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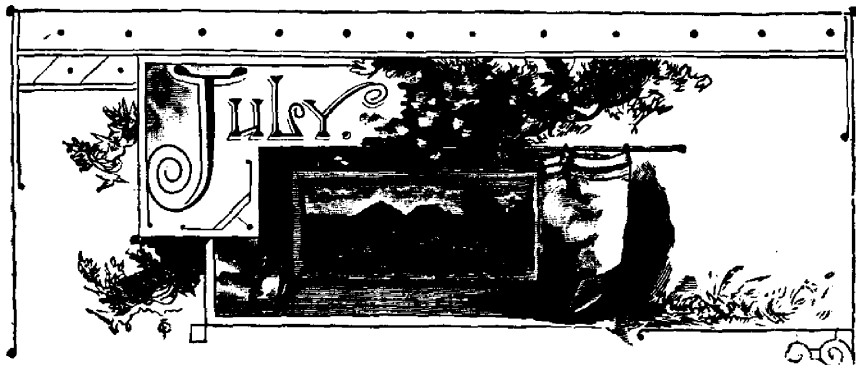
WRAGG.

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Canadian Horticulturist

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THE WRAGG CHERRY.



THE WRAGG CHERRY, a colored plate of which we present to our readers this month, comes to us from the State of Iowa. It was at first supposed to be of Russian origin, but this is uncertain. President Lyon, of Michigan, has had it under test there and says he thinks it is probably an unrecognized old variety.

Mr. L. Watrous, of Iowa, says of it, that it is so nearly identical with the English Morello that it is hardly distinguishable from it; but that it exceeds that variety in hardiness, as tested in that State. This cherry has its name from J. Wragg, of Waukee, Iowa, who accidentally met with the cherry in the western part of the State, where it was locally known to be a very productive variety. At first Mr. Wragg took it for the English Morello, growing on its own roots; but, on further examination, he became satisfied that it was not that variety. Procuring some young trees he sent them to the Iowa Experiment Station for trial, and they were reported as very hardy, and a valuable acquisition.

Description: Tree vigorous with an open spreading top, like the Early Richmond, but with dark colored bark like the English Morello; leaf large and thick, late bloomer. Fruit medium to large in size, liver color and with colored juice; seeds small; stem long; unsurpassed for cooking, but too acid for eating fresh.

NOTES FROM THE WORLD'S FAIR—III.



IN this immense Horticultural Building, 1,000 feet long and 250 feet broad, is the headquarters of the fruit growers and florists of this enormous Fair. Underneath the great dome, and stretching each way in the two front curtains, is to be seen a wealth of valuable plants, tree ferns, etc., so numerous as to give one the impression of a tropical climate.

One of the two great wings is devoted to viticulture, the other to vegetables, canned goods, seeds, etc., and the rear curtains connecting them contain our pomological exhibit. It is creditable to Canada that she is able to show by a far larger collection of fruit than any one State. One-sixth of the whole space, devoted to pomology is taken by us and creditably filled.

Passing through the centre of the building and then turning to the right, the visitor cannot be mistaken when he reaches the Canadian Court, for the word **CANADA**, in immense gilt letters, is very prominent, while arches with gilt letters of smaller size, indicate the various provincial exhibits. Our whole space is about 100 feet long and 52 feet wide, and has four tables throughout the full length, on which are erected several fine pyramids for holding jars of fruit.

Ontario, Canada's leading province, occupies nearly one-half of this court. Richer and more independent than the others, she has come forward liberally with her money, and relieved the Dominion by building her own tables, arch and office, and by furnishing three good men to care for same, viz., Mr. A. H. Pettit, the Provincial Superintendent; Mr. Orr, Assistant; and Mr. Brodie. Her exhibit is a most creditable one, thanks to Mr. Pettit's earnest and persevering efforts. Of fresh apples of 1892, Ontario shows 38 varieties—the leading ones for the commercial orchard—and a display of 555 plates kept in cold storage at a temperature of 33° above zero.

Her bottled fruits show up more varieties than any other exhibit. Oregon and Washington are more showy with jars of larger apples and pears, but their exhibit does not compare with the extent of Ontario's collection of varieties of all kinds of fruits. A list will be of sufficient interest to insert here, just as it was furnished us by Mr. Pettit:

Fruits.	No. of Varieties.	No. of Jars.
Strawberries	64	129
Cherries.....	16	85
Currants	6	70
Gooseberries.....	20	75



FIG. 557.—HORTICULTURAL BUILDING.

Fruits.	No. of Varieties.	No. of Jars.
Raspberries	13	50
Blackberries	4	27
Apricots	1	4
Wild fruits and nuts	8	24
Apples in jars	111	273
Crab apples	4	14
Peaches	20	83
Plums	56	137
Pears	75	188
Grapes	70	110
Quinces	2	10

Passing Ontario in the centre aisle, the visitors walk through the fine exhibit of bottled grapes, plums, gooseberries, Russian cherries, etc., by the Central Experimental Farm, prepared by Mr. John Craig, the Horticulturist; and then through a large show of 400 or more bottles of fine apples, plums, grapes, small fruits, etc., sent by the Province of Quebec. This province also shows some three hundred plates of apples, of the crop of 1892, and about seventy-five varieties; many of them smaller than the average of Ontario apples, but valuable for their hardiness. Noticeable among them were Scott's Winter, Arabka, Flushing Spitzenburg, Wealthy, McIntosh Red, Walbridge, Pewaukee, McMahon, Canada Red, Canada Baldwin, Fameuse, etc.

Mr. Blachford, B.A., of McGill University, has recently been sent on to assist us in the care of the Quebec exhibit, a young man of excellent ability; while Mr. Robert Starr, of the Fruit Growers' Association of Nova Scotia, who so ably superintended the setting up of the fruit, has now been succeeded by Mr. John Starr of the same province, who comes as the representative of the Nova Scotia Government. This latter exhibit is also creditable, though a large part of the apples of 1892 were injured by frost in transit and by careless re-packing in cold storage. The intention was to have shown one hundred and fifty varieties of apples, and these have now been reduced to eighty. Nova Scotia has one side aisle, excepting a portion occupied by Prince Edward Island's exhibit of fresh and bottled fruit, while the other side aisle is devoted to British Columbia and the North-West, of which a fuller account will be given later.

On the wall at the end of the Court, in large letters, is the words "The Fruits of Canada," a list follows, and the motto "The Apple Belt of North America."

It may seem conceited for us to speak of Canada as surpassing the world in any particular, but we feel justified in paying the fair young lady one more compliment. Passing through a wealth of magnificent apples bottled and fresh, from Washington, Missouri, Idaho, Colorado and Oregon, we reach the north

wing, and find Canada again prominent and surpassing the world, with the finest display of vegetables of 1892 to be found anywhere in the great Fair. British Columbia, the North-West, Ontario, Quebec, Nova Scotia and Prince Edward Island, have all vied with each other in sending the finest and largest collection of potatoes, turnips, carrots, mangolds, etc., on exhibition, and much honor is being paid to such success by the thousands of daily visitors from far and near. To superintend such an exhibit is enough to make one justly proud.

Our engraving (Fig. 558) shows a section of Canada's fruit display and more particularly a portion of the Nova Scotia exhibit, with Mr. John Starr in the foreground.

Now, lest we tire even of our delicious fruits and excellent vegetables, let us take another stroll about the grounds. Crossing the wooded island in front of the Horticultural Building we soon reach the Model Battle Ship, moored by the wharf in the waters of Lake Michigan. To all appearances a reality, few can persuade themselves that it is a sham, built on piles, helpless and unmovable. Accompanied by a relative, who is an ex-surgeon of the U. S. Navy, it was a heightened pleasure to have every detail of equipment, of medical service, of the 13 inch breech loading cannons, the torpedo, the gatling guns, the methods of taking latitude and longitude, deep sea sounding, etc., fully explained.

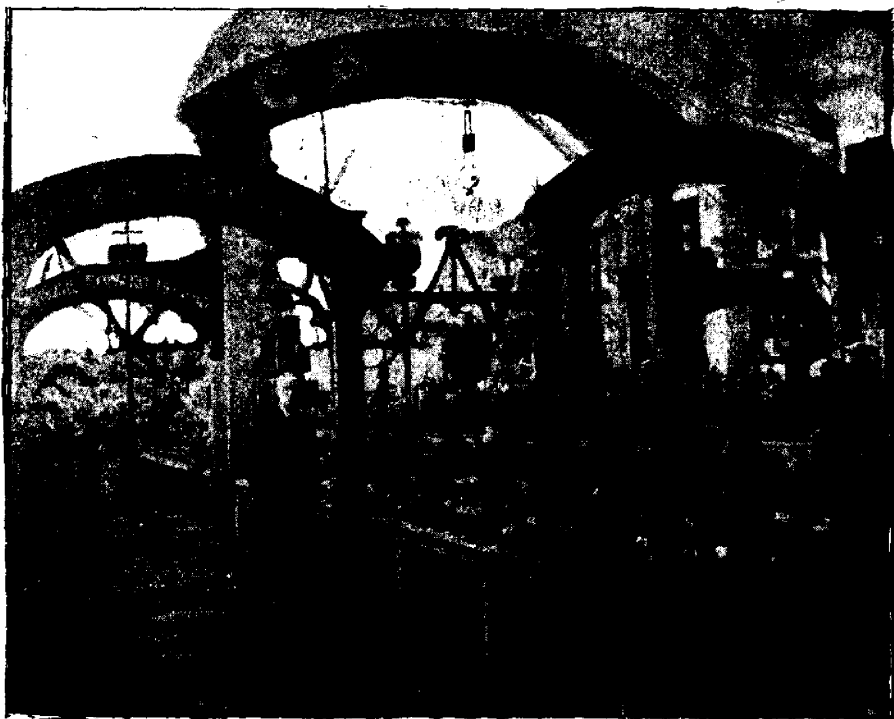
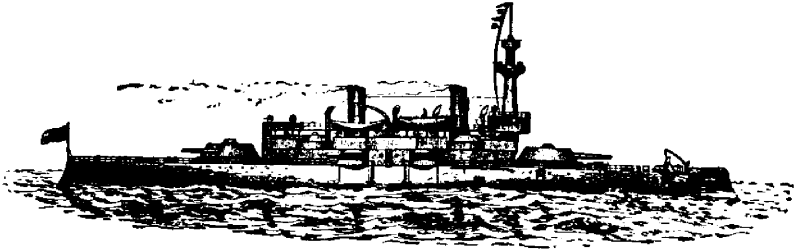


FIG. 558.—FRUIT EXHIBIT, NOVA SCOTIA SECTION.

Returning let us walk through the Fisheries (Fig. 560), which is on the way back to our own Horticultural Court before passing through Wooded Island. Plenty of interest centres here, for who has not at some time baited the hook and sat waiting for hours for the wary nibbles of perch, trout or catfish. In the central portion is the general exhibit, showing the means employed in fishing, and



U. S. COAST LINE BATTLE SHIP

FIG. 559.

the products, while one of the polygonal buildings contains the angling exhibit, and the other the aquaria. The latter consist of great glass tanks through the sides of which fish of various sizes and kinds, duly separated and classified, may be seen, almost as free from restraint as in nature. The total water capacity of these aquaria is 140,000 gallons. It is exceedingly interesting to walk among these and to see all kinds of fish, living and moving about in their native element, within a few inches of one's face and not in the least afraid of that terrible foe the human animal, who delights to torture them with cruel hook and afterwards devour them without mercy.

We Canadians do not forget the Queen's Birthday, even in a foreign land; but, on invitation of the British and Colonial Commissioners, we attended an official dinner at the Virginia, where loyal speeches were made in honor of Her Majesty, and where every preparation was on a magnificent scale.

THE FRUIT GROWERS of the World's Fair have organized and intend to look after their interests here. One object of the organization is to have some

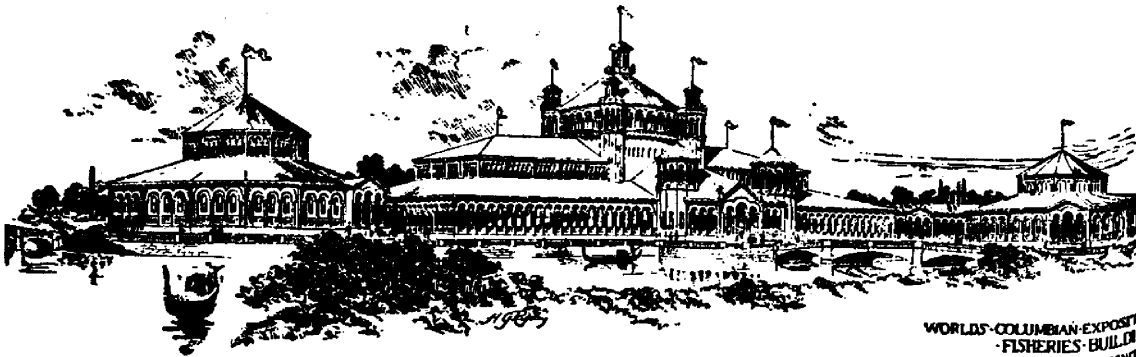


FIG. 560.

WORLD'S COLUMBIAN EXPOSITION
FISHERIES BUILDING
HENRY IVES COBB ARCHT.

obnoxious regulations changed, which prevent the delivery of even perishable goods except between the hours of eleven at night and eight the next morning. The consequent delays will seriously hinder the project of making a good exhibit of small fruits.

THE PRINCESS EULALIA has received a great ovation in Chicago. From the Women's Building she walked through the Horticultural, passing through Canada's Court, leaning upon the arm of Director General Davis. She is quite fine looking, and seemed much interested in our fruit exhibit.

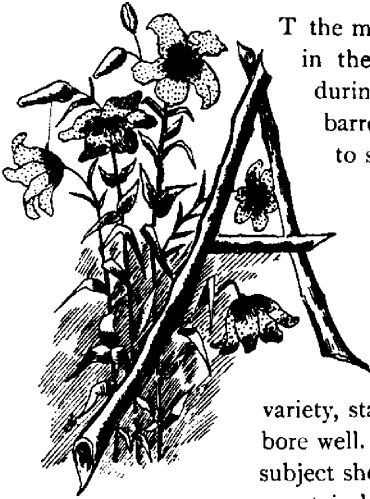
Later.—The Nurserymen's Association meeting here on the 11th inst., have co-operated in seeking a redress of the Fruit Growers' rights, and now we have every privilege granted us, so that fruits may be delivered to us at all times, without hindrance. It is therefore determined to continue a successive exhibit of fresh fruits and vegetables, as they ripen, right through the season. Some should come from each province and render the display as representative in character as possible.

The other day a Russian representative passed through our fruit display and asked many questions. His name is Ivan Tanschul, and he is a Professor of Political Economy in the University of Moscow. He seemed much interested in our Horticultural progress, and solicited copies of our Fruit Growers' reports, and those of the Central Experimental Farm.

Another day Francesco Ingegnoli, of Milano, Italy, called. He is the Secretary of the Italian Horticultural Society, and took careful lists of our more valuable fruits, for trial in Italy.

The Theory of Thinning.—We have become familiar with the statement that thinning the fruit on over-loaded trees, while it is young, does not materially diminish the number of bushels of fruit, the lessening number of specimens growing large enough to compensate for the difference. The superficial observer sees apples on a tree two inches in diameter, and on another four inches, and at once pronounces the larger ones twice the size of the smaller, four being twice the number two; but he decides hastily, for the cube of the two is only eight, while the cube of four is sixty-four, or eight times that of two. The large fruit is no less than eight times the size of the smaller, and it would require eight times as many specimens of the smaller to fill a barrel. This is of course an extreme case with extreme measures; but similar results will be obtained on a smaller scale. For convenience in multiplying and dividing, reduce the inches to quarters, and it will be found that a globular fruit eight quarters in diameter, will be more than twice the size in cubic measure of one six quarters in diameter. Any number of similar calculations may be made with like results. No wonder then that an orchardist found that his thinned fruit produced more bushels than that from the crowded trees.

THE REASON WHY SOME FRUIT TREES DO NOT SET THEIR FRUIT.



At the meeting of the Fruit Growers' Association held in the City of Hamilton, December 16th, 1891, during the discussion of the question "How may barren trees be made fruitful?" the writer ventured to suggest that it is well known to botanists that there are some plants the blossoms of which cannot be fertilized by their own pollen, and that possibly this might be the trouble with the orchard of four hundred Northern Spy trees planted in a block by Mr. Geo. Fisher, now eighteen years old, and which had never borne much fruit, while other trees of that variety, standing in another orchard of many varieties, bore well. He further stated that he believed that this subject should be investigated by our experimenters, to ascertain how far it may be true that our apple orchards

need to be planted with different varieties.

In answer to this, the esteemed Director, who represents the 8th Division, thought that this could not be the case with the Northern Spy, because that variety bloomed so late that there would not be sufficient apple pollen of other varieties to fertilize its blossoms.

An experience similar to that of Mr. Geo. Fisher befel a fruit grower in the State of Virginia. Some years ago he planted a number of pear trees of different sorts; when they came into bearing he was convinced that the Bartlett, on account of its many good qualities, and especially its early and abundant bearing, would be a profitable market variety. Accordingly he purchased several hundred trees of the Bartlett and planted them in a block by themselves; but, to his great surprise and disappointment, the trees, while blooming abundantly, set very little fruit. Unable to account for the sterility of his Bartlett orchard, he applied to the Agricultural Department at Washington for information.

In consequence of this application, Mr. M. B. Waite, of that Department, instituted an expensive series of experiments for the purpose of ascertaining, not only whether the sterility of this Bartlett orchard was due to the impotency of the Bartlett pollen to fertilize Bartlett flowers, but also what other varieties of pear, and what varieties of apple, were self-sterile. The results of his experiments as published are as follows:

Varieties of Apple Self-sterile.—Chenango Strawberry, Gravenstein, King, Norton's Melon, Northern Spy, Primate, Rambo, Red Astrachan, Roxbury Russet, Spitzenburg, Tolman Sweet, and Yellow Bellefleur.

Varieties of Apple Self-fertile.—Baldwin, Codlin partially, R. I. Greening.

Varieties of Pear Self-sterile.—Anjou, Bartlett, Bosc, Clapp's Favorite, Clairgeau, Columbia, Doyennè Boussock and D. Grey, Easter Beurre, Gansell's Bergamot, Howell, Jones, Lawrence, Louise Bonne, Mount Vernon, Pound, Sheldon, Superfine, Souvenir du Congrès and Winter Nelis.

Varieties of Pear Self-fertile.—Buffam, Duchess d' Angouleme, Flemish Beauty, Kieffer, Le Conte, Manning's Elizabeth, Seckel, Tyson, and White Doyennè.

If these results can be accepted as correct, and, from the extreme care taken to attain correctness, the details of which need not be here given, there is every reason to believe that they are correct, then it follows that notwithstanding the late blooming of the Northern Spy, the flowers are fertilized by pollen from other apple trees whenever the fruit is well set.

In the Report of the Illinois Horticultural Society for 1886, it is recorded that a hundred plants of dewberry in an isolated position were perfectly barren, but after a row of blackberry, planted alongside of them, came into bearing, the dewberry plants bore abundantly.

There is abundant room for further investigation in this direction, until we have a complete list of both self-sterile and self-fertile varieties of all of our fruits, especially those planted in large quantities.

D. W. BEADLE.

Training Tomatoes.—I believe in training tomatoes. The little trouble one will take training and pruning will be more than repaid by clean handsome fruit. First among my ten varieties stands Mikado, being the first to ripen, a heavy cropper of very large, solid fruit; but it ripens unevenly. Livingstone's Perfection is very prolific, second to ripen; a beautiful fruit, but subject to black rot. Ignatum ripens with Perfection, has very large handsome fruit, but badly affected with black rot. Henderson's Shaw or Yellow Mikado bears very large handsome fruit. Dwarf Champion is a small tomato both in fruit and plant, of good quality. The old standard Paragon is of excellent quality and prolific. With it ripens Henderson's Table Queen, a new variety. This tomato is all the originators claim for it. It is large and handsome, of fine flavor, a heavy cropper. The Peach is of little value except to amuse the children; very luxuriant in growth, and very prolific; The old Trophy is very late; Station Tree Tomato is a dwarf but useless variety; it ripens with the Champion, but has very small fruit. My tomatoes are all trellised, and are ripening in large numbers daily, while the same plants of my neighbors left to grow on the ground ripen very slowly and unsatisfactory. My advice to all who would grow good tomatoes is to trellis them. Some posts set about eight feet apart, a few strands of wire, a little care in training and pruning—this will be as bread cast upon the waters, that you shall find after many days.—HENRY C. TOWNSEND, *Dutchess Co., N. Y.*

AN AMERICAN PROFESSIONAL IN THE FLOWER GARDENS OF SOUTHERN FRANCE.



IN the Grasse County, acres of regions are laid out for the growing of the hosts of different flowers which go to make the numerous perfumes for which the town is noted. Violets and the narcissus are especially cultivated and brought in by tons. As a rule, only the unequalled Parma violets are sent into the still; all others are considered too weak odoriferously, to merit the steaming process. These pale-blue, fragrant "Parma" violets do not come from Italy, but are grown in the immediate neighborhood. According to the supply and demand, or according to whether it is a good or bad season for their growth, these choicest of flowers modest, are bought wholesale at from $2\frac{1}{2}$ to 10 francs the kilogram. Sometimes even 16 francs is paid—(so the retailers, who are not particular as to truism, will say). But at, say 3 francs the kilo of $2\frac{1}{8}$ pounds, a private person on the spot might, if so favored by the grower (who may hesitate to sell to single particular individuals)—have enough violets to form 40 or 50 of the small bunches, for which he pays from 30 to 75 centimes for bouquets to the sidewalk vendor. These retailers, big and little, make money while the flowers last. Of course, when they buy them of the producers at 3, 4, or 5 francs per kilo, the violets are in a confused, entangled heap. They have to make them into neat and pretty groups to make them salable, and manage to dispose of them for at least an advance, in all, of 25 to 30 francs. If they sell all, they have a profit of from 20 to 23 or 26 francs. Their risk in having any over, which may wither and become unsalable as fresh flowers, is now reduced to a minimum, for all the old and stale violets are disposed of cheap to sweet manufacturers, who steam them in, and coat them pretty thickly with flaked sugar, and then sell such at a high price as "confitures of violets."

Recently, a visit was paid by the writer to Grasse, the celebrated flower-producing land of the Riviera. Thrice previously the neighborhood had been visited, but not the town itself, nor its blossoming uplands. The train is taken from Cannes, and in about forty-five minutes the district of perfumery-makers is reached. The railroad is a climb nearly all the way, so that the dozen or so miles to be covered takes time for the train to rumble over.

Grasse gained, an inspection was made of some of the principal flower-distilleries. Among the more important is the concern of Roure-Bertrand fils (son), noted as a house for the pureness of its extracts of flowers and essences. Mons. Roure, junior, acted as guide over the extensive establishment, explaining

the multiplied mechanism used in the factory, and revealing part of the vast stores of matters already made. In the production of rose essence, he said 10,000 to 12,000 kilos of roses were needed to make 1 kilo ($2\frac{1}{2}$ pounds) of extract. This was sold at the high price of 2,000 francs (£80 or \$400) per kilo. It is the dearest of all the "first matters," or *matières premières*, used by manufacturers of perfumery. In fact, it is such a costly article to handle, that but a few firms can afford to manipulate it. Generally, it is only made on order given a long time in advance of the month of manufacture, which is May. The attar of roses of, and made in, Turkey, is, the cicerone went on, stronger than that made in Grasse, but not so fine. Probably because in the dwindling ottoman state they have not the perfected machinery which prevails in the Alpes-Maritimes department—machinery which (to their further credit, be it noted) is locally made.

The principal houses in and about Grasse interested in the raising of flowers of every species, from which suitable essences are extractable, are the following (all on the Avenue des Capucins): Robertet; A. Pilar; Lautier fils; Hugues-Guérét; J. Hugues; A. Chiris (introducing, so far as he dare go, all the tricks of the trade into the known products of this big house); Widow, or Veune, Cavalier; and B. Roure. There are nearly a score of other firms, all of more or



FIG. 561.—IN THE FLOWER-LAND OF THE RIVIERA—VIEW OF THE COUNTRY ABOUT GRASSE.

less extent, but in the foregoing list, it will be found the leading concerns have been fairly accurately summarized.

The best time to visit Grasse is, of course, in advanced spring, as the May month. Then all is an undulating forest of flowers, the air is filled with thousands of fragrant odors. A three weeks' sojourn, spent during the spring time, in this country, will never be forgotten. While there, one should get out and about so much as possible; take evening walks along the well-kept lanes crossing the flower reserves, when the sweet perfumes are most sensitive to and appreciated by the sense. The visitor should never make the ignorant mistake of sleeping with closed windows; leave them wide open all night and half open during wet or damp nights. Take no notice of those silly know-nothings who say the nocturnal air is "dangerous."

Being situate on a gentle slope of an offshoot of the Maritime-Alps, the view of Grasse and vicinity is of the most picturesque. It offers the, apparently, most changing, and charming prospects. With every hundred meters the tourist gets higher up on the hills above the town, a magnificent view is had of the ville, with its numerous important and busy perfumery manufactories, surrounded on all sides by flower-clad lands, a smiling valley at foot, and another range of hills closing the view to the sea.

It is a very pretty sight, that of seeing the harvesting (so to write) of the flowers for the distiller. The flowers are brought into sheds, heaped on long tables, and every grade of poor woman-kind set to work sorting them. They are so scantily paid that they can barely exist. Their employers verily exploit and sweat them. Old and young women, little boys and girls—all are at it earning a miserable pittance. On following the car-loads of flowers into the distilleries, one will be pleased with the first sense of the all-pervading perfumes. But getting right inside and into the deposits, it becomes too much of a good thing; the odor becomes so strong and rank as to lose its fineness to the sensitive nasal nerve, and becomes nothing more than a strong, almost nauseous smell, permeating everything damp—even your moistened handkerchief, although you may not have taken it from your pocket.

Many beautiful private gardens will be found in the Grasse district. The natives being naturally skilful horticulturists, they make their gardens models of good culture and work. Some excellent photos of these and other views were obtained of the photographer on the route de Vence, F. Busin.

For the verification of a few forgotten names of Grasse flower-people and makers of perfumery, the writer acknowledges his indebtedness to the yearly publication of rue Clotilde 1, Nice, known as "l'Annuaire des Alpes-Maritimes."

Some of the persons spoken with, and whose names have been herein mentioned, on learning that the details being inquired after were possibly for publication in a foreign professional periodical, expressed the pleasure they would have in receiving direct a copy of the journal containing this account, and

gave thanks in anticipation of being favored. It was promised to transmit their wish to headquarters. Many of these could also fill up an enclosed subscription form.

Believing that the road across country from Grasse to Vence-Caynes afforded some of the best scenery on the Riviera, I determined to cut across on foot. There is no railway at present direct from Grasse to Nice, although one is now building. To go by rail, means a long detour *via* Cannes, Antilles, etc. I was not disappointed as to the scenery; it is, indeed, a most beautiful route that by the highway. Stepping out sharp—for time was now very limited—Grasse was soon left behind, but, looking back, one has many delightful peeps through the wooded and flowered country at the old ville. Before the windings of the road oust it completely out of sight, you have learned to appreciate Grasse and its surroundings so blessed by nature. Numerous coquette and artistic villa-residences are passed, fronted by gardens full of luxurious growths. Some of the cottages look intensely snug, covered as they are by an avalanche of eternal-spring greenness. Romantic waterfalls and warbling rivulets are rife among the mountain hills running off from the roads. The fragrance of violets is particularly noticeable in the air, although no violets may be seen about. It was in the month of February when I thus passed over the road, yet everything



FIG. 562.—ALONG THE ROAD IN GRASSE VICINITY, ONE OF THE BEAUTY SCENES.

was as advanced as spring in Albion or America. The place, however, should be seen during April and May. In summer the heat is not oppressive, being tempered by the breezes from sea and mountain.

But I had not allowed myself enough time to do the walk comfortably from Grasse to Vence-Caynes. The distance is about sixteen miles. I started from Grasse at a quarter to 12, to catch the train leaving Vence Caynes for Nice at 3 p.m. As the next train did not depart till 6 p.m.—a serious delay—I had to go at a jog-trot half the way, and arrived just in time, after $3\frac{1}{4}$ hours on foot. Hoped to meet a diligence *en route*, but in vain. Fortunately, the moiety of the distance is a gentle decline.

Grasse is an ancient town of some 20,000 inhabitants. The deputy whom it sends to the Communal Chamber at Paris is the notorious pseudo-republican trade-politician, Rouvier, Minister of Finances, alleged to be a “clever” financier, which may be true—for his own pocket. This horsey-looking and self-esteeming negociant in politics is of the “republican” taint, which is always purchasable. Thus, if a clique of imposters—be they Bourbons or Bonapartes—were to start the vile “royanté” *régime* next month, the ill-physiognomist Rouvier would be the first to sell his “principles” and collaborate with them.

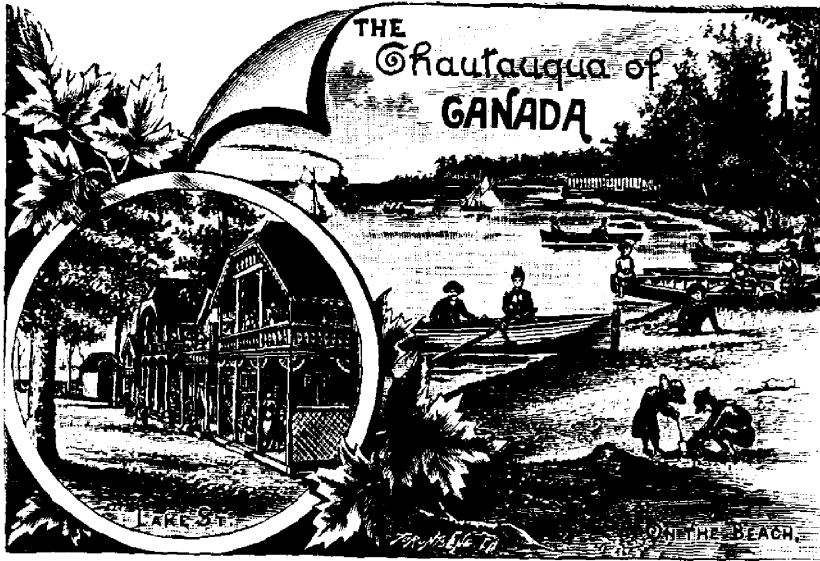
Not alone does Grasse produce the most fragrant flowers of the world. It also produces—but they grow wild, never being cultivated—some of the most fetid. One is particularly odious, and will be found in abundance on some parts of the hill sides, not under the gardener’s hands. It is of the shape of the blue-bell, but about six times larger, and is of a rather glossy brown color. It has a strong, nauseous “doggy” smell, that is to say, like the disagreeable smell emanating from the skin and hair of an unkept, mangy dog. Only once before has the writer come across a similar fetid flower, which was many years ago, while in England, and (if memory serves right) this was on Hamstead Heath, London.

Before going to Grasse, I had been all over the Town of Cannes; visited the Casino des Fleurs; but this “casino of the flowers” has not much that is floral about it as yet. It has only been opened during the present season. It is a great and creditable imitation of Monte-Carlo casino, but minus the vicious tables. There is a fine large public international reading-room, with a cosmopolitan supply of periodicals. I also went to the now open Exposition Internationale de Cannes, of passing interest locally, but of no interest internationally.

W. L'A.

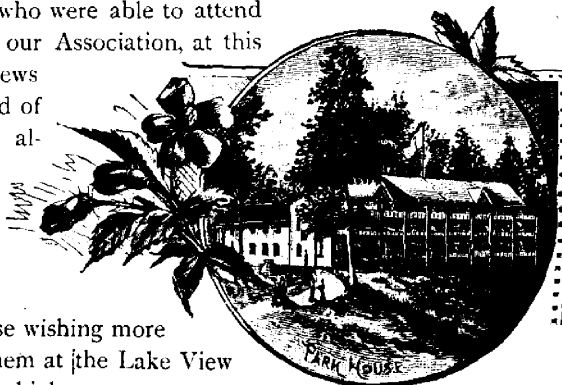
Packing Pears.—A good plan in packing pears is to wrap each one in soft paper, packing closely enough to prevent all motion, in bushel boxes. The French, who export more pears than any other nation, cover the inside of the boxes with spongy paper or dry moss, which absorbs the moisture. Each pear is then wrapped in soft paper and placed in layers in the boxes, the largest and least mature in the bottom, filling all interstices with the dry moss. Thus they will keep a month or more. They are so closely packed that though they can not touch each other, all motion is prevented. If one decays the others are not harmed.—Rural New Yorker.

GRIMSBY PARK.



Is a name sometimes given to Grimsby Park, of late such a favorite resting place for the citizens of Toronto and Hamilton who wish to spend a few days or weeks by the pebbly beach of our beautiful Ontario. How the children revel in the sand with tin pail and shovel, and what a pleasure our young people from the city, who have been housed up among brick walls, can find in such a lakeside resort with plenty of boats and fishing tackle. Bathing is also a popular amusement, and opportunities are afforded for both ladies and gentlemen to learn the art of swimming.

Those of our readers who were able to attend the last summer meeting of our Association, at this Park, will recognize the views here given, of the beach and of the Park House, where, although accommodations were somewhat ordinary, yet they were not out of keeping with what might be expected in a hotel, for summer use only. Those wishing more elegant quarters will find them at the Lake View House, with correspondingly higher rates.



The most peculiar building at the Park is the so-called Temple, a grand auditorium, capable of seating seven or eight thousand people. It was here that we gathered to hear an address on apple orchards, by Mr. J. S. Woodward, which appeared in our annual report for 1892. The building is unique in construction, and is about one hundred feet in height. The observatory on the top commands a fine view of Grimsby Village, The Point, and Niagara on the Lake.

Situated as it is, right in the heart of the fruit district, it does not seem inappropriate to give our readers this brief notice of Grimsby Park.



FIG. 563.—THE TEMPLE.

THAT IMPROVED BALDWIN.

SIR,—In regard to that improved Baldwin apple I sent you, I have had it in bearing for some years past. I first had one tree of it that I grafted myself, and the fruit was of such fine flavor that I have quite a number of trees now. Some four or five years ago I took it in town and showed it to Mr. A. McD. Allan; he pronounced it of fine flavor; he thought it was a Baldwin, but said it was of superior quality. It has kept up its fine quality, I have had it nearly as large as the 20 oz. Pippin, and in appearance very like the King. It is one that bears very regularly every year. I had, only a few days ago, some specimens that measured nearly 10 in. in circumference, and still good. I consider it the best apple I have.

Goderich.

WALTER HICK.

SUCCESSFUL CHERRY CULTURE.

Soil for Cherries.



It is generally accepted that the cherry tree requires a porous, well underdrained soil. As my farm is nearly all a slaty gravel, and the surface hilly, I have cherry trees growing on nearly all parts of it. I incline to the opinion that the Morellos and Dukes, or sour cherries, require somewhat different soil and treatment from those suitable for the Hearts and Bigarreaus. For an experiment, I set a few of each on low heavy ground, where water could be found three feet from the surface. The sweet cherry trees are healthy and vigorous and bear heavily, but the fruit is inclined to rot more than on higher ground. The sour kinds soon died out.

About Culture.—The sour cherry trees should receive continuous clean culture. They then mature heavy crops, even when young. My sweet cherry trees I have set along fences and at the ends of the rows in my vineyard. For the first four or five years, the earth is kept mellow around them, and they are mulched with strawy manure each spring, until they have obtained a diameter of six or eight inches, the trunk of each near the ground is wrapped with tar paper every fall to protect it from mice. A few days' neglect of this after the first snow-fall caused the loss of several trees. After four or five years, the sod is allowed to form around them; but the fall wrapping is continued till the bark becomes thick and rough. When forced by high culture, the sweet cherries are prone to crack the bark and prematurely decay.

Shall we Manure?—So long as the sweet cherry trees appear thrifty, I apply no manure. If the tree seems to fail for want of nourishment, stable manure, wood ashes or potash salts are applied. The sour cherry trees are treated precisely like peach trees, with light dressings of stable manure and kainit or muriate of potash every year.

Pruning to Shape.—The shape of the sweet cherry should be left almost entirely to nature. Necessary pruning should be done while the tree is young, during the first two or three years after setting. Unless made necessary by injury, no large limbs should be cut, as doing so is apt to produce a rotten spot. Most varieties of the Morello class require annual thinning as much as peach trees.

What Varieties?—I know of no locality where any variety of the sweet cherry can be relied on as a sure cropper. Perhaps Downer's Late Red comes the nearest to it, as it seldom rots on the tree, and is of good quality. White Ox-heart or Yellow Spanish, Napoleon Bigarreau, Black Tartarian, and Elkhorn or Tradescant's Black Heart are good market varieties. The Windsor is highly

recommended, and I have a good many trees of that variety set, but they have not fruited yet. Among the sour cherries none have been more profitable than the Montmorency Ordinaire, and English Morello. The Early Richmond bore heavily when young, but now trees that are twelve or fifteen years old, healthy and thrifty, blossom full and bear but little fruit. For five or six years after they came in bearing, the Elkhorns were my most profitable cherry, but lately they are dying out without any apparent cause. The May Duke seems a short-lived tree. The fruit is better for family use than for market, because the crop ripens so unevenly, thus necessitating several pickings.

Packages.—Until recently I used five and ten pound baskets, now I use a crate containing shallow boxes which are filled from the bottom, thus expediting packing so that the stems are covered when the package is opened for inspection.

General Remarks.—Sweet cherries here are not so sure a crop as the sour, but the fruit usually sells for a higher price. The main causes of loss of crop are cold storms or frost while in bloom, and rot. Moist, hot weather will sometimes destroy an entire crop three days before it is fit for market. I have known cherries to be perfectly sound when picked in the morning, appear streaked when shipped at evening, and nearly all rotten the next morning in market. The English Morello, and perhaps some other sour cherry trees, are subject to black knot. It appears to be identical with that on the plum tree. The free use of the pruning-knife has been my only treatment. So far it has been successful, as I have lost no trees, and the disease has been nearly eradicated.—W. D. BARNES, in Rural New Yorker.

Plum Culture is beginning to receive more attention in Nova Scotia, and a few venturesome ones are going to try it on quite a large scale. For plums, as well as for peaches, I cannot quote a higher authority than Mr. Willard, who from a young plum orchard of sixty acres shipped 16,000 boxes the last season. He says, "I have found that successful plum growing demands a succession through the season, beginning with the first that ripen in July or August, through to October, by this means holding the market and doing the business with ease without a glut on hand at any one time. The Czar or English plum is the earliest, then follows the Field, Bradshaw, Geuii, Prince of Wales, Peters' Yellow Gage, Hudson River Purple Egg, Union Purple, and last to ripen Grand Duke. These are all tried and tested sorts." The Lombard also, is widely known and well liked. In addition to these the following are highly recommended by large and practical fruit growers, Niagara, Shippers' Pride, Burbank, German Prune, Wild Goose, McLaughlin, and Coe's Golden Drop.—*Nova Scotia F. G. A. Report for 1893.*

CHERRY CANNING.



HERE is probably no fruit which submits so well to the canning and preserving processes as the cherry, which does not lose its delicious flavor by cooking. The strawberry, of course, is best raw, and is in its greatest perfection when freshly picked and eaten at once. Still there are many ways in which it can be cooked and preserved, and if the result gives us something different from the fresh fruit in flavor, it is yet very delicious. If you have never tried sun-preserving of strawberries and cherries, it will pay you to experiment with it this year; and, if properly done, you will find it one of the most delicious ways of putting up these fruits. It preserves them quite as effectually as cooking over the fire, and much more delicately, for it gives none of the rankness which is apt to follow cooking in a heavy syrup. The manner of preserving in the sun, is as follows:

Stone the cherries and put them on platters or in flat dishes. To each pint of cherries put a scant pint of granulated sugar. Mix them well by putting in first the pint of cherries and then sprinkling the sugar over. Let them stand over night, and by morning the sugar will have extracted much of the juice. If they seem not to be very juicy in the morning set each platter in the oven, for a few minutes only, or on a warm place about the stove until the juice has come out freely. Then set the platters in the sun—in the hottest place you can find—and put either glass or some sort of very thin netting over them. In from a day and a half to two days the syrup will thicken and the fruit will become semi-transparent. Put cold into jars and close them, and the cherries are ready for winter use. No heating is necessary; but it is a little better to put into self-sealing jars than into open ones, merely to keep the fruit from drying. Sun-preserved strawberries are done in exactly the same manner, and is by far the best way to preserve the flavor of the berry.

For canning cherries the best way is to sweeten them but slightly, cook for a few minutes, and then put them in air-tight jars. They are very easily kept, and the flavor is retained better if only a little sugar is put in. When the cans are opened in the winter they can be sweetened to taste.

GRASS AROUND CHERRY TREES.—The American Cultivator says that the cherry tree needs a dry soil, and if in grass the crop is none the worse, though the grass should be kept low by pasturing or with the scythe, for convenience in getting around among the trees to harvest the fruit. We have seen some places where the cherry crop seemed to be injured by removal of the sod from under the trees. The fruit was wormy and poor. It was not loss of fertility that caused this difference, for a thin skimming of sod could not make the soil much, if any, poorer. But it did make the soil around the trees much wetter in early spring, and this probably is what injured the fruit.—O. Farmer.

FRUIT-GROWING IN NOVA SCOTIA.



TRAVELLING directly from Western Ontario to the Annapolis Valley of Nova Scotia, one is impressed with many features which seem peculiar to the district—the equable climate, fertile soil, artificial dykes, great stores of natural fertilizers, rich in organic matter, supplied by every rise of the Bay of Fundy tides; and lastly, the longevity of the apple trees, as evidenced by the number of hale old veterans now standing, which were no doubt large trees at the time of the expulsion of the Arcadians in 1755. That the trees have attained this great age and continue to bear annual crops, substantiates the assertion that this region of Nova Scotia is perfectly adapted to the apple, and is in many respects its natural home. In the older fruit-growing sections of Quebec and Ontario—the Island of Montreal and Grimsby, Ontario, for instance—apple trees over 100 years of age are exceedingly rare, and when such are found they are invariably seedlings. But in the vicinity of Wolfville, Nova Scotia, and Grand Pré, of Evangeline fame, many orchards of grafted varieties have passed their centennial, to say nothing of the hoary old monarchs which have braved the storms of a century and a half. One of the most serious enemies to the apple tree in the Annapolis Valley, is the canker worm. This, with the black spot, are foes against whose inroads a determined stand must be taken each year, and it is to the credit of the fruit growers of this region that a progressive spirit is exhibited by them in testing the best means to exterminate these pests, with the result that spraying with diluted Bordeaux mixture and Paris green combined is now quite the universal practice. Growers are divided in opinion as to the best remedy for the canker worm. It is said by some that Paris green sufficiently strong to kill the canker worm will seriously injure the foliage. The growers who hold this view protect their trees by tacking around the stem or trunk bands of tarred paper which is smeared with printer's ink, for the purpose of trapping the female moths as they crawl up in the autumn to deposit their eggs. When this banding and smearing is carefully attended to in the autumn and again in the spring, little injury is sustained from the canker worm. Other growers find that if spraying is resorted to before the larvæ have attained maturity they are easily destroyed.

President J. W. Bigelow, of the Nova Scotia Fruit Growers' Association, has recently secured the actual results for the last ten years of ten average orchards situated in the Annapolis Valley. As a result of his investigations, he shows that a profit of \$52,065 has been made from seventy-seven acres of apple orchard in ten years from an investment of \$7,820, and permanent value remaining in orchard worth \$42,400. To prove the cost of producing a young orchard, Mr. Bigelow obtained facts from the owners of four young orchards planted five years ago, selecting those who paid the highest and the lowest prices for the land. From this tabular statement it is shown that from an outlay of \$5,285 in

five years the value of the orchard is raised to \$15,915, and the whole cost of raising an orchard cannot exceed \$3 per tree, which tree will give an average income of \$2 a year for 100 years. A very important factor, as already stated, in estimating the profits of apple orcharding in Nova Scotia is the proved longevity of the apple tree, as good crops are now being raised on apple trees planted by the French more than 150 years ago. Fertilizing the orchard by a top dressing of marsh mud ("muddy") is a common practice with most growers, and one which generally assures a satisfactory growth of wood, though potash and phosphoric acid should be added in order to balance the fertilizing ration.

Of the varieties of apples grown in the Annapolis Valley, a large number are of English origin. In a collection comprising 153 varieties collected for the World's Fair, there are 25 Pippins of different kinds, including such as English Golden Pippin, French Pippin and Cluster Golden Pippin—all names indicating considerable antiquity. In the collection there are also 30 well-known sorts which are natural born "bluenoses," and though few of them have attained more than a provincial reputation, yet their excellence should lead to a wider test. As a commercial variety, Gravenstein heads the list. Ribston and King stand next, followed by Blenheim, Baldwin, Spy and Nonpareil. The great success of the apple in the Annapolis Valley, and the natural facilities which Nova Scotians possess for placing it in good condition upon the British market, have had the effect of retarding the development to a considerable extent of other lines of fruit culture. With a climate and soil excellently suited to pear growing, pears are little cultivated, peaches still less, while plums and cherries are as yet restricted to particular localities. Small fruits have recently, received considerable attention, so much so that, while six or eight years ago home markets were not sufficiently supplied, now these demands are fully met, and large quantities are exported to the neighboring provinces, and even to Boston. A strong wave of enthusiasm is now sweeping over the province in regard to the future success of fruit growing, and a new era in the development of this industry on broader lines has already set in.—J. CRAIG, in *American Gardening*.

Intermixing Varieties.—The subject of intermixing in an orchard different varieties of the same fruit, and intermixing different fruits, in order to secure the better fertilization of the pollen, is one which will receive the attention of pomologists during the coming ten years. These facts at present are known—That apple trees with several varieties of apples on them seem to bear better annual crops than trees that are surrounded with those of the same variety. That orchards near where bees are kept in large numbers bear better than those distant from the apiary. That large florists will buy swarms of bees and allow them the use of their conservatories for the sole purpose of carrying the pollen of one flower to another. We often notice that in some seasons our fruit trees blossom well, but we get a poor setting of fruit. Scientists seem to think that this is due to the climatic influences that happen to be unfavorable to the transition of the pollen from one tree or blossom to another, resulting in a lack of proper fecundation.

THE ROSE LEAF-HOPPER.



THE leaf-hoppers form a large and interesting family of the true bugs. They are especially distinguished by the long third joints of the hind legs, which are covered and armed with a row of spines on each margin. These long legs enable them to leap rapidly and some distance, a fact to which their common name of leaf-hopper is due. Nearly all of them are small and slender insects with blunt or pointed heads of the shape shown at Fig. 564. They feed upon a large number of plants, being especially abundant upon the grasses of pastures and meadows, where they frequently rise in swarms as one walks along. Professor Herbert Osborn has lately estimated, after a careful study of the subject, that one-half of the available nutriment from pastures often goes down the throats of these little pests. Probably no leaf-hopper attracts more general attention the country over than the one infesting rose bushes. Nearly half a century ago Dr. Harris wrote: "There is a little leaf-hopper that lives upon the leaves of rose bushes and is very injurious to them. In its perfect state it is rather less than three-twentieths of an inch long. Its body yellowish white, its wing covers and wings are white and transparent, and its eyes, claws and piercer brown. The male has two recurved appendages at the tip of its hind body. Swarms of these insects may be found in various stages of



FIG. 564.

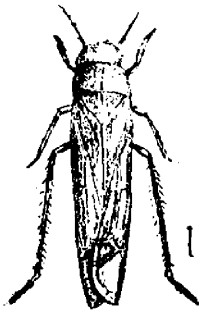


FIG. 565.

growth on the leaves of the rose bush through the greater part of summer, and even in winter upon house plants. Their numerous cast skins may be seen adhering to the under side of the leaves. They pair and lay their eggs about the middle of June, and they probably live through the winter in the perfect state concealed under fallen leaves and rubbish on the surface of the ground." Fig. 565. The nymph or pupa of the rose leaf-hopper is shown somewhat magnified at Fig 564, while the dult, also enlarged, is shown at Fig 565. The back of the pupa is protected by numerous elongated spinose hairs. The injury to the leaf is manifested by the appearance of numerous white specs on its upper surface. This pest is easily destroyed in its immature stages by pyrethrum, kerosene emulsion, or some form of tobacco.—C. M. WEED, *Ohio Expert Station*.

NOTES ON EGG PLANTS.



THE egg plant is one of the important vegetables, which has as yet received little attention in this State, and the poor withered specimens sent in from other States give consumers little idea of the delicious character of this plant when fresh and well served. No doubt also, the fact that it is not common, and that cooks are not accustomed to serving it, may account to a large extent for its neglect.

The egg plant is a native of tropical America, and reaches perfection only in a warm climate and near the coast. By careful treatment, however, and by a process of acclimatization, it may be successfully grown far inland and much farther north than commonly attempted, as the successful plantings in the college gardens for the past two years abundantly prove.

The following notes embrace the more important results of our experiences with this plant during the past five years:

1. *Culture.*—As a long season is required for the egg plant to mature, it is highly important that the plants be started early. It is our practise to sow the seeds in "flats"—shallow boxes about three inches deep—in a warm forcing house about the middle of March or the first of April. After about a month, or when the first true leaves are nicely started, the young plants are pricked off into other boxes, two inches apart each way, or better, into two-inch pots. About three weeks later, when the pots are well filled with roots, or when the plants begin to crowd, the latter should be shifted to four-inch pots. We have almost invariably had better success when the plants were handled in pots than when they were transplanted into other flats, the check caused by frequent disturbance of the roots appearing to be detrimental to most sorts. An exception is noted, however, in case of the Early Dwarf Purple which seems able to withstand very harsh treatment. It is important that the plants be kept growing vigorously from the start, as they seldom fully recover from a check, and in order that fruit mature the plants must be strong and vigorous when planted in the field.

The plants may be set in the field, in this latitude, about June 10th to 15th. We usually set them in rows about three feet apart that they may be cultivated by horse power. The soil should be a rich sandy loam containing an abundance of organic matter. Heavy dressings of stable manure are advisable. Frequent and thorough cultivation are absolutely essential to success.

Perhaps the worst insect enemy of the egg plant is the potato beetle. The tender foliage of the young plants is especially subject to attack, and as the growth is so slow, severe injury nearly always proves fatal. Paris green, one pound to one hundred gallons of water (about one-half teaspoonful to a large pailful of water), applied about once a week, will be found useful.

2. *Methods of Serving.*—No doubt that the fact that cooks are not familiar with methods of serving the fruit of the egg plant accounts to a large extent for the failure to use it more. The following recipes for cooking the fruits are given in Bulletin twenty-six of the Cornell University Experiment Station, and have been found satisfactory :

“*a. Fried.*—Cut in slices cross-wise not over a half-inch thick and parboil about fifteen minutes ; then remove and fry in a hot spider in butter and lard.

“*b. Fried.*—Cut into slices quarter to half-inch thick and lay in strong brine for two hours ; then wash *very* thoroughly ; sprinkle with brown sugar, pepper and salt and fry slowly to a dark brown.

“*c. Baked.*—Cut in two length wise remove the seeds and pulp and fill with dressing made of half teacupful bread crumbs, one teaspoonful butter, and salt and pepper to taste ; lay the halves side to side in dripping pan, add a little water and bake nearly an hour.



FIG. 566—BLACK PEKIN.

“*d. Fritters.*—Pare, cut in slices cross-wise, and soak in salt water for eight or ten hours ; dry on a towel, dip in beaten egg, and roll in bread crumbs, then fry slowly in hot butter until the pieces become rich brown ; serve hot.”

3. *Varieties.*—For several seasons we have grown such varieties as we could obtain from all sources. The number of varieties is comparatively limited, but there are several distinct types of varying importance. These types vary in regard to color, size, form, habit of plant and season of maturity. Some from their earliness and productiveness but small size, are valuable only for home use. Others by virtue of their large size and attractive appearance are popular in the markets, but as a rule they are not sufficiently early and productive for the short seasons of this latitude.

Black Pekin is a large and vigorous growing kind ; stems petioles and veins always deep purple ; leaves large, more or less distinctly lobed, purple with metallic lustre above. Fruit large, five to seven inches in diameter—often larger—spherical or oblate, very dark purple. Entirely distinct from every other variety, rather late, but it fruited well the past season. A popular market variety—*Maine Experimental Station*.

SIERRA SNOW PLANT.

This plant is acknowledged by all, to be the most beautiful in the floral kingdom. It is a bulbous plant, and attains a height of from fifteen inches to three feet. It grows at various elevations, but is more generally distributed between the elevations of six and seven thousand feet above sea level. In their flowering season, they throw up a spike of deep, brilliant red flowers, so intensely colored, as to glisten and sparkle in the light. These blooms last for several days. For supreme beauty, and wild magnificence, this plant stands unrivalled.

Grizzly Flats, Cal.

S. L. WATKINS.

Washing the Bark of Fruit Trees.—I noticed with a great deal of interest and satisfaction last spring the effect of potash dissolved in water to the strength of one pound to two gallons, and applied as a wash to trees in the orchards of Mr. Thompson, Mr. Archibald and Mr. Chipman of this village. I afterwards used a milder solution in a young orchard of my own, and, although the trees were previously in an average healthy condition, yet the effects of the application were noticeable at quite a distance, for it had given the bark a particularly clean, dark brown appearance. I would strongly recommend the cleaning off of all the loose bark and moss—the dwelling places of the bark lice and the winter quarters of the codling moth—with a hoe during April, and an application of the potash about the middle of June. Experiments have been made with most astounding results as to crops where the diluted potash has been applied as a fertilizer to the roots.

Pruning Raspberries.—In growing for fruit the branches should be nipped at one foot in length. If tips are the object let the branches grow, and when they reach the ground bury the tip. If you wait until the cane runs much before it is covered you will have a long string of roots and plants and none of it fit to set. Last fall my tips were covered until the branches were three to four feet on the ground and then nearly all covered, and this spring the young plants put up all around the old bush as bad as the red varieties. The Marlboro, I fear, will not yield well with me. What berries I had were fine. The Golden Queen proves more hardy, and I think of better quality.—Farm and Home.

THE TUBEROUS BEGONIA.



THE article on "Tuberous Begonia," was, no doubt, written for the benefit of that flower alone; no doubt it is a pretty flower, but a good deal of care is required to get the bulbs properly started. I can hardly fancy the author of that article is a true lover of flowers, when he speaks of going into a dry goods store, to get "material" for a foliage bed. Now, what looks better than a round bed, the centre filled with scarlet geraniums, then two rows of coleus, planted so that all the colors seem to blend into one, with an outside row of Tom Thumb nasturtiums; then in a mixed border protected with evergreen sand shrubs, you can make a good show with a few "faded coleus." Last year I planted out in such a border, several Zinnia plants, about three feet apart, and in between I planted coleus in September, when the zinnias were in full bloom; the effect of the two plants growing together was very pleasing. There are many beautiful plants grown, not for the flowers only; take that grand flower, the Pæony, no plant so useful in an open border, because after it has flowered you still have a handsome plant, the bright clean leaves of it always afford a pleasing contrast to your many colored annuals or perennials. The Columbine you sent out last year has proved to be a very pretty flower, so early, and such large flowers, one over four inches in diameter. I have saved the centre stems for seed, and hope to raise some good plants for next year. I am pleased to see so much interest taken in flowers by our little monthly. What a change since 1856, when I might travel for a week and hardly see a flower among our farmers, but now our daughters vie with each other who shall have the best garden; and the road to a good garden is now made easy by our "Canadian" florists from whom we can get, for very little money, a collection of all the beautiful hardy perennials, which, with a good selection of easy growing annuals, you may be sure of a wealth of bloom from April till November. In conclusion I will say, friends, if you want a pretty bed, be it of flowers or foliage plants, keep away from the "dry goods store;" a very poor substitute will these be found for any of nature's gems.

C. J. F.

Delaware.

SIX BEST APPLES.

For six of the best apples I have, or grown in this section, I should take the Baldwin, I have; then the Ribston, R. I. Greening, Canada Reinette, Ontario, (not for dessert), and Golden Russet. Another choice apple is the Fallwater, of fine flavor, long keeper; but I have not had experience as to its bearing qualities.

The prospects for fruit is, for apples, scarce, cherries and plums full of bloom, peaches not much grown but a good bit of blossom.

Goderich.

WALTER HICK.

ORCHARDS NEED CULTIVATION.

The following opinions of experts in orcharding will confirm the views always advocated by this journal on orchard treatment.

CULTIVATE THE ORCHARD :—Mr. W. F. Murray of Missouri, writes in *Farm and Home* : I attribute our success to thorough cultivation and careful pruning. By no other means could we have grown such apples in such a dry, hot summer, on trees planted sixteen years ago on land already very much worn, and at the same time secure six to twelve inches of new growth and plenty of fruit buds for a crop next season. This agreeable lesson confirms my faith in thorough and continuous cultivation, and careful annual pruning from the time the trees are planted until they cease to produce paying crops ; then cut them down and burn them. Why should old dilapidated, half-dead trees, full of diseases and prolific breeders of insects, cumber the ground ?

One advantage of cultivation is that the rough, broken and mellow condition of the soil fits it for receiving the rainfall more rapidly than a smoother, more compact surface, and for retaining moisture much longer. I think this the best way to irrigate. Another advantage is the cutting and breaking of the roots, thereby greatly multiplying fibrous roots, increasing the vigor and fruitfulness of trees. In my own orchard—the seven acres of 16-year old trees—I have but four dead trees, and only ten that are damaged to an extent worthy of notice. I know of one man in our county that can hardly read or write, yet he has an orchard which he plows deep and cultivates thoroughly every year ; and lo ! we behold this man growing the finest apples received at the principal shipping station of our country,—the wonder and admiration of all who see them.

TREES IN GRASS.—Prof. L. N. Bailey writes in *Bulletin 31* :—Permanent sod is an injury to the orchard. This has been proved in the experience of nearly every successful orchardist. It is forcibly illustrated in the instance of the old college orchardist. In the earlier experiments conducted by Dr. Beal the same fact was emphasized. For some years he kept a part of the trees in sod, others were cultivated thoroughly, while still others were cultivated at varying distances from the body of the tree. Even as early as 1874 he found that “ trees in grass made less growth, looked yellow in foliage, and bore smaller fruit and apparently less of it.” In 1875 he observed that “ the evidences look more and more strongly every year against the propriety of leaving trees, in our section, in grass. They have stood the severe winters no better ; they have borne no better ; the apples are smaller, the trees grow more slowly ; a greater proportion of trees have died than of those cultivated each year. So marked have been the results that we have plowed up about half that part of the orchard which was left in grass ”

A COMBINATION WIRE GATE.

Gates made wholly of wood are heavy. Since wire has become so cheap, it has entered largely into the construction of gates, proving light and serviceable.

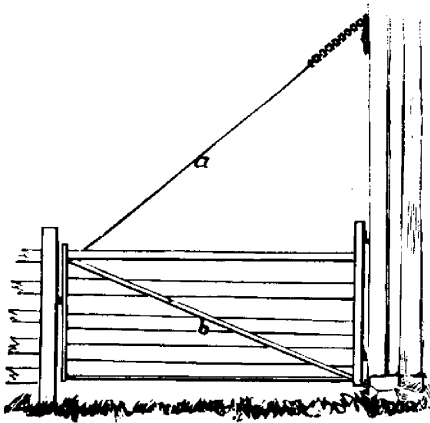


FIG. 567—A SERVICEABLE FARM GATE.

The accompanying sketch of a wire gate was sent us by S. Barrington. The form shown, is one of the best as regards strength, durability and freedom from swagging. The frame of the gate is wood put together in the usual manner, with a long brace *b* placed as shown in the sketch, and nailed in position. Holes are bored in the end pieces through which are passed and firmly secured annealed No. 7 or 8 wire; seven or eight single strands may be used to each gate. If the gate can be hinged to a building or high post, a wire support *a* can be used

to prevent sagging. If a few links of chain are attached to one end of the wire it may be always kept tight by hooking up another link.

VARIETIES OF APPLES MOST USEFUL IN N. S.

In reply to the question, "What varieties of apples are best suited to Yarmouth County," Mr. C. E. Brown, our well-known correspondent in Yarmouth, N. S., writes in the last report of the Nova Scotia Fruit Association as follows:—We have now the names of 146 varieties of apples grown in the county, in addition to which there are numerous seedlings and others of recent introduction, not known to the writer. The conditions of soil, temperature, shelter, and sunshine vary greatly in different parts of the county; on the shore, within the influence of the cool and salt sea breezes and fogs, but few varieties do well. Of these, named in the order of usefulness, Keswick Codlin, Oldenburg, Gravenstein, Wagener, Ontario, Northern Spy, Winter Greeuing, Easter Pippin, Sweet Bough, Grimes' Golden, Golden Sweet, and Wealthy are best. Inland, most kinds succeed fairly, but Red Astrachan, Major or Andrew's Sweet, Gravenstein, Grimes' Golden, Ontario, Northern Spy, Fall Jennetting, Baldwin, Ben Davis, Gavel Pippin, King, Ribston, Yellow Bellefeur, and Wealthy are the most popular and profitable." Most of these varieties were on exhibition in the Nova Scotia court at the World's Fair, with numerous others.

‡ The Garden and Lawn. ‡

FORSYTHIA.



THE members of this ornamental genus are extremely desirable as early spring bloomers. The first shrub in bloom on these grounds this spring was *Forsythia viridissima*, its yellow bell-like blossoms appearing on the lower branches when well protected by snow, before the leaves had attained quarter of their full size. Three species have been tried here, none with entire success. *F. Fortunei* is an upright form, more hardy than either of the two following. *F. Supensa*, is of trailing habits, resembling in this respect Bitter sweet (*Alastrus*), as a consequence it is more easily protected than those of upright habit. *F. Viridisima*, already referred to is probably the hardiest of this genus. It is usually injured at this point to some extent by the winter, which hinders a good show of flowers, as these appear on the wood of last year, but the vigor of the plant does not seem to be impaired. To obtain the best results in localities as cold as this, numbers of this group should be trained on trellises during summer, and laid down during winter. This will ensure early spring flowers.

They are easily increased by summer layering.

JOHN CRAIG.

Ottawa.

* The Apiary *

HINTS FOR JULY.



THIS is the time of year when many of us are found working from early morning to late at night, and a time when those who have only a few colonies of bees, and not much experience, are willing to take a few directions without going elaborately into why and wherefore. Too much swarming should not be allowed. To avoid, to a large extent, after swarms, put the new hive and new swarm on the old stand, and put the old colony and hive on a new stand. If full combs are used in the upper stories, be sure, early in July, leave two full combs of honey untouched for each colony. This should be kept and not extracted until fall, and until one has ascertained that the bees have enough honey below for winter and spring. Do not leave sections on the hive until they are soiled by travel stain from the bees; when filled remove them. When the honey season is over and the sections are only partially filled there is also no use in leaving the sections on the hive.

Brantford, Ont.

R. F. HOLTERMANN.



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.

EMPRESS AUGUSTA VICTORIA is a new and famous white rose, for forcing which, recently won the Pierson prize of a silver cup, worth \$50, in New York City. It is thought to equal the Bride in its habits of growth, and that it will also be popular with amateurs.

GRADING AND PACKING FOR MARKET.—Good and thoroughly honest packing may be the intention of the grower, but if the commission agent does not give sufficient attention to selling goods on their merits, and get correspondingly high prices for the best articles, is it to be wondered at if the grower becomes discouraged? Mr. G. R. Knapp writes in the American Agriculturist, that he knows some salesmen who only supply third-class trade, and cannot handle a first-class article to advantage. Others want goods shipped ungraded, in order that they may themselves do the grading and pocket the advance thus gained for the extra quality. The proper way is to make arrangements with some one who will give attention to handling extra selected stock, and work up a first-class fancy trade.



✧ Question Drawer. ✧

PRUNING EVERGREENS.

No. 576.—SIR,—Will you please let me know the best time to prune old evergreens, and if there is any book published on this subject?

W. C. SEARLE, *Clinton, Ont.*

Reply by Prof. John Craig, Horticulturist, Central Experimental Farm, Ottawa, Ont.

I do not gather from the question whether the pruning is to be applied to evergreen plants singly, in windbreak form or as hedges. Then, again, it is necessary to know what object the pruner has in view; whether to increase the vigor of the tree or to check its growth. Evergreens, meaning conifers, can usually be kept in symmetrical form by simply nipping out the terminal bud of any branch which is growing out of proportion with the others. Evergreen hedges should be clipped during the first two weeks in June, and again about three weeks later.

In pruning evergreens it is necessary to cut back to a strong bud, thus giving the limb a chance to start from the end bud so that it will not mar the symmetry of the branch. One of the best books that I know of on the subject of evergreens is that published by the Orange Judd Co.; the author of it is Josiah Hooper.

Pear Leaf Mite—Rose Pierre Guillot.

577. SIR,—I have some young pear trees in full bearing, which showed symptoms of blight two years ago; last year the leaves were covered with black spots, also the fruit, besides being much cracked. I send a sample of the leaves this year, and wish to know if there is any remedy for it, or if the trees should be cut down to prevent it spreading? Is the rose "Pierre Guillot" able to stand the winter, or is it a house plant? An early answer will oblige.

Yours,

J. H. MARSHALL, *Woodlands, Stormont Co., Ont.*

Reply by Mr. John Craig, Experimental Farm, Ottawa.

The pear leaves received are affected by an insect known to horticulturists as the Pear Leaf mite, *Phytoptus pyri*. This has been treated by the Entomologist to the Farm, Mr. Fletcher, in the Annual Report for 1891, a copy of which is mailed herewith. No satisfactory remedy has been discovered, but spraying with kerosene emulsion early in June is thought to be the best. The rose, Pierre Guillot, has not been tested in our rose grounds. It is a hybrid tea, and therefore not likely to endure, without injury, our cold winters; but with a fair amount of protection, I think it could be wintered at Woodlands. It is said to be as hardy as the tender hybrid perpetuals, such as Paul Neyron.

Treatment of Plum Trees and Grape Vines.

578. SIR,—Will you kindly inform me if it will now be too late to dress and trim young plum trees, varying in height from seven to ten feet, and four and five years in the ground? Bore a few plums last year, this year most of them heavily laden, but severely sprayed with sulphate of copper and the fruit very much destroyed. I wished them all to be topped, *i. e.*, about one-third of last year's growth to be cut off and so to make them *stocky* and strong, so as not to split when heavily laden in after years. Many also have been sprayed when the blossom seems to have been fully out. The same with many pear trees, young and old. The apple, mostly in full blossom now, have also been sprayed, were to have been all pruned, but not a branch cut as yet. Would it be better to let them alone till the fall? I mean the plum trees especially, but the others also. You will very much oblige if you will kindly advise me. Last year my grape vines were infested with a kind of round black scab. I sprayed them with sulphate of copper, which seems to be very effectual in causing the scab to peel off. But as it was not till the *very last* days of July that I knew of the remedy, and I dared to spray a second time only, the disease appeared when later on. A small bit of the sulphate (one ounce) seemed quite sufficient for 30 gallons of water to 200 grape vines.

GEO. STRANCHON, *Woodstock.*

Reply by Mr. John Craig, Experimental Farm, Ottawa.

I do not think it would be advisable at the present time to prune back your plum trees as severely as your letter leads me to believe that you intend to do. Such a severe heading-in, just at the season when they are making their most rapid growth, would be a dangerous blow to their vitality. Heading-in should be done in the fall or early spring. Your plum trees may be checked somewhat, by simply pinching back the ends of the terminal shoots; this may be done at once, and will prevent long straggling growths which are likely to be broken by wind-storms.

The grape vines you speak of are evidently affected by a disease called "Bird's-eye Rot"; this is best kept in check by close pruning and by spraying frequently with the Bordeaux mixture. Treatment should be commenced early and carried on until the fruit is nearly ripe, as the disease often develops on the fruit just before maturity. When the fruit is nearly ripe it is best to spray with the ammoniacal carbonate, as it does not discolor nor injure the berries and will not affect their sale.

* Our Book Table. *

BOOKS.

REPORT OF THE IOWA STATE HORTICULTURAL SOCIETY, for the year 1893. Twenty-seventh annual session held at Des Moines, January, 1893. J. L. Budd, Ames, Iowa, Secretary. It includes papers on—"Commercial Orchards," "In the Vineyard," "Improvement of Small Fruits," "Ornithology and its Relation to Horticulture," "Fruit Insects," "Climate and its Effects on Apples," "Cross-fertilization," "Notes on Lawn Making," etc.

CATALOGUES.

BEES AND HONEY. Illustrated Catalogue and Price List. A. J. Root, Medina, Ohio.

* Open Letters. *

Leading Varieties of Strawberries in California.

In the Sacramento region the variety that is most extensively cultivated is the *Triomphe de Gand*. In all probability this is the most superior shipping variety of strawberry that is cultivated. It is shipped by the carload from the Sacramento Valley to New York, Chicago and many other distant markets. The *Triomphe de Gand* is a very vigorous grower, of a large size, and a very beautiful red color, and of a splendid flavor. It is very productive.

The *Jessie Strawberry*, which is in many places pronounced a fraud and swindle, is a grand success here and is very extensively planted. It is not noted for shipping qualities, but its flavor is the best.

Another grand variety, which is at present little known, is the *Australian Everbearing* or *Crimson Strawberry*. This wonderful variety was introduced from Australia, eight years ago, by E. J. Baldwin. It is now very extensively cultivated in the San Gabriel Valley in Southern California. It is undoubtedly the earliest strawberry in cultivation, and the most profitable everbearing strawberry cultivated. In Southern California it is never without fruit. The berries are of a large size, resembling the *Monarch* of the West in shape, they are of an exceedingly beautiful crimson in color, are very firm and deliciously flavored; this variety is a remarkable shipper, and is shipped in vast quantities from Los Angeles to all parts of the country. The strawberry growers of Los Angeles County realize immense profits from this variety, the present season twenty-five cents per lb., clear of all expenses. The *Australian Everbearing* will yield two good crops the same season that the plants are set out; the first crop of fruit will not be large in size, but as the plants get more firmly established the fruit will increase in size. In the winter, and late in the fall, the fruit is white on the underside, of course this is caused by the temperature of the weather.

Cloud's Seedling is a splendid shipping variety and does well on the Pacific coast.

The *Oregon Everbearing* also gives very good results and should be more extensively cultivated.

The *California Everbearing* is a very superior variety in all respects, the plants are of the very largest size, as is also the blossom, which is perfect. The fruit is of an immense size, of a beautiful glowing red color, very firm, and possessed of a rich, sweet, delicious flavor; this variety is exceedingly productive, and yields its immense fruits until killed by frosts.

The *Honey Strawberry*, or *Red Alpine*, is another wondrously productive variety; the fruit is of small to medium size, very highly colored, a glowing crimson, and possessed of a delightful fragrance, and a spicy aromatic flavor, which makes it an unrivalled variety for table use.

This variety is ever-bearing, and in favorable climates, will bear fruit all season long.

S. L. WATKINS,

Grizzly Flats, El Dorado Co, California.

The Plants.

SIR,—Many thanks for Alfred Colomb rose kindly sent me, which I have planted in a pot in meantime. The blue spruce and strawberry plants you sent me in spring I gave to Mr. William Rose of this place, as I have no ground here of my own; he reports them doing well. Apples and plums about here promise fairly. Wild small fruits are abundant.

WM. H. WYLIE, *Marmora.*

SIR,—I ought sooner to have acknowledged your kindness in sending the plant I requested, with the addition of two fine strawberry plants. All came in good order, and are growing well. I heartily thank you for your prompt and generous favors.

FRANCIS COLEMAN, *Hamilton, Ont.*



THE ROCKY MOUNTAINS.

As one proceeds westward, after the first distant glimpse of the Rocky Mountains, the scenery grows in grandeur. Higher and higher rise the snowy peaks, loftier and more majestic than Alp or Appennine. One never grows weary of their ever-changing aspects. Like Cleopatra's beauty, age cannot wither nor custom stale their infinite variety. Rose-pink at dawn and eye, snow-white beneath the noontide sun, pale and spectral by the wan moonlight, they are a thing of beauty, and a joy forever.