added when the soap mixture was hot, and afterwards the whole was diluted with twelve gallons of water.

*Three best Winter Apples.*—For early winter the Blenheim Orange was counted most appropriate. About Peterboro' this apple is grown quite successfully ; Mr. E. B. Edwards stated that in his shipment of apples last season to Great Britain, this apple netted him just double the returns of any other variety.

For mid-winter, some recommend the Baldwin, some the King, and some the Northern Spy. No doubt the first is one of our best shipping apples, because it carries so well and shows bruises so little. In this particular the Spy fails as an export apple to the English market, for it shows bruises badly ; however, for a near market it is one of our very best. Not only is it highly prized in our own markets, but in the United States also, our Canadian Spys are in great demand. At the present time they will bring \$4.50 a barrel in Chicago, and many car loads of them could be disposed of most readily.

The King apple stands at the very top in the British markets, alongside of the celebrated Green Newton Pippin, but unfortunately the latter scabs, and the former is a wretchedly scant bearer.

The Ben Davis is the favorite of some growers for a mid-winter apple, it is hardy, bears early and abundantly, and is of a good color ; only for its unfortunate lack of quality, it would be *the* apple we are seeking. But evidently the great mid-winter variety, perfect in every particular, has not yet been found.

For a late winter, the Golden Russet of Western New York was highly commended.

*A Good Rose.*—The Lena Turner was mentioned by Mr. Thos. Beall, as an excellent rose. It had been a constant bloomer with him, was dark pink in color, and one of the most satisfactory in his collection. He grows a good many of hybrid perpetuals, and lays them down every fall, partly covering them with earth, for winter protection.

*Uniformity in Description of Fruits.*—Mr. Saunders gave a very valuable address on "Desirable Hardy Ornamental Trees and Shrubs for Ontario," which will appear in full in our Annual Report. He also spoke upon the great importance of uniformity in the descriptions of fruits, given in the HORTICULTURIST and other journals.

In describing apples and pears, the following order was desirable, viz.:

*Tree*, origin, character of growth, color of wood, or other peculiarities, productiveness, etc.

*Fruit*, size, form, color, character of stem and cavity, and of calyx and basin; *skin*, color and markings.

*Flesh*, color, texture, juiciness, sweetness or acidity, flavor, quality.

*Period of ripening.*

In describing plums and peaches, a similar order should be followed, only that the character of the suture should follow the color, and in speaking of the quality of the flesh, it should be stated whether it is free from or clings to the stone.

*Raspberries in the North.*—Mr. R. B. Whyte, of Ottawa, grows his raspberries on a heavy retentive soil. He plants in the fall, placing the plants from two to three feet apart in the rows, and the rows from five to seven feet apart, according to the variety. His method of pruning, as described, is the very opposite of that used in the Niagara district. He allows his canes to grow up tall during the summer, cutting off all laterals within two or three buds of the main cane. Then in the fall cut back the tall stems to about five feet, and bend them down to the ground, placing upon them pieces of boards, scantlings or other weights, to keep them under the snow. He always cuts out the old wood and surplus canes as soon as the fruit is gathered. Four to six canes is the number allowed each hill.

The eight best varieties, in Mr. Whyte's estimation, are (Red) Cuthbert, Herstine and Heebner; (Yellow) Golden Queen, Brinckle's Orange and Caroline; the Hillborn blackcap, and the purple hybrid Shaffer.

Mr. Boulter, the President of the Peterboro' Association, said that the Shaffer was not so desirable for canning purposes as commonly supposed. For home canning it is all right, but in the canning factories it goes to pieces in cooking, and takes too much sugar to be desirable.

*The Peach Curl* was curable with Bordeaux mixture, according to Prof. Craig. The first application should be made before the foliage starts, and the succeeding ones at intervals of ten days.

*The Formation of Local Horticultural Societies* in the towns and incorporated villages of Ontario, was discussed, whose object should be the distribution of horticultural literature and the holding of lectures, instead of giving prizes for fruit exhibits. (See Agricultural and Arts Act, sections 36, 37 and 47.) The societies would receive their due share of the electoral district grant,

and for eighty cents each, could make every member also a member of the Ontario Fruit Growers' Association, with all its privileges. The remaining \$1.20 could be well spent in the interest of members, in an additional distribution of fruit and ornamental plants or bulbs, payment of lecturers, etc.

*Experiment Station Work* was also discussed, and it was decided to again ask the Local House for some action in this direction. A committee was appointed who suggested an entirely new scheme, and one that will commend itself to all. It was to establish, say five initial sub-stations for testing fruits, to be carried on by the Ontario Fruit Growers' Association, under the supervision of the Professor of Horticulture at Guelph. The idea is to select expert fruit growers, each of whom has had long experience in growing any one line of fruit, and give them each an annual allowance of money, on condition that he would make frequent reports concerning them, both to our Secretary and to the Prof. of Horticulture at the Ontario Agricultural College. An inventory of the varieties already under test would be asked of each specialist at the outset, and then the Managing Committee would fill in such other varieties as it would be desirable to have tested in that locality. From time to time, additional stations still would be added, as it might seem necessary, in order to test climatic adaptation of new fruits more fully. Any one proving himself incompetent or careless, and failing to report at the intervals stated, would forfeit the continuance of the annual grant, which would be henceforth made to some other more competent person. The above is but a rough outline of the plan, which will no doubt be much modified by the Committee, but certainly no more economical scheme could be desired, and probably none more productive of excellent results.

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APPLES FRIED IN BATTER.—Fry to a crisp several slices of salt pork. Core, but do not peel, large, tart apples. Slice each apple crosswise in three or four slices, taking care not to break the slices. Dip each slice in a batter composed of one cupful of flour, one teaspoonful of baking powder, a pinch of salt, and milk sufficient to make of the consistency of pancake batter. Cover both sides of the apple and fry a light brown in the pork drippings; a most acceptable accompaniment to roast veal or pork or baked fish.

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APPLES AU NATUREL.—Prepare apples in as varied and delicious ways as you will, there is nothing more wholesome or tempting for breakfast or dessert than these. For a summer or autumn breakfast, line a silver cake basket with grape leaves, letting the little tendrils curl over the edges. Polish your apples until they shine—mellow Sweet Harvest and brilliant Red Astrachans—and pile in with an eye to the best contrast in color. If fortunate enough to possess a blooming morning glory vine, pick six or seven of the delicate pink and blue blossoms, place in the interstices, and you have "apples of gold in pictures of silver," that Pomona herself would be proud to own.—R. N. Y.

## THE SUCCESSFUL RAISING OF PEARS.



PEARS are a delicate fruit, liked by nearly everyone, the trees are early bearers, of easy culture, and they take up very little space. When once well established they bear neglect better than most other kinds of fruit. The tree has no insect enemies, if we except the fall web-worm, which occasionally locates on it, or perhaps, once in a lifetime, the tree may be visited by a small colony of slugs. Pears delight in dry and sunny locations, yet will grow and thrive almost anywhere if properly cared for. If the soil is wet it should be underdrained, and for this purpose a ditch filled with the small stones that can be raked from the surface will answer admirably. For standard varieties, 20 ft. apart each way is sufficient, and for dwarfs or pears worked on quince stock, 10 ft. will usually do, though some varieties, if planted deep, will root on the pear stock and become standards, requiring more room. For market there is little profit in dwarfs, but for family use they come into bearing so early, and with some varieties they bear fruit of so much better quality that they are well worthy of cultivation.

For a small place I would advise planting dwarfs exclusively, planting deeply so that the pear stock may in time throw out roots and the tree thereby become a standard. A fertile soil is good, but not absolutely necessary.

Until the tree is well grown the ground should be carefully worked through the early part of the season, letting the work cease as early as the first of September. Dwarfs should be worked every season, as the quince stock on which they are budded has fine fibrous roots that feed near the surface, and turf left about them for any length of time is fatal to any good results. All summer varieties should be picked at least 10 days before ripening, and ripened in boxes excluded from light, and as far as possible from air. Of course they will ripen otherwise, but to secure the best possible flavor, there is no better plan. Fall varieties should be gathered two weeks before ripening, and handled in the same way. Winter varieties may remain on the trees until the leaves fall, taking care not to let them get severely frozen. Pack them away in a similar manner as recommended for the earlier varieties, and keep as near the freezing point as you can until you wish to use them. A few days in a warm room will then ripen them rapidly.—Farm and Home.

THE RECUMBENT APPLE. — Mr. E. Reeves, in a paper before the Iowa Horticultural Society, says: Later comes the Hibernial family of apples, which includes Hibernial, Recumbent, Silken Leaf, and others. All are perfectly hardy and vary but little in fruit. Recumbent is the most widely distributed, and is among the best. Fruit large and the best cooking apple I have tested among the Russians. It is the best apple we have for pies, but for eating from the hand, is simply atrocious. Season, November to January.

## JAPAN PLUMS.



If these fine and splendid plums I wish to state that my experience is limited, but so far as tested on my ground they far exceed my expectations, and I believe this is true in all parts of the United States where they have been tested. No fruit of recent introduction is meeting the expectations of fruit growers throughout the entire country equal to these oriental plums. Their high quality, size of fruit, smallness of pit, earliness in bearing, great productiveness, handsome color, freedom from insect pest, long keeping and shipping qualities, recommend them as fit companions for our finest natives.

These Japanese plums so far on my ground have been a surprise to me, especially their power to endure a low temperature, having stood 26 degrees below zero without showing a tinge of frost, and remaining healthy to the terminal bud. The past season the Burbank and Ogon bore a heavy crop for such young trees, and these same trees that bore so heavily this year, are extremely full of fruit buds for the coming crop next year; this indicates great productiveness, and these plums bid fair to be heavy annual bearers. Just why these fruits, from their far off island home in the Pacific Ocean, with a mild and genial climate, should have such power of endurance in our cold continental climate, one thousand miles from the ocean influence that they have been surrounded with, has been a puzzle to me; but after watching them side by side with our hardy natives the past four years, and witnessing their splendid behavior, I have been forced to the conclusion that there was once a close relationship between our natives and these Japanese introductions, and that in the preglacial climate they had a common origin in North America. Their habits and growth are so much more in harmony with our natives than those from Europe, that I am quite sure at one time ancient America and Japan were closely related, and either the ancient Japan climate was more in harmony with our present diversified climate, or these plums and our natives had a common origin in North America. Such hardy Chickasas as Golden Beauty, Honey Drop, Chas. Downing, Col. Wilder, and Wild Goose, also of the Miner group such plums as Miner, Hammer and Rockfort are connecting links that chain our native plants to some of these oriental sorts like Satsuma, Burbank, Yellow Japan, Ogon, etc. The points of similarity noted are early shedding of leaves and maturity of wood early in the fall like our natives, multiple of leaf buds like native sorts named above, also color and roughness of bark, and fibrous condition of inside of fruit. There doubtless are many more points of resemblance that will reveal themselves as we more closely study and compare with our natives, however, we must not expect too close a resemblance for they have been separated for thousands of years, and the conditions that have surrounded them were so

radically different it has almost blotted out their connection. When we realize that these orientals became separated from our natives, and surrounded with a genial climate, show the influence of a high civilization for unknown ages, while our natives had to struggle against climate, savage beasts, wild and destructive races and tribes of mankind, and were left entirely to nature's law, the "survival of the fittest," in the great struggle for existence, the only wonder, it seems to me, is that, under such different conditions and treatment for ages, we can find a trace of their origin and relationship. I have expressed my views to some of our Pomologists, and will give brief extracts from a few of their letters, bearing on the subject.

P. J. Berckman of Augusta, Ga., says: "Your idea of a connecting link of the flora of Japan with that of the North American continent coincides with what my dear old friend, the late Prof. Asa Gray, once told me, that he found a wonderful similarity between some of the plants of the United States with their congeners from Japan, which made the study of the latter so very interesting to him. You modestly term yours a wild idea; permit me to say that it is far from such, and really, in your letter, you but substantiate facts."

Prof. Bailey, of Cornell University, New York, says: "I am much interested in your letter upon the Japanese plums. The fruits of Japan and the United States are really very closely related. The two countries were once connected at the north-west, and the flora of both originated far north, and was driven southward by changes in external conditions."

Prof. G. Goodale, of Harvard University, Cambridge, Mass., says: "You will find in the Article Sequoia, in Dr. Asa Gray's Darwinia, an account of his views in regard to the relation existing between the vegetation of Japan and parts of the United States. It is very interesting to know that you have independently, by your study of plums, arrived at the same conclusions as to many points."

W. A. Taylor, Assistant Pomologist U. S. Department of Agriculture, says: "In regard to the Japan fruits about which you write, I am glad to receive your report concerning them. Your conclusion on that they must have been native in a more severe climate than that of Japan, is no doubt a correct one."

Prof. C. S. Sargent, who has devoted much time to the investigation of Japan trees, and who spent the summer in Japan this year, states that he finds no wild representative of the species to which the cultivated Japanese plums belong."

J. L. Normand, of Marksville, La., writes: "I find that the Japanese plums have a wide geographical adaptation in the United States; most of them will succeed from the great lakes to the Gulf coast, and as to their relationship with our native sorts, the more I study them, the more I find that they sprung from the same race of plums. The flora of Japan and the United States has a close resemblance in many of our wild plants."

Prof. C. C. Georgeson says: "that the common wild fox grapes of this country, *Vitis Labrusca*, grows wild in Japan." These plants are silent witnesses which unmistakably prove that this continent was once connected by land with Asia. The American Indian, with his high cheek bones and Mongolian features, are strong evidence that they are of Asiatic origin. Here we have better proof than the ancient legend of the "Lost Atlantis," that North America was once connected by land with Asia.

In closing, permit me to say if my conclusions, on the affinity of these fine Japanese and our native plums, are true, it opens up a new era in plum culture; for here we have introduced a fine fruit that, doubtless, is related to some of our hardy Chickasas, or other natives. In their large size and fine qualities lies the condensed improvement brought about by the scientific combinations of the life forces of these Oriental plums. So, really, to the Japanese horticulturists we owe much, for we at once can avail ourselves of these wonderful fruits which it has taken, perhaps, thousands of years for them to develop, while our natives were left for nature to improve under the law, "the survival of the fittest." By cross-breeding our natives with these fine Orientals, we gain these long ages of improvement made by the Japanese horticulturists. Already, much has been done by J. L. Normand, of Marksville, La., who has produced hundreds of new seedlings, which are cross-bred with our natives, and many of them are said to be fine, and I look forward for great results on my ground of these cross-bred seedlings.

*Cedar Rapids, Iowa.*

A. B. DENNIS.

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STICK TO IT.—The New England Farmer says: "If we would make money raising small fruits we must go into the business to stay, not for a year, but for many years or for life. There will be bad years for fruit growers as well as for producers of any other products, but those who learn the business most thoroughly, and who establish a name for quality of products and for fair dealing, will be the ones to succeed in the long run. They will have to sell with little profit some years, when everybody else is in it, but they will make the money when others fail from ignorance of the business or because of periodical under-production. It is the earnest workers and steady plodders, after all, who come out ahead in the struggles for existence."

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EATING GRAPE SEEDS.—It is growing more and more the fashion—and a good fashion it is—not to swallow the seeds of grapes. Appendicitis is more and more feared as a result of swallowing grape seeds. The seeds lodge in the vermiform appendix and the almost incurable disease follows. That appendicitis is more common nowadays than in times past may be owing to the fact that more grapes are eaten, as production is greater, and the price reduced accordingly.



## THE WEST WIND.



T is strange how many people have never got acquainted with West wind. A friend, who keeps a domestic observatory, was showing me his records—taken three times a day—and in the month just past there were twenty days of West wind. And the whole year will show even a larger proportion than that, and yet people will build houses on the east side of a street in a village; and wonder “Why they get so much dust?” And have their stoves in the east end of a church, and find “so much difficulty in getting the building warm at the farther end!”

Our ecclesiastically-superstitious forefathers were accustomed to think and say a great deal about “Orientation.” It seemed a great thing to get the exact point of the sunrise on some particular day. As for instance, if a church was to be built in honor of St. George, then a solemn vigil must be kept all the night preceding the 23rd April: and as the sun rose on that morning, the exact east or south-east point must be secured, so that the “east end of the church shall face exactly so!” And thus they got the true, “Orientation” of that particular saint’s church.

Not for honoring mediæval saints but for the very useful purpose of keeping ourselves warm, we ought to give a good deal of attention, not to the orientation, but the *Occidentation* of our dwellings and public buildings. Kee-way-tin, whom Longfellow describes in *Hiawatha* as the north-west wind, is a very persistent fellow; and we need not think, by naming an ever-shifting and somewhat visionary territory after him in the north-west, to get rid of his presence here! But in reality our ever-present friend is rather south-west than north-west. From Prof. Maury, the best authority we have on marine and aerial currents, and all that results from them, we come to the following deductions:

The great bulk of the earth at the equator, as it swings easterly on its axis, fails to carry the thin fluid of the air with it as fast as it moves itself; and there is the same contrary current we would feel if carried swiftly forward on a perfectly calm day. Hence, the trade, or easterly winds of the Tropics. These extend as far on each side of the equator as the vertical sun is found; or  $23\frac{1}{2}^{\circ}$  north and south latitude. As the heat is greatest in the centre of the heated region—the equator—there is drawing toward the centre from both sides; and the east wind has a little north or south in it, as it blows respectively at the north or south of the equator. As the great recoil or eddy of this ever-present eastern tropical wind, the prevailing winds of the temperate zones are west—somewhat south-west. Every orchard in the country leans to the east; every open shed—if the farmer has any sense—has the west wind at its back.

We used to be taught in school, (I wonder if it is in the geographies yet?) that the Gulf Stream made a mild climate for the British Islands. The fact is,

that it is the condition of the west wind that makes the climate. The mere proximity of the Gulf Stream doesn't do it except mediately, and in a small degree; for the Gulf Stream is nearer to Nova Scotia than it is to Britain, and it does not give Nova Scotia a mild climate. The west wind that strikes British Columbia and Washington territory, is a moist wind; and consequently, those coasts have a mild climate, like England. In passing over the Coast Ranges and the Rocky Mountains, the wind is robbed of its moisture, and becomes a dry wind and therefore a cold wind—as it sweeps easterly over the British Territories. By the time it gets to Labrador, it is perfectly Arctic. Now, *that wind* pursues its course over the Atlantic, and by the time it reaches the British Isles, it has again become a moist wind, giving a moist, mild climate. It goes on crossing the Scandinavian mountains and other moisture-robbing elevations, and by the time it reaches Russia, it has again become a dry, cold wind, giving a dry cold climate. On both continents, the west and east coasts respectively, show a vast difference of temperature, at the same latitude—and for the above reason.

This all points to the fact, that if we would be sheltered from the cold, we must be sheltered from the west wind. Hence, in the country, the great value of timber-belts for shelter; for crops, for houses, and to prevent so much drifting of the roads. I am glad Mr. Phipps has taken up the subject so vigorously. It is no use wishing he had been in the vigor of his life forty years ago—when his appeals would have done so much good, in hundreds of townships so now denuded of their wood—for then people would not have listened to him. Several farmers have expressed to me their regret that the township they live in has been so completely stripped. "Not a sheltering belt of timber," said one of them, "after you pass this one, for six miles up this line!" "Well," said a young girl in the sleigh, "I know that the strip of bush next our house, makes us a great deal warmer; and we sometimes have apples hanging thick on our trees, when other orchards are badly stripped with the winds." And though it may be too late to save belts for shelter in many places, yet there are many newer neighborhoods where the advice is still practicable. The narrowest shelter-belt I ever saw, was in the County of Bruce, where a rather fancy fellow, a bachelor, had run a double fence along his front, after he made his first clearing. A space of twelve or sixteen feet was, when I saw it, growing up thickly with all kinds of "soft stuff," making a beautiful front. In older clearings the belt must needs be planted.

Much of the survey of Ontario is "on a skew"; much to the disgrace of the surveyors, and the Crown-land officials, who permitted it. West of Toronto, are no fewer than twenty-five three-cornered townships! In very many townships, therefore, there is one end or side of the farm directly facing the north-west. Let a strip, at least ten rods wide be left, all across that side of the farm. And if the same is done for the south-west side, all the better. But these angles are sometimes the man's *front*, and already cleared. In that case,

a narrow belt only, as a double row of Norway Spruce, or two or three rows of maple and native spruce mixed—or something of that nature—could be tried. Only, the stock must not be allowed to browse and trample them. By far the quickest-growing of all our trees is the willow. And it might be taken into consideration, whether a belt of a few rods wide, across the north or west side of a farm, of the straight-growing white willow, would not be a very profitable investment—both as a shelter, and a self-renewing source of firewood. They find in Manitoba that these soft woods burn moderately well when well seasoned.

And then, when the continual drift of the air is from west to east, in the open atmosphere, how can it be otherwise inside of buildings? Stoves are in the east end of a church; and long pipes struggle to carry the smoke and the heat, *against* the current of the atmosphere! No wonder there is dissatisfaction; and no wonder the minister and the choir are half-frozen! If you have a stove near the east end of a house, the heat is fully half lost. Every time a door is opened, the heat—either by being driven or drawn—is taken away from the west end of the room and house. A little consideration on this point would often indicate where the chimney and the stovepipe holes should be.

And a little of the same consideration would often decide the site of a school-house, as well as of a church. Unless there is not another possible site to be in anywise obtained, never build a church or school facing the west. If it must be so, then have the stoves near the door, and let the heat *flow in*—as it will do, every time the door is opened. At the same time, an immense amount of cold air also comes in. With the front the other way, and the registers or stoves in the west end, every opening of the east door would let out a quantity of warm air, but would admit little or no cold air.

For one other thing, and one only I shall claim the gratitude of your readers—the suggestion of double windows for the north and west sides of dwelling-houses. I never knew the benefit of them till once I tried them. Far less firing, far more comfort, no more havoc with house-plants; and as for ventilation, our trouble was the general one—“too much draught” everywhere!

It has probably never occurred to many people, that there is a continual “drift” of the air in buildings; particularly in large public buildings, where no partitions interfere. And it is only common wisdom to take this fact into consideration, in the direction a building faces, in the arrangement of rooms and flues, and in the location of stoves and registers.

*St. Catharines.*

W. W. SMITH.

APPLE CREAM.—Peel, core and steam six or seven large, juicy, sour apples. When tender, cool, and rub through a sieve. Add  $1\frac{1}{2}$  cupful of sugar, the whites of four eggs beaten to a stiff froth, and a quart of cream. Freeze, turn from the mould, and serve with sponge or jelly cake.

## NOTES ON SOME GRAPES SENT OUT BY OUR ASSOCIATION.



### The Burnet.

I know of few grapes that there is such a difference of opinion about, as the Burnet. I have had visitors pick it out as the finest grape in my garden, while others do not care for it at all. Some growers speak very highly of it as a fine flavored profitable grape to grow, while others say it is worthless, and both views may be correct, as few grapes depend more on proper conditions to do its best, than the Burnet. If planted in a warm sunny spot, well fed, and not allowed to overbear, it is large in berry and bunch, a heavy bearer and the highest flavored grape in cultivation; more like a grape grown under glass than any of our outdoor varieties, but if planted in the shade of tree or house, it is small in size and sour, very subject to mildew, and in unfavorable seasons also does not ripen.

### Prentiss.

Either the introducer drew a very long bow when describing the quality of the Prentiss, or it must depend on some peculiar quality of soil or climate, to produce the best flavor. I had no fault to find with the quality or appearance of the crop; every year it was heavily laden with medium size bunches of handsome green fruit, but so poor in quality that no one would eat them.

### Brighton.

If there is any one grape that can be said to be the very best, that one is the Brighton, though not without faults, its good points are so numerous that it stands unrivalled among our outdoor grapes for amateur cultivation. Bunches medium to large, compact and handsome in shape; berry medium in size, of a beautiful shade of red, skin thin, seeds small, flesh free from tough pulp and remarkably sweet and delicious in flavor. What more would any grape lover ask for? The only weak points I can see in it, is that it is somewhat deficient in pollen. It grows alone or alongside other varieties, with the same characteristics, like Rogers 3 or 15, or Crowling, the bunches are sometimes open and few in number, but if it is near neighbor to a vigorous pollen producing variety, such as Concord, Niagara, etc., the bunches are large and compact and the yield heavy. It seems also to be more subject to the influence of shade than most grapes, to do its best it must have a warm sunny situation. In a favorable location, I have picked bunches quite ripe on August 28, while the same season other vines that were shaded by trees did not ripen properly at all.

**Moore's Early.**

If it could only be made to produce a paying crop Moore's early would be the most valuable of all grapes for this latitude. It is so early that it ripens perfectly every year. Its only competitor in earliness is—that type of everything objectionable in a grape—the Champion. The bunch is rather small, but the berry is very large, of the same type of flavor as the Concord, and Worden, but to my taste it is superior to any Concord I have seen grown in this district. The amount of heat, in the average summer here, is not sufficient—except in very favored locations—to fully ripen any grape that does not mature before the Concord, hence the great value of a variety like Moore's Early, that we can depend upon to ripen even in the most unfavorable seasons.

Ottawa.

R. B. WHYTE.

**PRUNING TO KEEP FRUIT TREES DWARFED.**

HERE are cases where a person has fruit trees growing in a comparatively small space, and it is desirable to check their growth and keep them dwarfed. With this object in view, a very special system of pruning would be necessary, and the object would be to get growing branches nearer to the ground and not up in the air a long distance, where the trees would make large spreading heads.

In order to accomplish this, one has to prune out, during the summer, most all the strong and vigorous growths at the apex of the plant, so as to throw the course of the sap into the branches near the ground; for, in a state of nature, the tendency of the tree is to go up, and to go up as rapidly as it can, and the upper branches are, therefore, the strongest, and the lower branches are the weakest. To cut the strong ones out, therefore, strengthens the lower ones. It is on the same principle that we prune hedges. These we keep low, and for this reason the plants are pruned in the summer time. The strong, vigorous branches—the top of the hedges—being the ones cut out; and this throws the sap into the branches near the ground, thereby strengthening them and making them of equal growth with those at the apex—and this work has to be done during the growing season. If the same kind of pruning were done in the winter time instead of the summer, the result would be that the next spring innumerable strong shoots would push out where the upper ones are cut off—and growing so strong they would absolutely draw the nourishment from the lower branches. The pruning is done in this case while the sap is in vigorous circulation, so that the channel may at once be turned into these lower branches. One might take up any number of questions of trees in detail—apples, cherries, plums, grapes, or whatever it may be—and the lesson is the same for all of them. If you want to keep trees dwarf, with abundance of good growing branches near the ground, cut out all the strong shoots at the apex during the growing season. From time to time, we may give other similar lessons in regard to other objects of pruning—*Meehan's Monthly*.

## PROFIT IN SPRAYING.



THE fact that one well known plum grower at Winona, Mr. George Cline, has been practising spraying for ten years past ; that he treats his large plum orchard with four or five applications every season ; that he has so convinced himself of its benefits that he will not omit it for a single season, and has purchased a machine, for utilizing the power of the wheels to do the pumping, at a cost of nearly one hundred dollars, and that his orchard yields annually large crops of plums, is surely sufficient evidence of the benefit of spraying

with Paris green to destroy the curculio, and to lead all plum raisers to try it for themselves.

If additional testimony is needed we may quote from the experiments of W. J. Green, Horticulturist Ohio Experiment Station, bulletin 18, in which he gives the following summary of results :

(1) The profit to be derived from spraying orchards often exceeds \$20 per acre, and for vineyards is much more. The fruit crop of the State would be enhanced in value by several million dollars annually if the practice were generally followed.

(2) Combined fungicides and insecticides are recommended whenever applicable, because of a saving of time ; a less liability of injuring foliage ; greater efficiency in some cases, and as a precautionary measure in others.

(3) Dilute Bordeaux mixture, copper-arsenic solution and ammoniacal solution of copper carbonate are the most useful fungicides for the treatment of the diseases herein mentioned, and the first has the widest range of usefulness of all.

(4) Early spraying is the key to success in the use of fungicides.

(5) For the plum curculio and shot hole fungus use Bordeaux mixture and Paris green combined, making three or four applications.

It is not known that this treatment will prevent the black knot, but cutting away and burning the diseased branches will accomplish the result.

(6) Scabby apples rot much earlier than those free from scab, and spraying with fungicides will save at least 50 per cent. of this loss.

(7) Spraying with fungicides in the season of 1892 prevented much of the early dropping of apples, which is usually attributed to wet weather.

(8) For apples, two applications of Bordeaux mixture before blooming are advised, and two of the same mixture after blooming, with Paris green added.

(9) The same treatment is recommended for the pear as for the apple, before blooming, but the copper-arsenic solution is advised after blooming.

(10) The Bordeaux mixture, if used too late, causes a russet appearance on both pears and apples.

(11) The quince may be treated the same as apples, or with Bordeaux mixture alone.

(12) The treatment advised for the cherry consists in making two or three applications of Paris green, 2 ounces to 50 gallons of water.

(13) Peach trees and American varieties of plums have very tender foliage, and must be treated with very weak mixtures, if at all.

(14) Raspberries may be treated with Bordeaux mixture alone; grapes with the same until the fruit sets, after which use copper carbonate. Potatoes should be sprayed at least five times with Bordeaux mixture and Paris green.

### ABOUT CULTIVATING ORCHARDS.



THE diverse treatment which orchards receive throughout the country affords a lesson showing the great benefit of giving them the best management, and the loss from neglected treatment. Neglect is too common, and poor crops and scabby fruit is the result. In contrast with these neglected orchards, are a few to which the owners give the best attention, and who receive good prices for the copious returns of handsome fruit. One orchard of this class, which has grown to full bearing size, affords the owner a handsome profit every year, while his careless neighbors receive not more than one-fourth of his returns. This well-managed orchard is kept in grass, which is grazed short by sheep, the grass afforded them being only one-half or two-thirds as much as would give them full feed, the deficiency being made up with grain or meal. This is fed to them regularly in long broad troughs. The sheep eat every wormy apple as it falls, and the fruit is thus kept nearly clear from insects. The droppings of the sheep enrich the ground, and a top dressing of barn manure is added yearly. The sales of the fruit from this orchard for many years have been equal to one hundred dollars from each acre it occupies. The shade of the apple trees prevents a rank growth of the grass, and the grazing of the sheep gives it somewhat the appearance of a lawn. The owners of some other excellent orchards, who cannot use sheep, apply yard or barn manure more copiously. In one of the finest visited, the annual application of manure had gradually made it two or three inches deep; the result was a superb crop of apples. Other orchards, with less manure, are kept clean and mellow with a gang plow or Acme harrow, to keep the surface clean and in a finely pulverized condition.—Ex.

## LAYING OUT AN ORCHARD.



THREE objects should be considered in laying out the orchard: symmetry of appearance; economy of space; and facility for future care. In California, where millions of trees are planted annually, various methods are used. Many are now planting in what is known as the triangular or alternate system. This method gives more trees to the acre than the square system, and in case of apple trees, every other row can be planted to peaches. As the life of the peach tree is short, several crops of fruit may be gathered before any serious damage

is done the apple trees, and before crowding, the peach trees can be removed. In laying out an orchard to be planted in this manner, take three pieces of timber one by two inches, and of the length that the trees are to be apart. Miter and fasten the corners together with pieces one inch thick and six by eight inches in size. These should be fastened firmly with two-inch screws. To make the triangle strong, the pieces should be turned on edge. After the triangle is fastened together, measure off the exact length it is desired to have the trees apart,

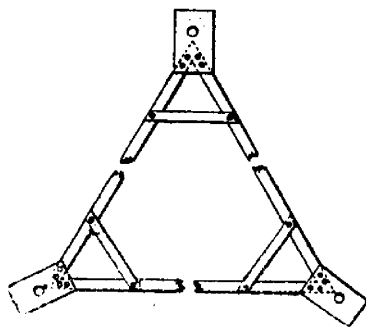


FIG. 409.—TRIANGLE FOR ORCHARD PLANTING.

and bore an inch hole through each corner of the boards, being careful that the holes are exactly the same distance apart. Place the three braces across the corners, and the triangle is completed. Stretch a line or a wire on one side of the track to be planted, the proper distance from the fence, place two corners of the triangle exactly on the line and set a stake through each hole on the line, also



FIG. 410.—PLANTING BOARD.

one in the third corner. Move the triangle along the line, placing one corner over the stake and the other corner on the line and drive the stakes as before. After the first and second rows are staked off, only one row is set at a time, while the two corners of the triangle are kept over the last row of stakes. There should be a person at each corner of the triangle.

After the stakes are all set, bore an inch hole in each end of a board, four inches wide and six or eight feet long. Cut a notch in the centre, place it against the stake, drive a stake through each hole in the end of the board, and remove the centre one. The hole is then dug, and when ready to set the tree, lay the board over the stakes and place the tree in the notch. The same plan can be used in laying off an orchard by using a square instead of a triangle. All the



measurements must be exact, or the triangle will not fit when placed over the stakes. In this way it is no trouble to keep the rows straight, no matter what length they may be. The stakes should be fifteen to eighteen inches in length, and somewhat smaller than the inch holes in the triangle, so that they will work easily.

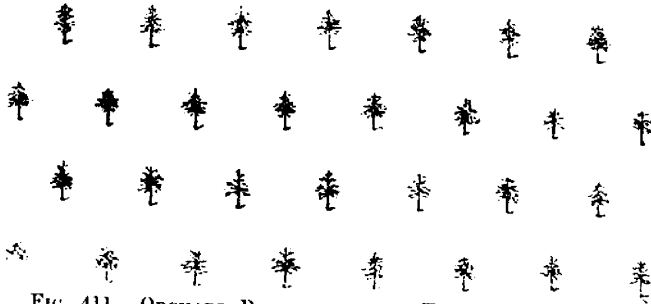


FIG. 411.—ORCHARD PLANTING IN THE TRIANGULAR SYSTEM.

### PRUNING THE GRAPE VINE.



THE grape vine accommodates itself to almost all methods of treatment, and, with reasonable care, gives abundance of fruit. The necessity for good, rich soil, well drained and cultivated, the same as for other fruits, is generally admitted by all, but proper pruning, the easiest part of grape growing, seems to be the least understood of any part of the work.

It must be remembered that the vine bears its fruit on shoots of the same year's growth, from eyes on the previous year's wood. It is necessary to understand this, because it is necessary to keep up a supply of young wood wherever it is desired the fruit should grow. A one or two-year-old plant, when sent from the nursery, may have only one shoot, or it may have several; in any event, all should be cut off but the strongest one, and that cut back to within two eyes of the base. These two eyes will produce shoots the following season, and when they have made a growth of a few inches, rub off the weak one and let the strong one grow until September, when the end should be pinched off to ripen up the wood. Late in the fall, cut back to within three eyes of the base. All side shoots and suckers should be pinched off. The second year the strongest shoots from these three eyes should be preserved as before. The third and succeeding years allow only the strong canes to grow with branches to compare with the vigor of the vine. Trim all vines severely in the fall, leaving spurs or canes of new wood, containing two or three eyes each, for next summer's fruit. After pruning, lay the vine down and protect for winter, the same as blackberries and raspberries.—Farm and Home.

# ‡ The Garden and Lawn. ‡

## PORCH DECORATION.



Give an illustration of vine decoration of the porch of a country summer home not far from the city of Chicago. The vines are now in their third season's growth. They were all loosened and laid back on the ground last spring to allow re-painting the house. When these vines were purchased they were the ordinary sized plants sent out by the nurseries. They are mainly large flowering clematis, and *Akebia quinata*, the only exception being a golden netted honeysuckle set out at each side of the steps of the porch, two feet out from the akebia vines, and trained over a fan-shaped piece of brush from the woods. This honeysuckle needs protection here in winter. We get short forked branches and set them thickly into the ground close to the vine which is cut back to two feet in length, and wound over the fork, and then leaves put in under and above them, and a few pieces of long brush laid over to

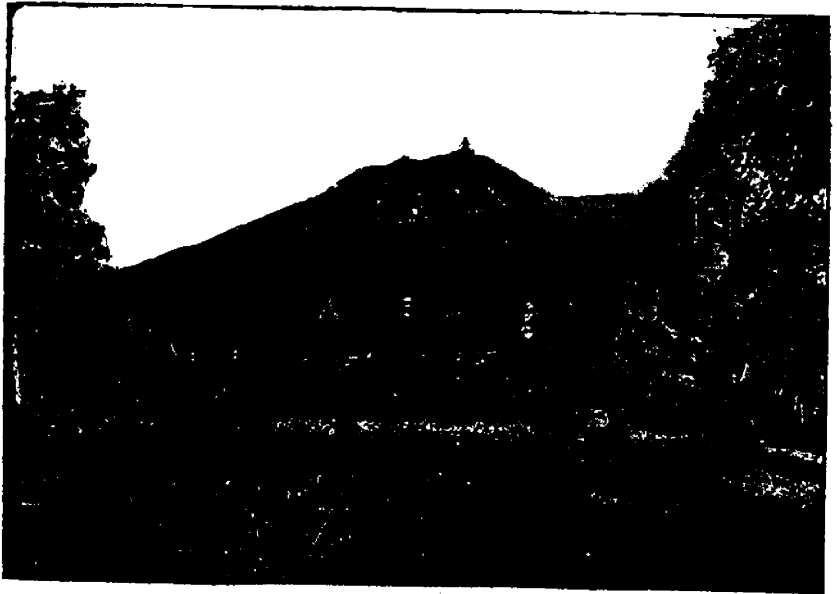


FIG. 412.—PORCH DECORATION.

hold the leaves in place. In this way they winter nicely. Heavy manure or straw litter that will get matted down is apt to kill them.

In the fall of 1889 a trench three feet wide and two and one-half feet deep was dug close to, and around the porch, and filled up with a rich compost of rotted manure, rotted sod, leaf mould, sand and black earth from an old corn

field. The old earth was wheeled away. The following spring two vines of *Akebia quinata* were planted at each post, and clematis between the posts, three feet apart. A frame of wood, on which was stretched a stiff 4-inch mesh of galvanized wire netting, was screwed on to the porch railing between the posts reaching to the middle of the top railing, and to within three inches of the porch floor, thus allowing the water to run off the porch. On this porch the clematis are trained each spring. The trellis for the akebia consists of two side iron rods  $\frac{1}{4}$  inch thick, placed 6 inches apart, with coarse wires crossing obliquely from side to side, forming large meshes. The side bars extend ten inches beyond the mesh at the upper end, and three at the bottom. These bottom ends are bent abruptly in so as to form a right angle, and when in place rests on the top of the "noseing" of the porch floor. The cap at the top of the porch post extends two inches out from the face of the post. When putting up this trellis, the upper side bars are laid against the capping, and the bottom of the ends rests on the noseing, thus the main portion of the trellis stands two inches out from the posts. An ordinary staple is driven over the two upper ends into the capping and also at the bottom into the noseing, but in no case driven so far in as to tightly bind and prevent slipping out when desired. To fully secure it in place, a piece of L shaped iron is used, having a screw point at the longer angle which is screwed into the post near the middle, so that the shorter end presses tight against the wire mesh at some point where the wires cross. To carry the vines along the top from one post to another, three hooks are screwed into the middle of the outer face of the wood work under the eaves, one in the centre and one at each end. These hooks are formed like the figure 9, with the right side of the loop not closed, and when in position the eye is downward. Into these loops is laid a  $\frac{1}{2}$  inch iron rod extending from post to post. The main vine is trained on this rod, and side shoots or new ones from the roots are tied to small double-pointed tacks driven above and below the main rods, thus widening the belt of vine.

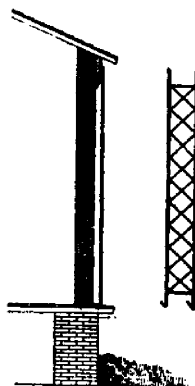


FIG. 413.—THE WAY TRELLIS IS ATTACHED TO PORCH.

In the north the akebia loses its leaves about Christmas and regains them very early in the spring, under the eaves and similar protected situations, it often retains them until spring, and in warmer climates it is an evergreen.

Each fall all the clematises are cut down to within one foot of the ground and their crowns covered with leaves, and a V shaped wide wooden trough placed over them to keep them dry. The balance of the soil is covered thickly with well-rotted manure, and, all that can be is worked into the soil in the spring. This is done each fall.

To prepare the porch for re-painting, withdraw the screws from the clematis

trellis and remove them ; then take out the L shaped screw from the centre of the akebia trellis, cut any of the material used in tying the vine to the double-headed tacks above, and slip the top iron rods out endways from the vines. Then draw the bottom of the trellis outwards, from the staples below and then downwards from the staples above and lay back on the ground. To replace, shove up the top into the upper staples and in below to the lower ones. Replace the L shaped screw and work in endways among the top vines the loose rods and lay them in their hooks and re-tie to the double-headed tacks.

The akebia is very pliable and tough ; in fact, in Japan, their native place, they are often used in basket work, and will stand considerable disarranging when not in leaf. The two short panels, on both sides of the entrances, are covered with the akebia of this season's planting, and above them is fastened to the wood-work by tying to the double-headed tacks until they reach the iron rods above. The akebia in this locality is very hardy, but needs a rich soil for full development. Ageratum, of the heliotrope shade, is planted thickly at the base of the vines, which, with the clematis presents a pretty picture of color all season.—Gardening.

### WINTERING GERANIUMS.

In its natural state the geranium is a plant which is never wholly at rest it is, however, very amenable to treatment in cultivation, and very patient with bad usage. The proper treatment for bedded plants intended for another season's planting is to take them up carefully and pot or plant in boxes, and stand in a light place in a temperature secure from frost, yet not high enough to excite active growth. Under these conditions a very little water would be sufficient during the cold season. When the weather becomes milder in spring, and plants start to grow, care for them properly, regulate the growth and disposition of the branches, and thus prepare them for planting at the proper season. But one may not have the facilities to care for the plants in this manner, and yet want to preserve them. A damp cellar is not a suitable place, and may cause them to mould and decay. The plants when taken up can be placed in boxes, most of the foliage be removed, and soil be made only a little damp ; then place the box or boxes in a dry frost-proof cellar where there will be some light. The leaves will soon all fall. By the first of March it will be best to place the boxes containing the plants in the window of a moderately warm room, and give water and start the plants into growth. Some leave the plants in the cellar until the weather is warm enough to set them out, but they are then in a very enfeebled state, and it takes a long time for them to recover.—Prairie Farmer.

## THE OLEANDER.



HE Oleander in its native habitat, and in some of the Southern States where it has become acclimated, attains a height of from twenty to thirty feet, but in the North it may be kept within any desired limit by judiciously pruning. It is said to have been introduced in 1599 from Palestine where it grows along the banks of the Jordan and other watercourses. It is easily propagated from cuttings, which root readily in wet sand or in bottles of water set in a sunny window. When the new roots are about an inch in length the cutting should be potted in rich, mellow soil, and as soon as established it should be given plenty of sunlight and moisture.

The oleander delights in a rich, mellow soil; black dirt from the shore of pond or the edge of a swamp, made mellow by the addition of sand and well rotted stable manure, seems to meet its requirements. It is a moisture-loving plant and should have an abundance of water, especially during the blooming season, but the drainage must be good so that there may be no stagnant water about the roots. It is a rank feeder, and when growing well should be supplied with some liquid fertilizer as often as once each week. Diluted leachings from barnyard manure make a desirable fertilizer for it; so, also, does soot tea, prepared by putting wood soot into a thin bag and pouring scalding water upon it. Use when cold and about the color of tea. As a special fertilizer small bits of fresh fish buried in the soil about the roots will be found satisfactory. Repot the plant or change the soil at least each year. Treated in this way and given plenty of sunlight a plant should be in bloom in about nine months from the cutting and may, perhaps, show much finer bloom than the plant from which it was taken, not only at the first blooming season but subsequently. It may be finer, not only in size, but in form and color as well. One cutting taken from a plant that bore small pale semi-double flowers, bloomed at nine months' old, producing large clusters of very double flowers, each four and one-half inches in diameter, and of a deep rich pink in color.

The oleander is almost a perpetual bloomer if well treated, but nearly all prefer to give it a season of rest during the winter, which produces a greater profusion of bloom in the spring. It will bloom again in the autumn. It is rarely troubled by the insect pests that prey upon other house plants. The leaves should be washed or sprayed occasionally to keep them free from dust. It grows rapidly and is usually of a symmetrical form.

When too large for further use as a house plant turn it out of the tub or pot in the spring and set in rich, mellow soil in the open ground, as soon as all danger of frost is over. Give a daily and abundant supply of water and it will give a magnificent display of bloom all the season. In autumn, before frost, lift it

carefully with as large a ball of earth as possible and set it in a tub or box, in which it may be removed to the cellar. Give only a sufficient amount to keep the leaves from falling, and in the spring, when the weather has become warm, return it to the garden again.

There are many varieties of this old favorite, all beautiful—both single and double, all deliciously fragrant. Among the best are Prof. Durand, double white flowers with creamy white throat ; lutea, single yellow ; gloriosum, double carmine pink ; Kenwood, large, double rose ; purpureum simplex, purple.

The sap of the oleander is poisonous ; children should not be allowed to play with the broken stems or leaves, and they should be kept out of the reach of cattle and horses.—Vick's Magazine.

### SOIL FOR ROSES.

The best soil or compost that I know of for roses is fibry sod from a pasture and of a medium heavy texture, that is, a soil neither light nor yet the extreme of heaviness. Sod taken from a very old pasture, or a piece of land that has been lying idle for a number of years without being grazed or mown, is very liable on being rotted down to be really too light for roses, and after being in the beds for a few months will somewhat resemble leaf-mould. Experience in that line has caused me to fight somewhat shy of sod taken from idle pieces of land that has not been grazed or mown for years. The accumulation of vegetable matter in the way of grasses, mosses, leaves and other herbage, gives it that leaf-mould appearance when thoroughly rotted down, and it is too light. Having procured a suitable sod and a supply of pure cow manure, it is best to stack or pile it to rot. If wanted to use in April or May, or June, it ought to be stacked in August to have it sufficiently rotted. It is a hard matter to lay down any rules for the proportions of manure to use to the quantity of sod, for the reason that the nature of the soil itself varies in so short a distance. The guide that I follow is simply this : Knowing where it is procured, I take into consideration the nature of the grass crops or pasturage raised from it. For instance, if from hay-land, which has yielded a fairly good crop, of course it stands to reason that such sod will not require such quantities of manure as sod taken from a piece of impoverished land. Thus while in some instances it is only necessary to use, say, one-fourth, in others it is absolutely necessary to use one-half manure. It should always be borne in mind that roses require a good rich soil. I don't know of any instance where the gardener has to use common sense and judgment more than in the selection of soil for rose growing.—American Florist.

“ KATE, what's become of the porous plaster I left in that desk ? ” “ Porous plaster ! Why I thought it was one of those new postage stamps, and I put it on a letter to ma. ”—*Life*.

## THE SPIRÆAS.



ONE of the most popular class of shrubs in the door yards of Southern Ontario is the Spiræa, because it is so easily grown and propagated; so pretty in bloom, so useful in decorations, and many species are so hardy. Then, in planting a large houseyard, or park, the spiræas are well adapted to the requirements of the landscape artist who desires to round out the outline of his clumps of trees and shrubbery well down to the green sward.

The spiræas are by no means new favorites. Away back in ancient Greece, Theophrastus called them by name, and the Greek word *speiræ*, I wind, seems to be the derivation, alluding to its use in making garlands. There are some fifty varieties known, of which three are found natives of Canada, under the common name, Meadow Sweet, viz.: *S. opulifolia*, *S. salicifolia*, and *S. tomentosa*.

A very popular variety in our gardens is *Spiræa van Houttie*, a variety that seems hardy, a healthy grower, showing very little dead wood. On this latter account it is a great favorite with many planters as an ornamental hedge for separating the vegetable garden from the lawn.

*S. astilboides*, which is shown in the engraving, is a handsome Japanese variety, of somewhat dwarfish character, and of very graceful habit. The flowers are white, in spicata panicles. It would be well suited to the mixed border, or to rockery decoration; though it is particularly at home in a moist locality. How hardy it is, the writer is not able to say, but possibly some reader may have some experience to offer.

Another Japanese variety, *S. prunifolia flore-plene*, is cultivated in Canada gardens, under the name of Bridal wreath. It is quite hardy and very pretty, with flowers in little rosettes about a quarter, or one-third of an inch in diameter, arranged along the slender willowy shoots.





FIG. 414.—*SPIRÆA ASTILBOIDES*.



## ✦ The Kitchen Garden. ✦

### MARKET GARDENING PROFITABLE.



HERE is no doubt that vegetable gardening is a profitable occupation, where one makes it a specialty and uses some judgment in his work. Indeed many a gardener who understands his business, makes more money off a few acres of ground than some farmers off a farm of one hundred acres. There is scarce a village in Ontario so small that it would not support one or two vegetable gardeners, and the larger towns will consume the product of many gardens. The fact is that many people who have gardens, find it pays them better to buy from a gardener than to grow what few things of each kind are wanted each week, and when visited by a truck wagon two or three times a week, gradually cease to grow the poor and meagre stuff which it has been customary for them to produce, and buy the fine large cauliflowers, beets, melons, etc., which are brought them in attractive form by the gardener.

A writer in *The Country Gentleman* gives a good hint in this connection. He says:—It sometimes appears to me that farmers and gardeners show less ingenuity in developing new lines of work than do men in other occupations. It is not only that there are new crops to try, but new methods of handling and selling the old, to the end that they may bring a better profit. As a gardener, growing hot-bed plants for my own use, I have found that a considerable local trade could be established in them without much effort. I found also that the average village gardener, especially if he was an amateur, had little knowledge as to what he wanted in this line, and some farmers were not much better posted. Most of them were inclined to confine their purchases to cabbage and tomato plants, not seeming to understand that to make a complete garden there was quite as much need of pepper and celery, and cauliflower and sweet potato plants, as of the others. When I would call their attention to the wider variety, with a few words of explanation as to the time and method of planting, they were usually glad to act upon my suggestion that these be added to their list. So that many who would ordinarily have been my patrons to the extent of a few shillings at the most, became buyers for from one to five dollars' worth of plants, and I am glad to believe that the value of their gardens was increased in like ratio.

In any village or suburban community, there is a chance for the building up of a little business in this line, which, while not reaching any great amount, will represent more clear profit than most other occupations of the soil. The time employed in making and attending to the hot beds will be largely in that season of the year when one cannot yet work in the open ground. The capital

required is almost nothing. A very small plot of ground, a little lumber for making the beds, waterproof cloth and straw mats, if glass cannot be afforded, and a small outlay for manure and for seeds, and you have it all. Ten dollars will easily furnish the equipment for hot-beds which will supply more than a hundred dollars' worth of plants. It should be borne in mind that a second crop can be grown here as well as in the garden; for as soon as the lettuce and cabbage and other early plants are off, the same beds should be utilized for celery and sweet potatoes.

If one undertakes this branch of gardening, he should employ some business talent in disposing of the product. It is well to make a canvass early in the season, and secure as many advance orders as possible, as many people will buy if the matter is brought to their notice who would not think of it if left to themselves. Then when the plants are ready, and the weather and soil propitious for setting them out, draw quantities of them from the beds and place them at the grocer's for sale (well bedded in fresh rich earth), or fill a light wagon with them, and make a house-to-house canvass.

### ONIONS IN 1893.



WE have frequently referred in these columns to the success attained with the Prizetaker onion by Mr. T. Greiner, a horticultural writer and experimenter, just across the border of Niagara Falls. This gentleman frequently attends the meetings of our Association, and some of us, having tried his method of cultivating onions with fair success, will be interested in his experience this season. He is more than ever convinced that the Prizetaker is the most profitable variety. He says in the *Country Gentleman*: If I want to make sure of a good crop of onions, I will plant the Prizetaker, growing seedlings under glass, and transplanting to open ground in April. Onions just at present are cheap, being quoted at only \$1.25 to \$1.75 per barrel by the Buffalo commission houses; yet I sold all the Prizetakers I had in early fall at from \$1 to \$1.25 per bushel at Niagara Falls, and could have sold many wagon-loads more at that price if I had only had them.

The expense connected with growing the seedlings is the only bugbear yet operating against a more general adoption of the plan known as "The New Onion Culture." By sowing seed in rows in hotbeds or on greenhouse benches, I have usually calculated on from 300 to 400 plants per square foot or bed. Once I raised 8,000 plants from one ounce of seed under one hotbed sash 3 by 5 feet, or over 500 plants per square foot. Usually, however, I do not get more than half that number. But as I start the plants now in greenhouse, and like

to get them out in cold frame in March to harden, and also to get them out of the way when lettuce and radishes and tomato plants need the room, I grow the onion plants in flats filled with clear sand. My boxes are about 19 inches long, 10 inches wide and five inches deep. I scatter from one-sixth to a quarter ounce of seed evenly over the top, cover with an inch or half an inch of clear sand, and treat in the ordinary way. Such a box should give 800, and perhaps even 1,000 good plants, and the area covered by an ordinary hotbed sash, therefore, might be made to produce 10,000 plants. I have gradually been learning to set my plants closer in the rows. At first I planted four inches apart, with rows 12 inches apart. While the distance for the rows seems to be just right, I have reduced that between the plants to  $2\frac{1}{2}$  or 3 inches. Even now I sometimes question whether  $2\frac{1}{2}$  should not be the outside limit for greatest yields.

My failure with Yellow Danvers, etc., left me with a quantity of bulbs of hickory to walnut size on hand. They are too large for pickling, and too small for sale. A suggestion found in a recent number of *Gleanings* pointed out to me a method of utilizing them. I had my boy pick up these small onions from the barn floor, carry them to the greenhouse, and plant them rather close together (so they almost touch in the row, with rows about one inch apart) under the benches in a bed of rich soil. I intend to market them for bunching (green) onions later on.

**APPLE AND TAPIOCA PUDDING.**—One cupful of tapioca soaked in two cupfuls of cold water over night. In the morning, butter a pudding dish and fill two thirds full of quartered tart apples. Add to the soaked tapioca one cupful of sugar, one beaten egg, and a little cinnamon or nutmeg. Pour over the apples, cover and bake two hours. Serve with liquid sauce, made of one egg, one cupful of sugar, and one-half cupful of butter, beaten together and boiled until thick with one small cupful of hot water. Flavor with lemon.

**APPLE JELLY.**—Core and quarter Astrachan apples, removing bruised or discolored spots, but leaving the skins on in order to give a richer coloring. Cook slowly until tender, with water to nearly cover, being careful not to let them scorch. Place in a jelly bag and allow them to drain over night. In the morning, measure the juice and put over the fire to boil. Allow a pound of sugar to each pound of juice. Place the sugar in shallow pans in the oven and let it remain until the juice has boiled twenty minutes. Then stir the sugar, which should be very hot, into the boiling juice until thoroughly dissolved. Let it just come to a boil and take from the fire. Have the jelly glasses and bowls rolled in hot water, and fill with the scalding juice, which will at once begin to form. When thoroughly cold, cover the glasses with paper dipped in beaten white of an egg, then with a thicker paper pasted over. Label carefully. If the directions are carefully followed, the jelly will turn out translucent, crimson and firm, a delight to both eye and palate.

## \* The Apiary \*

### THE TWENTY-FOURTH ANNUAL MEETING OF THE NORTH AMERICAN BEE-KEEPER'S ASSOCIATION.

(Continued from December Number.)



THE question of races of bees came up for discussion. Years ago bees were brought to America from Cyprus, also the Holy Land and Syria. It was thought that whilst some of the other bees had good qualities, none were equal to the Italian bees. The Entomologist of the the United States Government at Washington, hinted that it was the intention of the Government, at the close of the World's Fair, to send some one in quest of new races of bees, and do work for the bee-keepers of the United States, along this line. Doctor Riley the Entomologist, also stated that the Government had not yet given up hopes of mating queens not on the wing, thus selecting the drones which were to mate with the queens.

In reply to a question "re the best method to adopt when being stung?" Doctor Miller said, keep at it. It is of course, well known, that the inconvenience and swelling which is occasioned from a sting to the novice wears away in time. To those keeping only a few colonies, advice given by others may be of use. One recommended Cuticura, another recommended strongly heating the parts either by holding in very hot water or by bathing the part. Some also use ammonia.

On Tuesday morning R. F. Holterman gave an address upon

#### "THE PRODUCTION OF COMB HONEY."

The production of a first-class article of comb honey becomes a subject of greater importance from year to year. The demand for comb honey is increasing, and those producing the article in the best condition will secure the best prices and readiest sales. There is no treating the subject except in detail.

There are a number of points to be considered: First of all, is the man fitted; for no man who is not thorough in his work, neat, intelligent, paying attention to detail, can succeed to the fullest extent. It is then a subject worthy of the attention of a man or woman of first-class ability. The locality must be considered, one in a locality generally poor, cannot expect to compete in the production of comb honey, with a bee-keeper in a good locality; by that I mean heavy flows are required rather than prolonged. The greater number of pounds of honey gathered in the least time, the better the production of comb honey. Upon this we are all agreed.

## THE HIVE.

Upon this subject I hardly consider it wise to more than touch. There is such a diversity of opinion, everyone must judge for himself according to conditions. At the same time I cannot treat the subject honestly and conscientiously, without stating that I consider any material variation from the depth of the Langstroth frame a mistake.

## THE SUPER.

There is perhaps no super that will give us all advantages and no disadvantages. We must then select the one which has the greatest number of advantages and the least number of disadvantages. I should like the super that would protect the four sides of the sections, also its edges as far as possible, but when we consider the difficulty, in fact, impossibility, of getting at sections, the conclusion is forced upon us, that something else must be looked for. The section supers, with section holders consisting of two sides and a bottom bar with separators, followers and wedge, is probably the super we are looking for, as it is not covered by patent, and everyone is at liberty to make and use it. The sections are protected as far as convenience in handling permits.

## SIZE OF SECTION.

The size of section must be the next consideration. In this, we must keep in view convenience, demands of the market, and what the supply dealer makes. When we do this but few will fail to take the  $4\frac{1}{4} \times 4\frac{1}{4}$  section. To decide upon the width is a more difficult matter. In Canada, ninety-five out of every hundred use the  $5\frac{1}{8}$  section, a few use seven to the foot, the balance  $1\frac{3}{8}$ ,  $1\frac{3}{4}$ ,  $1\frac{1}{2}$ ,  $1\frac{1}{8}$  and 2 inches. The demand is for the thinner section,  $1\frac{1}{8}$  or seven to the foot. In the United States I am safe in saying, the demand is increasing for a thinner section, something more in the direction of what Canadians are using, and that demand will be met.

## BEES.

Next comes the bees. Upon this it is my intention here to touch very briefly, as the subject comes up again under "General Management." Just let me say, beauty of comb produced, honey gathering qualities, and the like, must be looked to before beauty of bee. I believe many of our queen breeders are bowing too much to popular opinion in the breeding of queens. They know a beautiful queen and beautiful bees will please as soon as the eyes rests upon them. We are apt to be carried away with them the moment we open the cage, while it takes time to manifest other and more practical characteristics.

## MANAGEMENT.

And now comes management. The bees should have plenty of stores in

the fall of the year, they must be wintered well, and every hive should have plenty of stores so the bees in the spring need never curtail brood rearing on account of shortage of stores. All that applies to the building up of colonies in the spring applies to the successful production of comb honey.

I take issue with the statement that bees can get strong too early : such a condition never was and never will be ; the opposite, too weak colonies at the honey flow, alas ! is too nearly the rule, and reduces the number of pounds of honey we get per colony. If a colony gets crowded in the lower story, and the time has not arrived when sections should be put on, I place an extracting super with a queen excluder (or without, as I see fit), and at the proper time replace this with comb honey supers. With extracting supers on the hive there is, at this season, practically no excuse for swarming. All hives should be placed on secure stands and in every case a spirit level used. There is no serious objection to the hive leaning forward a trifle, sufficient to shed rain, but sideways they must be perfectly level. The greatest cleanliness should be observed, bottom boards, hives and top bars scraped and only such old stock as have bright, clean combs, run for comb honey. Full sheets of foundation should be used in the right sections and the foundation as light as possible and of the best wax. I prefer wax made from cappings and taken by the solar wax extractor for this purpose, but in this matter the supply dealer is at the mercy of the bee-keeper and it rests with the latter what kind of wax shall be used. When I make the statement that light foundation should be used I am at variance with some leading comb honey men, but while it is a fact, that the bees will thin down the foundation, there are seasons and times when they will not do this, and against this we must guard in order to avoid making the article unpopular. I used a bait (one of last year's sections) in the supers. I have also tried supers without but can find no great difference. Swarming is an important factor in the production of comb honey, and the longer one works for this the more confident one must feel that no one who wishes to make comb honey to perfection will ever care for any device to prevent swarming entirely.

*(To be continued.)*



## The Canadian Horticulturist

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

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

### Notes and Comments.

TO GROW THE BIG SQUASH.—Mr. Warnock writes that the hills should be fourteen inches deep, instead of six inches, as described in volume XVI., page 423.

THE COMMITTEE ON NEW FRUITS for 1894, consist of Messrs. A. McD. Allen, Leslie; D. W. Beadle, 450 Markham Street, Toronto; and Mr. John Craig, Horticulturist of the Central Experimental Farm, Ottawa. These gentlemen are all experts, and are not easily puzzled in identifying varieties. It will not be easy for any nurseryman to impose old fruits on them as new kinds.

THE IDAHO PEAR was shown by the State of Idaho in quantity. In the opinion of one the jurors, it is identical with the Sheldon, but grown in Idaho it is enlarged beyond recognition. Query? Would the texture of the flesh be also altered by the change of climate, for the flesh of the Sheldon is finer grained than the Idaho. Has anyone fruited this pear in Ontario?

MORE FREQUENT COMMUNICATIONS from the readers of this journal are invited. We desire to make this journal a record of experience in fruit culture and floriculture, representing all parts of Ontario, and as far as possible, the other provinces also. We have a large number of readers in Nova Scotia and British Columbia, and notes of their work will be acceptable as well as of work in our own province, and thus our journal will be indeed, what its name imports, the CANADIAN HORTICULTURIST.

REVISION OF ASSESSMENT ACT—Messrs. Beadle, Wellington, and Allan, were appointed a committee to confer with the Minister of Agriculture, regard-

ing the discouragement to the fruit industry under the present Act, because orchard land is taxed so much higher than farm land. This seems unfair, in view of the many fruit failures, and the long years before an orchard begins to yield any returns.

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OUR PROVINCE is not behind Nova Scotia in her provisions for teaching horticulture, for the Agricultural College at Guelph, has always given more or less attention to the study of that art, and at the beginning of the present College year the Minister of Agriculture has added to the teaching staff a Professor of Horticulture, in the person of Mr. H. L. Hutt, a graduate of the College, who is a native of the Niagara District.

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SOME PRIVATE EXHIBITS of great value were made by fruit growers in the Province of Quebec, in addition to the display made by the Province itself, viz.: R. Brodie, Montreal; Wm. Craig & Son, Abbotsford, P. Q.; J. J. Gibb, Como; George Copeland, Thelford; W. Johnston, Granby; Abbotsford Fruit Grower's Association; Missisquoi Horticultural Society; George B. Edwards, Covey Hill, Que. For such details our readers are referred to the official list, not yet published.

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NOVA SCOTIA FRUIT GROWERS have established a Horticultural School in connection with Acadia College. A grant of \$50 per scholar has been made by the N. S. Legislature, for the support of the work, The Association has secured the services of Prof. E. E. Faville, graduate of Ames Horticultural School, Iowa, and the course is to last during six months of each year. Fruit growers generally are invited to take advantage of this course of training in scientific horticulture.

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MANY ENCOURAGING WORDS have come to hand from our subscribers. In response we beg their assistance in making this journal what it should be, the leading journal of its class in America. We shall be glad of illustrations of trees, plants, fruits, flowers, lawns, gardens, etc., either drawn with pencil or photographed, especially when accompanied by descriptions. We will have them engraved in due time, and they will add very much to the attractiveness of our pages. We hope that our volume for 1894 will be of more practical value than any preceding one.

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THE BRITISH COLUMBIA FRUIT EXHIBIT at the World's Fair, contained samples from many different sections of that Province, proving beyond doubt its capabilities for fruit growing. Mr. A. Clemes, Spence's Bridge, sent us sixteen varieties of apples and four of plums; Mr. Thomas Sharpe, of the Experimental Farm at Agassiz, sent on fifteen varieties of plums, and twenty-two of apples, a fine collection, which in the table, page 404, Journal for 1893, is



classified in British Columbia column. The plums were exceedingly fine, indeed there were none finer shown by any exhibitor, and it was quite disappointing to see them so soon begin to decay. A medal was awarded British Columbia for her plums, and one for her apples. Mr. Hutcherson, who collected fruit for the Provincial exhibit, sent on nine varieties of plums, and ten varieties of apples, besides a large collection of varieties from orchards in various parts of British Columbia, whose names appeared with their their exhibits. These will all appear in the official list to be printed and distributed by the Dominion.

LOCAL HORTICULTURAL SOCIETIES may be formed this month in incorporated towns and villages, under the provisions of the Agricultural and Arts Act. Ordinarily the object is to hold an annual exhibition, but in this case only a few reap the benefit. An excellent plan to make them more popular, and of equal benefit to all concerned, is to take advantage of those provisions of the Act which permit the use of the funds in the distribution of horticultural literature, and the securing of lectures on the same topic. By affiliating with the Fruit Grower's Association (see by-laws 61-23, annual report), every member will receive our journal and report, and the Society will have abundant funds for the securing of lectures, distributing choice roses and other flowers, and for securing the services of able lecturers. Several societies have been formed on this plan, and it has in some cases been found necessary to limit the subscription list, so anxious are those interested, to unite. A circular of explanation may be had on application to this office.

SUCCESSFUL SPRAYING.—Every season careful experiments are conducted at Maplehurst, by the editor of this journal, in spraying for the various insect and diseases of our fruit trees. This season, in his absence, the foreman applied the various mixtures as usual, and reports that owing to frequent rains the Paris green was not as effective as usual in destroying the codling moth. The apple crop, therefore, was much injured by this insect.

Better success, however, attended the use of the Bordeaux mixture for apple and pear scab. Some trees of the Fameuse orchard were treated three times, once before blossoming, once after, and once two weeks later, at intervals of about two weeks. The fruit on these trees was quite marketable, being fairly clean, while those not treated were worthless, being covered with scab.

A Bartlett pear orchard, which is more subject to scab than those situated on other parts of our fruit farm, was beginning to show their fungus very badly on the young fruit in June: the Bordeaux mixture was at once faithfully applied, and the result was to completely avert the progress of the scab, and the fruit, though showing marks of the scab, attained full growth, and was quite marketable, while those untreated were small, scabby and worthless.

Will not our commercial orchardists give these mixtures more careful trial, etc., during the coming season, and report to this journal for publication?

Grafting Broken Trees.

594. SIR,—On the 15th of December we had a heavy rain from the east which froze as it fell, and continued all night. The sight which met our gaze the next morning was enough to sicken a lover of trees; trunks and limbs bent, broken, split and torn; hardwood, softwood, evengreen, all shared the same; fruit, shade, ornamental, forest trees; scarcely any are spared. Large numbers are split and broken to the ground, altogether the worst damage from an ice-storm we have ever experienced. It will be many years before the damage is repaired. I have thought that the best plan to take with the fruit trees whose tops are broken beyond repair, would be to saw off the trunks below the break and graft them. Would that not be the quickest way to replace the trees?

GEORGE WOOD, *Monticello, Ont.*

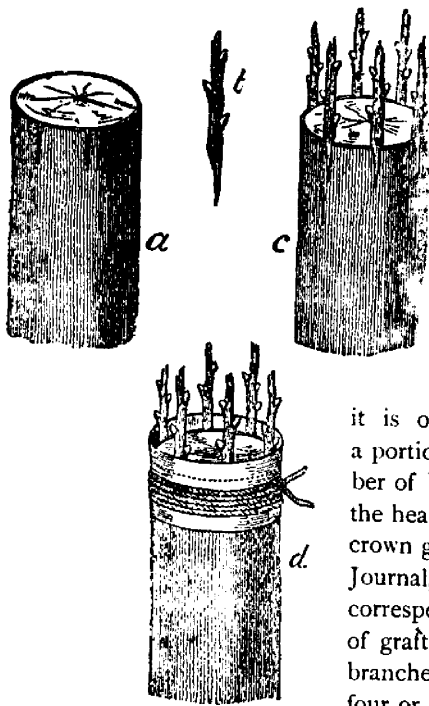


FIG. 415.

are then wrapped in paper. The wounds are well pressed with clay or grafting wax, and the cap-like cavity formed by the paper wraps serves to hold the clay in place. This is a simple method, requiring few tools, and as likely to succeed as the more scientific method of cleft-grafting. The latter is, of course, the only proper method of dealing with smaller limbs.

The plan proposed by our correspondent might succeed in the case of comparatively young trees, where the balance between root and top is not too much disturbed; but the removal of the whole top at once is usually fatal, or at least so stunts the growth that it never recovers. The shock is of course worse if done in summer, but, even if done when dormant, the young shoots and grafts will hardly produce sufficient leaves to keep the trees alive. When grafting old trees,

it is on this account usual to renew only a portion of the tree each year, leaving a number of branches with heavy foliage to continue the health of the tree. Probably the method of crown grafting, illustrated some time ago in our Journal, would serve in many cases such as our correspondent describes. To perform this mode of grafting, the main trunk and large upright branches are sawed off smoothly, the ends of four or five scions are beveled on one side and inserted under the bark, and the cut sections

### Hollyhocks as Shelter Plants for the Apiary.

**595.** SIR,—I have hollyhocks planted on the west side of my bee hives, for the purpose of keeping off the hot sun in summer. The leaves have become affected with rusty spots and have dropped off. Can you explain? And what could I plant in their place which would answer the same purpose?

*Reply by Prof. John Craig.*

A SUBSCRIBER.

Hollyhocks are frequently and seriously affected with a disease classed among the "rusts" and scientifically known as *Puccinea Malvacearum*. This appears on the leaves of the hollyhocks and closely allied plants, causing brownish rusty patches. This disease has been introduced from Europe and seems to be spreading quite rapidly. Some successful results in treating it have been reported, where Bordeaux mixture was used as a spray.

Wherever plants are seriously affected, it will probably be best to root them up and destroy them. As a substitute for the hollyhock, I would suggest some of the tall growing double forms of the sunflower family. We have now many double varieties of *Helianthus*, which are very desirable for positions where they serve the purpose of a screen or a back ground, and I do not think of any other plant at the present time which would fill the position so well. One of the most desirable forms of the helianthus is that known as the Californian Double Sunflower.

### Strawberries for Home Use.

**596.** SIR,—What two or three kinds of strawberries would you prefer to plant in the garden for family use?

J. DELGARMO, *Marmion*.

There is so much difference in taste that this question is not easy to answer satisfactorily to all concerned. We know some who prefer the sharp acid of the old Wilson to the milder flavors of other berries. We would recommend a trial of Downing, Cumberland, Sharpless, Saunders. Would our correspondent be kind enough to give the results of his experiment.

### Grapes for Home Use.

**597.** SIR,—Please give me a list of grapes suitable for planting in the neighborhood of Owen Sound, for home use.

JOHN DELGARMO, *Marmion*.

The varieties most popular for home use or market are frequently changed, owing to the introduction of new kinds. We would recommend our correspondent to try for his section the Early Victor, Worden, Lady, Agawam, Diamond and Brighton.

## \* Open Letters. \*

### Spraying for Pear Scab.

SIR,—At the late annual meeting of the Fruit Growers' Association of Ontario, at Peterboro', the question of spraying apple trees for the Codling Moth and plum trees for the Plum Curculio, came up for discussion. During the meeting, which I had the pleasure of attending, those present who had sprayed with Paris green as a remedy against these insects were requested to give the results of their experience, and some convincing instances were given, proving the efficacy of this method of fighting these two pests.

The following day, however, I am informed, there was some evidence brought forward, which was of an adverse nature. As I have tested this remedy and advocated its use for several years, I shall be very much obliged if any readers of the CANADIAN HORTICULTURIST, who have failed to obtain paying results from spraying plum or apple trees, will write to me upon the subject. My only object in this matter is to arrive at the truth, as to whether the practice pays or not. I shall be glad also, at the same time, to receive opinions from fruit growers as to the greater susceptibility to injury of certain varieties of plums and apples. It may be well perhaps to mention here that I shall be at all times pleased to answer enquiries concerning insects injurious to crops, and that letters and parcels can be sent to me free of postage.

*Central Experimental Farm, Ottawa.*

J. FLETCHER.

## » Our Markets. «

### THE APPLE MARKET.

Probably there has never been a greater boom in the apple market than the present one. The great scarcity of apples both in Canada and the United States is now being fully realized, and prices are steadily advancing, with occasional fluctuations. On the 6th of December, a circular from Liverpool stated that the slight increase in arrivals was from Canada, and it was probable that the English market would be dependent upon that source for supplies. The circular also stated that the quantity arriving was altogether insufficient for the demand, and that the market closed at an advance of 3/ to 4/ per barrel. Canadian Baldwins were quoted as high as \$7.18; Ribstons, \$8.28; Kings \$9.25. Nova Scotia Baldwins, which come next in value to those from Ontario, reached \$6.21 and the Kings \$7.43.

On the 9th of December, a circular from another large wholesale house in Liverpool, farther emphasized the keen demand for all descriptions of apples, and called attention to the satisfactory returns which had been made to the Canadian shippers, Baldwins and Greenings reaching \$6.82; Kings \$7.91; adding that it was a matter of surprise to see the price received for Greenings, the explanation being that this variety is particularly favored at this season of the year, by people who at other times would scarcely look at them. Nova Scotia Baldwins sold at \$6.36; and Kings \$6.21.

A New York circular of the 18th of December quoted Kings at \$3.50 to \$4.50; Snows \$3 to \$4; Spys \$4; Baldwins and Greenings \$3 to \$4.

On the 16th of December, a circular from Liverpool states that the principal supplies of apples received in that market were from Canada, and that the prices were practically unchanged. Baldwins made \$7.06; Greenings \$6.94, and Kings \$9.37. These latter were usually plentiful on that date, and showed a slight falling off in value. Nova Scotia Kings reached \$7.43. Some Newton Pippins were sold as high as \$9.98 per barrel.

A cable on the 22nd of December, stated that the market was depressed in consequence of the holidays. The highest quotations for Baldwins was \$6.09; Greenings \$5.60; Kings \$6.82.

An article in the Trade Bulletin, Montreal, under the same date was headed "The Apple Trade Booming," and called attention to the high prices of apples on both sides of the Atlantic; some sales in England has netted shippers in Western Ontario \$4.82 per barrel, and at the Montreal auction rooms, a straight car of choice Spys \$4.10, and even seconds brought from \$2.50 to \$3.10.

Those who have been favored with even a small crop of first class apples are very fortunate, but no one should be very confident regarding the future of apple growing on this account, for the market for this fruit is a very fluctuating one. Growers must expect that there will be an occasional season in the near future when the apple crop is a very abundant one, and prices so low as to scarcely repay them for the trouble of harvesting. On the whole, Canadian fruit growers are the best situated of any in the world to make money out of the business because the clear quality of Canadian stock is so highly appreciated, both in the English and American markets. Notwithstanding this, however, it must not be supposed that apple growing, or any other line of fruit culture, will always prove a mine of wealth, for there are many discouragements, and many seasons of failure and disappointment. This season is one of the hardest to bear, because the prices are high and many growers have so little to sell.

\* Our Book Table. \*

BOOKS.

THE A B C OF POTATO CULTURE. T. B. Terry, Hudson, Ohio. Published by A. I. Root, Medina, O. A cheap and valuable treatise.

THE O. A. C. REVIEW, Guelph. The Christmas number is very creditable. It contains a photogravure of the College, of the Minister of Agriculture, of the President, of the Botanical Laboratory, and of many of the young men. Besides this, it contains much interesting reading matter.

THE CHRISTMAS NUMBER of the Montreal *Star* is one of the best productions of its kind: the reading matter is excellent--the supplementary art pictures are charming, and worth framing, and the portfolio of Canadian Wild Flowers is superb. The *Star* almanac is also indispensable in an office, for it contains such a wealth of information. The publishers are Messrs. Graham & Co., Montreal.

WISCONSIN FARMERS' INSTITUTES of 1893, forms a fine volume of 256 pages. The book contains the cream of the information given at the Farmers' Institutes of the State of Wisconsin, arranged in systematic order. It is edited by Mr. W. H. Morrison, Madison, Wisconsin, the Superintendent.

ANNUAL REPORT OF THE BUREAU OF INDUSTRIES for the Province of Ontario, 1892. Part VI.—Labor organizations, strikes and lock-outs. Toronto, 1893.

REPORT OF THE IOWA STATE HORTICULTURAL SOCIETY for the year 1892, containing proceedings of the Annual Meeting, and the transactions of the affiliated Horticultural Societies in the State. Edited by the Secretary, J. L. Budd, Ames, Iowa.

CATALOGUES.

THE COLUMBIAN GRAPE Co., Kingston, Ohio.—Columbian Grape a specialty.

A. M. SMITH'S ANNUAL CATALOGUE FOR 1894.—Fruit and Ornamental trees, plants and vines. Dominion Nurseries, St. Catharines, Ont.

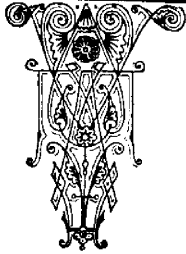
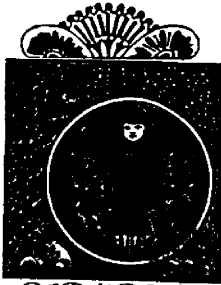


Is Different from Others

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J. J. H. GREGORY & SON,  
Marblehead, Mass.

# Winter.



**W**HEN Winter comes earth seeks  
repose.  
And lest she feel the chilling storm,  
God covers her with virgin snows,  
And tucks them in to keep her warm.

That nothing may her rest disturb,  
And hushed be cataract and rill,  
God puts within her mouth his curb  
Of mighty frost, and holds them still.

Yet all abroad, roused from their calm,  
The unchained winds may sweep the sky,  
God weaves their notes into a psalm,  
And bids them be earth's lullaby.

She sleeps her weariness away,  
And when the hours their signal ring  
God marks unerringly the day,  
And wakes her with the kiss of spring.

—D. M. WELTON, in *McMaster Monthly*.