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Continuous pagination.



TULIPS.

1. STANDARD ROYAL.
2 SAMSON

3. YELLOW PRINCE.
4. CROWN OF ROSES.

THE Canadian Horticulturist.

VOL. V.]

JUNE, 1882.

[No. 6.

TULIPS.

These beautiful flowering bulbs can be purchased at such moderate prices, and be grown so easily, that it is a wonder that every lover of flowers does not have a large bed of them. Their colors are so varied and brilliant that they make a most gorgeous display when planted in masses; and they are so hardy and grow so readily in any good garden soil that there is not the slightest difficulty in their cultivation.

The earliest varieties will usually be in bloom in the last days of April, and by planting the sorts that come later, a succession of bloom can be kept up until the first of June. The Duc Van Thol tulips (Fig. 1), are the first to bloom.



FIG. 1.—DUC VAN THOL TULIP.

These are both single and double; the double are all red with a yellow border,

the single are of various colors—scarlet, crimson, yellow, white, &c. These all grow about six inches in height, and are very showy. After these come the variety known as the Tournesol (Fig. 2),

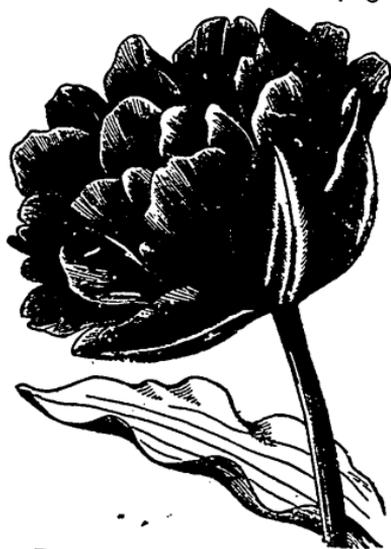


FIG. 2.—DOUBLE TULIP OR TOURNESOL.

with very large double flowers, yellow or orange and red, which continue for a long time without fading. These are followed by Single Early Tulips (Fig. 3), of many colors, as red, crimson, violet, purple, yellow; also many of them very beautifully striped, and others edged with white or yellow or red.

Flowering as they do so early in the season, they continue longer than the

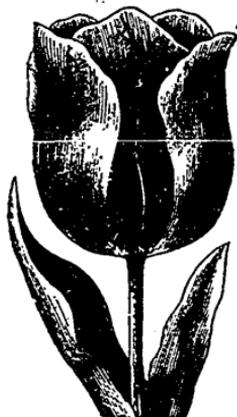


FIG. 3.—SINGLE EARLY TULIP.

late flowering and make a splendid display.

The later Tulips (Fig. 4), grow taller than the earlier sorts, and are great

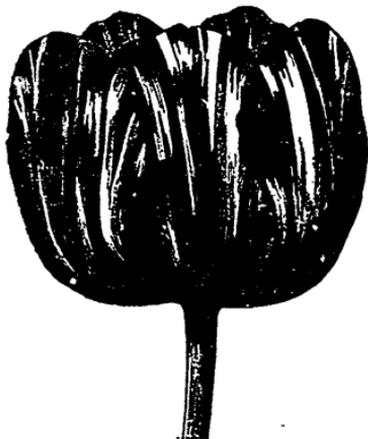


FIG. 4.—LATE SHOW TULIP.

favorites with all lovers of this showy flower. They have been divided in sections known as Bizarres, Byblooms and Roses. The Bizarres have a yellow

ground color, which is broken with any other color, as purple or red; the Byblooms have the ground color white, broken with purple; and the Roses have also a white ground color, broken with cherry, crimson, or pink. Numerous rules are laid down for judging these tulips, and the "points" of the flower defined with most minute exactness; but as it is not probable that the readers of the *Horticulturist* will be growing them for exhibition purposes, we shall not weary them with these rules.

In planting tulips it is necessary to choose well-drained soil, as standing water is very injurious to them. Autumn is the proper season for planting them, say the month of October. They should be covered to the depth of about three inches, in soil that is sufficiently rich to yield a good crop of potatoes. An occasional stirring of the surface and eradication of weeds is all the further cultivation required. Most writers on tulips insist upon the necessity of taking up the bulbs as soon as the leaves have withered, and keeping them in a cool, dry place until the planting season. It is true that if this is not done the more delicate varieties will die out after a while, and the stronger will lose their variegation and revert to the old red color. But after all, one gets tired of the same thing year after year, and when the tulip bed begins to run out, there is a pleasure in procuring a new lot to supply their places, and enjoyment in marking the changes that further cultivation by those who devote themselves to the

raising of new tulips may have produced.

There is also a variety known as the Parrot Tulip (Fig. 5), having long, loose,



FIG. 5.—PARROT TULIP.

fringed petals, the most of them having three or four colors, yellow, crimson, orange and green intermingled, the yellow color, however, usually predominating. They are very brilliant and showy, and will be particularly interesting to those who are not familiar with their peculiar form.

The Tulip holds a conspicuous position in the history of commercial speculations. It hardly seems possible that men, business men, shrewd and calculating, should have been so beside themselves as to value a single tulip bulb at one and two thousand dollars. A Harlem merchant paid half his fortune for a tulip that he might keep it in his garden for the admiration of his visitors. In 1635 the tulip mania had seized upon all classes, and speculation in tulip bulbs took the place of ordinary

business. Upwards of \$46,500 was paid for forty bulbs, and a sailor is said to have eaten a tulip bulb, mistaking it for an onion, the value of which would have furnished a princely dinner party.

DRIED FOODS.

At present we export to Europe about 6,000,000 pounds of evaporated apples. The process is extremely simple. The fruit is "cored" and sliced into pieces one-sixteenth of an inch in thickness; it is then exposed to sulphur fumes, which arrest all fermentation, and then to a dry hot blast of air, which reduces it to about half its original weight. The sulphur fumigation prevents the fruit from becoming dark, and after drying it is almost as white as when first cut. Simple as is this process, it costs about twice as much as drying the fruit in the sun, but such is the saving in weight and flavor that it is preferred, and evaporated apples sell to day in the European markets for fifteen cents a pound.

An old produce dealer interested in the European export trade told an *Evening Post* reporter that in view of the astounding magnitude of the export trade in food products, it would not be surprising to hear of attempts at compressing or drying every product of the country. The same process as that applied to apples has been used with some success with peaches, and some berries that can be grown cheaply, and as the export of dried food products increases, the import is constantly decreasing. The raisins from California promise to drive all foreign raisins out of our markets. There are vineyards of hundreds of acres in Placer, El Dorado, Los Angeles, San Diego, and other counties, given up to growing and drying grapes, partly by evaporation and partly by sun heat.

CORRESPONDENCE.

THE GOOSEBERRY.

The Gooseberry is a fruit which seems rather at a disadvantage in Ontario, as the standard English sorts do not succeed, both from their liability to mildew and because their mode of growth is unsuited to the climate.

Only two kinds are considered reliable—the Downing and the Houghton, and these in quality, growth and size of fruit are but middling. From their appearance I should suppose these to be hybrids, and that the small, smooth, swamp berry is the female parent.

If this be correct, it is quite possible and probable that we may yet have a considerable number of new sorts, and of a much better quality; but the matter must be taken up without loss of time, or it may be too late.

It has often been said that this was a land of wild grapes, but when first settled it was even more a country of wild gooseberries, and the varieties were endless; red, green, rusty-purple, and even blue; small, middling and large, prickly, spiny, hairy and smooth.

Some of the two last are, or were, of very fine flavour, almost equalling the finest English kind, which is also hairy.

In many old settled and improved districts the native gooseberry is practically extinct, and ere the march of civilization completely annihilates it, we need men of observation, practical and scientific knowledge, who have taste and leisure, to experiment and improve this fruit. Seedlings with the native habit of growth, and the fruit more like the English in size, would make a name and a profit for the successful originator. But even if good hybrids cannot be produced, we need not confine ourselves to two sorts, nor to twenty.

When this district was new, I was struck with the superior habit of growth and the efficient mode of renewal of the native bushes in the woods.

On trying the fruit I found the quality not only bad and indifferent, but also good, and used to mark plants of superior flavour when ripe that I might transplant in the fall.

In this way I selected and removed three or four dozen bushes, which filled a considerable plot of ground when placed at a due distance from each other, intending to prune, mulch and manure them, but owing to various untoward circumstances they were quite neglected.

Notwithstanding want of care they have borne for more than twenty-five years, and for pies, preserves and ripe use, we think them better, and certainly more reliable, than the two standard sorts.

Several years ago I saved and sowed seed from the best and largest, but did not find the fruit of the seedlings equal to the parents. Cultivation will not improve them.

They differ from the English sorts in having a disinclination to take root from cuttings, but any sucker or offshoot with the least portion of root will grow.

Partial shade is desirable, as in some kinds the fruit drops considerably in arid situations.

C. ORILLIA.

REPORT OF FRUIT TREES.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

DEAR SIR,—I am a little late with my report for 1881. The winter of 1880 and '81 was a very hard one here. My Ontario apple tree was winter killed dead to the snow line. I had a graft of the same variety, which was grafted into a seedling stalk; it was also killed.

This is sufficient proof that this variety will be too tender for Eastern Ontario. I had two trees Beauty of Kent, one Fall Pippin, one Sweet Bough, bearing trees, all winter killed; also a row of young trees of Gravenstein, every one killed. My Glass Seedling plum survived; the fruit buds were all killed, but the tree was not injured. I had a fine McLaughlin plum tree killed. My Flemish Beauty and Clapp's Favorite pear trees came through the winter uninjured, only the fruit buds were killed. All the other varieties of pear trees that I had were winter killed. The Swayzie Pommie Grise and Grime's Golden apple trees are growing fine; they are hardy. Grime's Golden has borne some fruit for three years. My Burnet grape made a large growth last year, but bore no fruit, which disappointed me very much. I think I over-manured it; it came into blossom the latter part of July, and the blossoms all fell off. Do you think that over-manuring would make it act in this way? All my other varieties of grapes bore heavy, but none got any manure. I removed the surface earth from my Burnet, and put a heavy coat of rotten manure over the roots: then put the earth back again over the manure. I have heard that grapes will stand any amount of fertilizing, but I think that I overdid it. I find the Burnet needs but very little winter protection.

The cold days for the Winter are as follows: November, 4 days thermometer below zero, the lowest being 11 degrees; December, 1 day 10 below zero; January, 17 days thermometer below zero, the lowest being 24—it went to this figure three times; February, 10 days below zero, the lowest 25 degrees. The average cold for 11 days, taking the last four days of January and the first seven days of February, was 12½ degrees below zero.

The ground was well covered with snow the whole winter. Yours respectfully,
A. BRIDGE.

West Brook, near Kingston, March, 1882.

FRUITS IN ALGOMA.

MR. EDITOR,—I have been on the point of writing to you for some time, but have not, as I have been trying to promote the interest of our Association; but as this is a newly settled part of the country, and some have not enough land under cultivation to allow them to set apart an orchard, so they say they would rather wait a while longer, and see how the trees and vines grow and stand the winters before purchasing for themselves. We have quite a variety of wild fruits, such as strawberries, raspberries, gooseberries, cranberries, and I have heard of a few wild grapes, but as I have not seen any, I cannot speak about them. There are also some very old apple trees on this island which bear fruit most seasons, but seldom have a chance to ripen, as the Indian and half-breed pick them before they ripen. One of my neighbours ripened a few bunches of Concord grapes last season. I have four Concord and four Isabella vines, but they are not bearing yet. I expect they will have some fruit this summer. All small fruits will do well here, and I think that if we can get the most hardy that will ripen early, that we can grow apples. I don't see why we should not, as our climate is no worse than that of Collingwood or Goderich, and they grow fruit in these townships. Also at Sault St. Mary's, I am told, they have fine orchards, and ripen their fruit. Most of the tops of my apple, pear, plum and cherry trees got killed last winter, but sprouted out of the stems or roots. I will still protect them, and see if I can make anything out of them. I intend trying some

Black Walnut and Chestnut trees this next spring, unless you think we are too far north to admit of their growing. If you think they would not do well here, I wish you would make a note of it in next number. I read the articles in one of the back numbers, and don't understand if that is the only distance north that such trees will grow. Of course we have no such trees here, and I would like to plant a few to test them for a winter or two. I cannot think of any more at present to mention, so hoping you will excuse this from one who is not accustomed to write long letters,

I remain, yours respectfully,

JAS. C. COOPER,

Note.—It is not probable that the Sweet Chestnut would endure the climate. The Black Walnut might.

ENGLISH SPARROWS.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

SIR,—In your March number there was a communication from Mr. Newhall, referring to an article from an Australian paper respecting the destructiveness of the English sparrow, which article I had previously read.

As Mr. Newhall gave no particulars of his own observation, I doubted the facts as stated, as my garden and small plum orchard is constantly filled with sparrows, they having made it a roosting place all winter, and I had never noticed any harm they had done to fruit or fruit buds.

I wrote a short article to send you to that effect, but before sending it I happened to notice a pear tree in my garden with a dozen of sparrows on it busy pecking at the fruit buds which were then just beginning to expand, and going to examine them closely I found they were nibbling at the incipient stalks of the blossoms. Think-

ing they might be after insects, I concluded to watch them more carefully before writing you; but on going into my plum yard adjoining, I found there was hardly a fruit bud left on several hundred bearing plum trees, the places where the fruit buds had been picked out being quite distinct all over the trees. They had not then touched any cherry or peach buds, but on Saturday last I discovered dozens of sparrows on my specimen tree of the new "Windsor cherry" seedling, which stands at my kitchen door, and which was, as usual, perfectly covered with an enormous show of blossoms. On examining closely, standing under the tree and looking up, I saw they were all busy eating the unopened fruit blossoms, and looking under the tree found the ground covered with the debris of the buds dropped in eating them. Since then they have been busy on all my cherry trees, more than half of the unopened blossoms being already gone. To-day I found them eating the peach blossoms for the first time, and doubt not but all will be destroyed before the week is over, as there are hundreds of them busy at work all the time.

It is evident that strong measures must be taken to prevent the spread of the sparrow, and to destroy them where they are already a nuisance, as they are here. As long as they were few in numbers they did apparently little or no injury to the trees or fruit, living on what they could pick up out of the horse droppings on the streets and any spilt grain about the railway depot and elsewhere. But this spring there has been little or no movement of grain by rail, and the birds have increased so much that they can't make a living off the horse droppings, and have been supplementing it with fruit buds.

The benefit they were to do in destruction of insects has been greatly

exaggerated. It is only when they have young that they hunt for them. I saw a female to-day busy catching spiders from a vine trained against a wall, while several hundred others were eating fruit buds. One chipping sparrow is worth twenty English for destroying insects, while the English drives them away.

Law or no law, I will try and destroy as many sparrows as I can in the most wholesale manner possible.

Yours truly,

JAMES DOUGALL.

Windsor Nurseries, April, 1882.

"LOST RUBIES."

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

DEAR SIR,—Allow me to call the attention of your correspondent, Mr. J. C. Robinson, of Owen Sound, to an unfortunate slip in his note on page 95 of your April number.

Mr. Robinson says, "No one can convince me that 'Lost Rubies' is akin to foreign sorts; *the leaf and cane are as plainly native as our Canada thistle.*"

Mr. Robinson will be perhaps mortified to learn that Canada cannot claim the honour of being the mother country of this prolific thistle. Had he seen as many acres of it as I have seen in the old country, he would know that, like many others of our plant and insect pests, it has been introduced—like the white man himself. The simile was unfortunate for his argument.

While I am writing, I should like to mention that the name of the manufacturer of Buhach, on page 76, should be Mr. Milco, not Miles. This correction may prevent the miscarriage of letters.

E. W. CLAYFOLD.

New Bloomfield, Perry Co., Pa.

GRAPE VINES AT BALTIMORE.

I am well pleased with the *Canadian Horticulturist*. It was a well-spent dollar. The report is well worth the amount. I have over nine hundred Grape Vines set out at present; and I am experimenting and trying to improve or invent new or better systems of training, that will harmonize better with the natural growth of the vine, and that can be successfully and economically laid down and covered for winter, which is a necessity in this country.

T. A. CHAPMAN.

CANADIAN APPLES IN THE ENGLISH MARKET.

The arrivals of Canadian apples at the port of Liverpool last year were something over 200,000 barrels, but owing to the shortness of the crop in both the United States and Canada these numbers will certainly not be reached by the imports from the two countries during the present (1881) season. In fact, the shipments to Liverpool within the last three months, as compared with those in the corresponding period of last year, show a decrease of nearly 30,000 barrels. With the view of giving the trade an opportunity of judging for themselves as to the most valuable class of apples to be imported to this country, Mr. Smythe, the Canadian Government Agent at London, Ontario, has forwarded a consignment of some hundred different varieties of Canadian apples, properly classified, which were supplied by the leading growers in his district. These are on exhibition at Liverpool. It is expected that the next Allan steamship will bring from Canada a further supply, which will be exhibited at the leading pomocultural shows in Great Britain. By this means it is intended to promote the interests of this important branch of the Canadian export trade.—*The Grocer*.

THE UTILITY AND BEAUTY OF TREES.

Address of the Hon. George B. Loring, United States Commissioner of Agriculture, delivered before the American Forestry Congress, at their recent meeting in Cincinnati, Ohio.

Gentlemen,—I have accepted your invitation to be present on this occasion and to preside over your deliberations, not because I feel competent to instruct in the art of forestry, but in order that I might assure you of the sympathy of the Agricultural Department of the Government, and of my own high estimate of the value of your work. The question of forestry is one of the most intricate and difficult of all the agricultural problems which come before us.

That our forests are wasted by reckless extravagance and by uncontrollable conflagrations; that they are diminishing before the immense demands upon their products, we all know. Their importance as a climatic influence is conceded. The profit of tree-growing on wisely selected lands is acknowledged. But the methods by which our forests can be restored and preserved still puzzle the statesman and the cultivator alike. The nature of property in timber lands as adjusted for the State and the individual, in all those countries where the forests have attracted the special attention of the Government, particularly in the Old World, has so much of exclusiveness and reservation for the gratification of personal desires, that we can derive but little benefit from its study. The rights and powers and duties of State and Federal legislation, as regards our forests, require the most careful and ingenious consideration. We learn from the statistical returns the vast value of forest products to our commerce, to our domestic manufactures, to our internal trade. And by constant investigation we are ascertaining the best systems of tree-planting, and of cultivating specific wood crops in

favorable localities. You will pardon me, therefore, while I leave all these difficult, practical problems for the consideration of those who have brought here the results of long study and experience, and turn my attention to the value and

IMPORTANCE OF TREE CULTURE

as one of those arts by which man beautifies his abode, and manifests that taste which especially distinguishes him in the scale of animate being, and which he labors to gratify as soon as he has laid the hard and substantial foundations of State and Society. Men build first, and then plant. The primary work of erecting an empire, in which all the sturdy virtues are called into operation, and where courage fixes the national power, and wisdom establishes the national education, is not a field for the exercise of man's love of beauty. With the wars and the felling of the forests, and the log cabin and primitive school-house of a newly-settled country and a newly-founded empire, taste has but little to do. But when safety and property are made secure, and the highways are well worn, and the skill and strength of the cultivator have stripped the landscape of its natural beauty, and the foot of man has trampled out the graceful lines in which Nature always works, then there uprises man's demand for the beautiful, and he endeavors to restore by art what he was obliged to destroy for his subsistence. For whatever may be his outward circumstance, however hardening and depressing may be the incidents of his life, man has an instinctive love of beauty, which insists on being gratified. He knows that this is his distinguishing characteristic which separates him from the beasts that perish—an element of his mind and heart which leads him "from nature up to nature's God." To him the sunrise

means glory as well as daylight. The lone and lofty mountains elevate him to the contemplation of the Almighty power, even while they are "a shelter to the wild goats;" and the dewy pastures where the cattle graze and recline in the long shadows, lull him to the sweets of evening repose; the sparkling stream, "where the wild asses quench their thirst," will soothe and sing him to happiness and rest. The majestic and commanding tree, whose widespread branches shelter the panting animals from the blaze of the noon-tide sun, is a picture of power and strength and varying loveliness, which is to him a source of never-ending delight. When his eye surveys the swelling landscape, the emotions which belong to him as a child of the Creator of all, inspire and elevate him above the earth on which he treads, and distinguish him from that other order of animal existence, to which all scenery is alike, whose sensibilities no ugliness of nature or art offends, which no starry heavens delight, and no homely surroundings disturb; whose vision is blind both to the graces and deformities of even its own kind, which nibbles the daisy and the Juno grass with equal satisfaction, and whose soul "can not rejoice with those who rejoice, nor weep with those who weep." It is man alone who knows that "a thing of beauty is a joy forever."

TASTE IN TREE PLANTING.

It is in accordance with this sentiment that man has applied his skill and taste to the creation of all the charming scenery of groves and bowers and gardens, and to the enhancement of natural beauties themselves. Great gardens of antiquity, the monstrous towering pleasure grounds of Rome and Babylon, set an example which advancing civilization has not failed to follow. The cultivation of parks and

gardens constitutes one of the most interesting and important duties of modern art—a duty in the faithful performance of which England has set an admirable example. Leaving, in the early part of the eighteenth century, the formal and heavy style then in vogue, through the influence of some of her most illustrious poets—Addison at Bilton, and Pope at Twickenham—the English people revolutionized that whole system, and established that classical style of planting which has since been so much admired and imitated throughout the most refined parts of Europe.

This science of landscape gardening, which advanced so slowly in the Old World, and the proper system of constructing a city with light and water, and parks and shaded streets, which was so shamefully neglected until a comparatively recent period there, have until within a few years been entirely overlooked in our own country.

When more than seventy years ago, the city of Cincinnati was founded and the spot was chosen on which has been erected such a splendid array of public buildings, private dwellings, music halls, art galleries, churches and libraries, the application of art to the arrangement of gardens, parks, streets and highways, was hardly thought of. It was enough to clear the land and till it without converting it into a pleasing picture. It was all the early settlers in our country, could do to blaze a path through the forest without considering how best to crown and drain a highway, and it was not until after the Revolutionary war that the planting of trees and shrubs was made a necessary part of the laying out of gardens and grounds. I remember well the only garden in the State of Massachusetts, laid out early in this century, by an English gardener, and kept in good order until within a

dozen years, an object of delight to all who were allowed to enter its sacred inclosure and perambulate its well-visited walks. Such a scene as this was rare. Public-spirited citizens planted avenues of trees in highways, and were considered benefactors. Here and there a "door-yard" was ornamented with clumps of lilacs and syringas, but nowhere, that I am aware of, were there associations of enterprising and tasteful citizens organized for the purpose of adorning their towns and of providing for the health and comfort of themselves and of the community of which they formed a part. It remained for our own generation to unite for so important and laudable a purpose; and I congratulate this beautiful city that its natural comeliness has been enhanced and its suburbs made delightful by the combined efforts of those who believe that a love of beauty is a human attribute, and that we are under a sacred obligation to preserve that health which is given us for a high and useful purpose. The practical service of an association like this, as I have said, it is not necessary for me to discuss here, in the presence of those who know by experience how trees and shrubs should be grouped; who have learned that an evergreen should be transplanted in August, and that a little lime and muck applied to the roots when it is planted will give it a wonderful stimulus; who understand that a plantation of trees should be made to suit the building it is to surround and the landscape it is to occupy; that trees should not be planted too near a building, or too near each other; that the plants nearest the house should be low in stature and of a beautiful sort; that the shades of green should be properly blended, and the foliage selected accordingly; that trees should be protected by each other against those winds which are obnoxious to them;

that the Norway will not bear the rough gales from the sea, and that the Scotch pine rejoices in them; that trees and plants should not be "marshalled in regular order and at equal distances," like beaux and belles standing up for a quadrille or country dance; "that it is easier," as Downing says, "to make a tasteful park by planting new trees than by thinning out an old forest, and that nature herself is full of hints and suggestions," an observance of which constitutes the highest art of which man is capable in all that work of which earth, sea and sky form a part. With all this you have long been familiar, as the practicable part of a most agreeable labor; but for the trees themselves, these living monuments of nature's bounty, or of man's skill; those landmarks which we love to contemplate; those sentinels and armies along the landscape; those silent friends who somehow connect themselves with so many of the dearest scenes and events of our lives, and watch over the graves of the departed day and night, and through all the changing seasons—for the trees themselves let us say a word.

BEAUTIFUL TREES.

Now I know not how it is, but next to the face of an old friend returned from a long absence, the sight of a landscape or a tree, once familiar and connected with the early event of our lives, long lost and now bursting upon our vision, fills us with the tenderest emotion. Who that has suddenly come upon a flower by the wayside in a foreign land, which grew beside some well known path in the country of his home, has not been filled with sweet recollections and transported to that spot which will forever outshine the glory of all others?

How often have we turned our eyes unexpectedly upon a solitary tree keep-

ing watch and ward over a hillside pasture, and at once, as if the heavens had been opened, there came a vision as dear to us as the memory of that sacred band of the loved and lost! How often has a footpath, winding through the woods, opened suddenly upon us, and in a moment a long past, and perhaps long-forgotten hour of joy, shone around about us? The trees are indeed our companions, clothed by us with the most delightful associations, appealing and responding at once to our sense of beauty, and preserving, as it were, with tender care our choicest memories. Their story is all told and well told by the young Indian who, in the midst of the splendor of Paris, regretting the simple beauty of his native island, sprang forward at the unexpected sight of a banana tree in the Jardin des Plantes, embraced it while his eyes were bathed in tears, and exclaiming with a voice of joy, "Ah, tree of my country," seemed by a delightful illusion of sensibility to imagine himself for a moment transported to the land which gave him birth.

TREES OF HISTORY.

And then what a living and vital interest gathers about those trees which either by accident or by design have become monumental and representative. To know them well is to be intimate with the great deeds and the great men of history. Into what classic associations and deeds of daring, and raging and majestic conflicts by land and by sea, and profound mysteries and rites are we borne by the long and interesting story of the

OAK,

the tree which Pliny says held "*Honos apud Romanos perpetuus*"—the highest honor and repute with the Romans. We recall the solemn ceremonies of the Druids among the oak groves which stood strong and solemn on English

soil, during the morning twilight of English civilization. The scarred and sturdy tree near "White Lady's," in which the defeated monarch hid himself after his almost miraculous escape at the battle of Worcester—how like a guardian angel it stands in the history of royalty in England.

The contemporary of this tree, the wide-spreading oak of Hartford, spared from the primeval forests of America, as imposing and perhaps as ancient as the Pyramids, decayed and broken, concealing in its stout heart the Charter of Colonial Privileges—what a cherished and commanding figure it is in the record of freedom on this Continent! What a tale of valor and proud endeavor, and the heroism which triumphs where "the battle rages long and loud," could that pasture oak tell, which was borne from the fair hillside of Andover, Massachusetts, to become the sternpost of the immortal frigate Constitution?

THE ELM.

Call to mind now the story of the elm tree, and what a mingling of fable and fiction and interesting fact gathers around it. When Orpheus returned to earth from his melodious mission for Eurydice to the dominions of Pluto, and sat him down upon the verdant hill, it was the elm which first responded to his plaintive airs, and offered him his refreshing shade. It gave its name to the imperial city of Ulm, in Germany, and as Elmwood it designates the home of one of the most brilliant of modern American poets.

The elm planted by Henry IV., of France, in the Luxembourg gardens of Paris; the elm which Queen Elizabeth planted with her own hands at Chelsea, while waiting for the crown; the elms planted by Sir Francis Bacon in Gray's Inn walks, will not be forgotten so long as the memory of these remarkable

persons shall endure. And when we turn to the pages of Columella to learn the food most used for cattle in his day; and to the plays of Plautus to read with what twigs the Roman rogues were beaten; and to Evelyn to find out what timber made the best pipes, pumps, poles, ship-planks, beneath the water line; and to Galen and Pliny for a sovereign remedy for all the ills that flesh is heir to—we find that the elm reigns supreme, and is nutritive, corrective, medicinal, and imperishable, alike. To my mind there gather around this tree, also, historic associations at once romantic and tender. One hundred and fifty years ago, Captain John Lovewell, of Dunstable, Mass., with a little band of forty-six followers, started in early spring to drive Pangus and his tribe of Piquackets from the fertile lands which they occupied near Fryeburg, Maine, and from which they made their murderous assaults on the white settlements. The march was through pathless woods, and the expedition was one which required all the strength and courage which man can possibly command. Chaplain Frye, who accompanied the little army, was a young man, born in Andover, a graduate of Harvard, an exemplary youth, an accomplished scholar, and a devoted servant of Christ, the profession which he had chosen. On that beautiful May morning, when Captain Lovewell's men were ambushed by the Indian warriors of Pangus, on the shore of the Piquacket Pond, Chaplain Frye was one of the first to fall mortally wounded. When he left his home to join the expedition he planted an elm tree, in that early spring time, on a commanding eminence in his native town, in order, as he said, that he might be remembered should he fall in battle; and there it stands at this day, a lofty and noble monument to the devoted young Chaplain, putting on its green

robe each year on the anniversary of his death, and taking on its sad yellow hue in the autumn as if in mourning for him whose name it bears. And to every son and daughter of America, what a representative tree this is! Would you learn its significance? Go with me, then, to that ancient farmhouse, standing as it has stood for more than a century on that sunny slope which our fathers loved so well. That ancient dwelling, with its broad and open front, receiving on its ample brow the sweet south wind, and with its long sloping, defiant roof in the rear, closed firm against the invading north, the type of our ancestral architecture. It stands there still, as it has stood for generations, gathered around and supported by the massive chimney, which has so long sustained and warmed its hospitable heart. It is a bright June morning, and the sun is pouring in its flood of light upon the narrow entry, with its homespun carpet, and its steep and winding stairway, leading to the cheerful chambers, fragrant with sweet herbs and the sweeter air of heaven. From the sunken door-stone, trod into earth by the footsteps of many a hardy and honest generation, to the humble roadside, the green and grassy slope extends, telling its story of the joy and happiness which have gathered on its sod, and the sad tale also of sorrow and woe, how young and old have been borne out of that threshold, the child and the mother, the youth and the gray-haired father, amidst tears and sobs, down to the silence of the grave. And over all that scene the drooping elm looks down from its towering height, a witness of the domestic drama which has been acted there for years, and now the recognized type of those virtues which adorned our ancestors, those protests and assertions which made them great, the courage and defiance which made us free. Do you think there is

in all the world another tree like this American elm—the accepted ornament of our ancient rural homes, the grand and solitary sentinel, seen from afar, and telling this story of American life with which you are all so familiar, and of which you are all so proud? In this centennial period of our history, too, how this tree is woven into the heroic events of our annals! There are many incidents of that great time when our fathers rose up to assert their independence; the amazing stand at Lexington and Concord; the calm and steady courage at Bunker Hill; the solemn assembling of the Continental Congress; the generous devotion of the colonies to each other; the impressive patience of our own great revolutionary existence; but not one stands out in grander proportions than that scene at Cambridge, when Washington, in the calm majesty of his manly strength, assumed the command of a disorganized body of militia, named it the Continental army, and waged war against the most powerful Empire and the best disciplined troops in the world, and founded an independent nationality of freemen. The canopy beneath which this sublime event occurred has become immortal as the Washington Elm.

Who that is familiar with sacred history can fail to be reminded of the most stirring scenes in the career of God's chosen people, as he contemplates the

CEDAR,

the tree which crowned Lebanon, and was associated with the highest and most sacred art and architecture of the Jews. Never was tree dedicated to more illustrious architecture than when Solomon sent his four score thousand hewers into Lebanon and covered his Temple "with beams and boards of cedar." And the great king immortalized the tree when he selected it as the type of one of his no-

blest conceptions: "His countenance is as Lebanon, excellent as the cedars."

The temple of Diana, at Ephesus, which was 220 years in building, was constructed in its frame and boarding entirely of cedar. It is of this tree that Madame de Genlis says: "The rose will be in all countries the queen of flowers; but amongst trees the honor of being king belongs only to the ancient and majestic cedar." And so high a place has this tree secured in history, that "the few cedars still remaining on Mount Libanus are preserved with a religious strictness; and on the day of the transfiguration the Patriarch repairs in procession to them, and celebrates a festival called the feast of cedars."

TREES FOR INSPIRATION.

The intimate relations which trees bear to remarkable events and illustrious persons in history are almost innumerable, as you may infer from the few and striking illustrations to which I have called your attention. But these insensible though living companions of man do not stop here. They afford shelter and encouragement to his loftiest aspirations, and offer him protection and sympathy in those hours when his mind is filled with fervor and inspiration. Evelyn says: "Innumerable are the testimonies I might produce concerning the inspiring and sacred influence of groves from the ancient poets and historians. Here the noblest raptures have been conceived; and in the walks and shades of trees poets have composed verses which have animated men to glorious and heroic actions. Here orators have made their panegyrics, historians their grave relations, and here profound philosophers have loved to pass their lives in repose and contemplation." Would you find instances of this in your own day? Attend Hawthorne, then, in his wooded

walk at Concord, and learn the height which man's contemplation may reach amidst the whispering silence of the groves; join Thoreau in his forest seclusion, and know the inspiration which belongs to those solemn arches and to the leafy chapels which Nature prepares for her worshippers.

TREES FOR PROFIT.

And now, to him who, in a spirit of thrift and economy worthy of that people to whom as an American he belongs, would ask what is all this worth? let me say that the judicious selection and planting of trees may be made one of the most profitable branches of agriculture. Not for the beauty of the town alone, but for a thrifty use of remote and deserted acres also may the culture of trees be made a part of the business of life. A venerable clergyman in Massachusetts, the father of one of the most distinguished bankers in Boston, left at his death a large territory of woodland in the town which was blessed with his ministry for more than fifty years, and the profits on this land, which he had purchased at a very low rate at the beginning of his professional service, and which had been devoted to the growth of wood, principally pine, were greater than those realized on lands purchased and sold at the same periods in the most prosperous parts of Boston. "We have heard of a gentleman," says the author of *Practical Economy*, "whose lands were more extensive than fertile, whose practice was to plant fifteen hundred trees, on the birth of every daughter, upon his waste grounds, which were on an average worth one pound each on her becoming of age, thus enabling him to give her a fortune of £1,500 without any extraordinary economy on his part, the regular thinning of the trees at proper seasons, with barking, &c., paying off all the current expenses, be-

sides yielding him a small rent for the land." The profits derived from the growing of the pine, the locust, and the birch, all capable of flourishing greatly in light and somewhat worthless lands, have been in many instances very remarkable. Perhaps I would not recommend the cultivation of wood and timber as a universal branch of agriculture in these days when the *secret of the business lies in quick returns and devotion to local markets*; but I can find in the experience of those who have tried it an encouragement to those who, by the possession of large tracts of waste lands, may be compelled to follow their example in the business of tree-planting; and I read with profound interest the statement addressed to Governor Foster by an enterprising citizen of this State, with regard to his success in tree planting, and the groves of walnuts, maples and chestnuts which he is cultivating with pleasure and profit.

But more than all this, to the poetic and practical alike I would present the advantage of

ORNAMENTAL GARDENING,

both in our towns and around our rural homes, and its kindly effect upon the character of those who are subject to its influences. It is an old story, I know—this of the refinement and invigoration which attend pursuits upon the soil—but it is so true and so charming and, I am sorry to say, so little heeded, that it may, if properly told, be repeated a thousand times, and heard with pleasure and profit. The devotion of mankind in all ages to the land is a feature of social and civil history which can not be lost sight of by him who would trace the steps which man has taken in his progress and development. "To dress the garden and to keep it," was the first duty imposed on man when he entered upon his career on

earth, and "to dress the garden and to keep it" has been the desire of every man who, after long wanderings, has learned the point from whence all his impulses sprang. The poor man seeks the soil; the rich and the powerful believe in its refreshing influences and its repose. The industrious and frugal mechanics and labourers of our country all toil for a home and a spot which they can cultivate. The merchant of our day, like his ancestor in the early periods of our commercial history, when every man bought a farm, believe now in the delights of rural and suburban life. The law and the custom of our fathers was a land-holding clergy, established for life in their ministrations. From the farms and plantations of the colonies sprang brave and hardy and wise men, who gave us our freedom and our nationality.

I trust, therefore, that to this and to all other associations dedicated to the work of preserving and restoring our vast forest wealth, and of beautifying the earth upon which we tread, the people of this continent will extend a grateful heart and a helping hand.

In conclusion, let me urge upon this Association the most careful consideration of the topics before it—the use of forests; the conservation of forests; the influences, injurious and beneficial, of forests; the educational means by which we may become acquainted with Forestry work. To what extent can the land-owner enter profitably upon the business of tree-planting and forest culture? What legislation can the States best adopt for the increase and preservation of their forests? How shall the General Government provide for the planting of forests on its public lands? What is the precise extent of forest waste? What is the comparative value of various timber trees? How shall we secure wind-breaks on the prairies? By what chemical processes

can we preserve our timber used in building and fencing? What forest trees are best adapted to various localities?—these are questions which should be answered as definitely as possible. They are questions which the American people are anxious to have answered, and before which all discussion of foreign legislation, all consideration of the value of wood products, all statistics of trade, all study of land tenure, sink into insignificance. I trust the deliberations of this convention will point the way by which these problems can be solved, and by which our vast forest wealth can be economically preserved and profitably used.

SOUTHERN CALIFORNIA FLOWERS AND FRUITS.

The habitat of our favorite flowers is always a source of interest to the flower-lover, as well as to the botanist,—but a climate, which will by adoption give home and nurture to the more delicate forms of plant-life, and give results nearly, if not quite, equal to the finest conservatory conditions, is one deserving the attention of amateurs. Below the 35th parallel, these results in multitudes of instances are daily witnessed. This is true of the valleys at the foot of the Santa Ynez mountains, and the valleys for twenty or thirty miles below sheltered by the trend of the coast from cold north winds and the hot winds of the desert beyond the mountains; especially in the belt of country known as the Santa Barbara valley, a strip of land lying on the sea-coast, protected by the outlying islands from ocean winds and storms, rendering the harbor a naturally fine one, where steamers land at all seasons. Then, with the protection on the north and west before noted, a climatic condition may be found embracing the needs of temperate, semi-tropical and many tropical plants. The Stephanotis will climb amicably beside the

fragrant Honeysuckle. Tecoma Jasminoides will intermingle its lovely leaves and flowers, shielding in winter the leafless Wistaria and rejoicing in the spring over its clusters of royal bloom. Rhus Cotinus will produce its wreaths of delicate fringe in the shadow of the Magnolia and Pomegranate. Fuchsias will lift their tall heads from circles of Gladiolus and Tuberoses, none feeling an alien presence of a stunted growth. But over all these will reign a crowned queen—the Tea Rose, and royally she fills the throne. No garden is complete without a hundred varieties of Roses, and with intelligent culture nothing finer in results can be imagined, and all the year around. April and May are, perhaps, the most royal months of bloom, but no season is without Roses, and a morning hour is required for taking off the old Roses, making room for the on-coming bud and bloom. A circle of these around a Dicksonia antarctica in carefully combined colors, with a border of Diosma alba. is a thing of beauty. You cannot cure the once possessor of such a garden; the gravitation toward it is as certain as the laws of any other gravitation. And the Eastern florist, after a winter among such gardens, will pack many a sigh and regret away in the recesses of trunks and portmanteaus, and with infinite disgust will fight Jack Frost another winter, until discretion becomes the better part of valor, and sooner or later the dream of a sunny home and a semi-tropical garden becomes a reality. A commingling of fruits from all zones becomes also a possibility. Citrus fruits grow side by side with the Apple and Pear, Figs and Bananas with Plums and Peaches. Perhaps nothing financially is of more importance to this valley than the following list of fruits: Apricot, Prune, English Walnut, Raisin Grape, Bartlett Pears, Olives, Egg Plums and Nectarines. The Peach does well ordinarily,

having off-years, and some varieties a curled leaf. These fruits are mostly purchased by the cannery in large quantities, as also immense quantities of Tomatoes. I have seen Tomato vines seven years of age, but young plants produce better. Eternal vigilance is the price of orchards here, as to insects, as elsewhere. But with it the finest results are realized. Olive culture is becoming prominent, and in another letter will be described. Lima Beans have brought, with their present high prices, a bonanza to farmers in this valley, in many cases realizing from \$75 to \$125 per acre, this season; the land is of course very rich and of many descriptions. Fruits of the leading varieties are proved, from the cash-books of producers, to vary from \$200 to \$500 per acre, and some instances of Apricots run higher, at six and seven years of age. Most fruits, deciduous ones, bear at three years from planting in considerable quantities.

As a home, with its thoroughly equable climate, neither hot nor cold, nothing can be more desirable than this portion of Southern California.—Mrs. N. W. WINTER, in *American Gardener*.

HARDY RASPBERRIES.

The hardness of Raspberries is a somewhat mooted question, but so much seems well established, that the amount of cold which the canes can withstand depends mainly upon the degree of ripeness of the wood. While a fully ripened cane may survive almost any possible degree of cold, an immature one may be killed by a few degrees below freezing point. Many varieties which we are in the habit of calling "perfectly hardy" were killed last winter by the unusual earliness—before the plants had ripened their wood—not by the intensity of cold. "Turner," "Brandywine," and even wild kinds, were killed down to

within a few inches of the ground, while the same degree of cold, if it had occurred a few weeks later, would not have injured them in the least.—*American Garden.*

CELERY CULTURE AT KALAMAZOO.

Celery culture is becoming a local industry of no small importance at Kalamazoo, the marsh land in the vicinity having been found to be admirably adapted to its growth. From the *Kalamazoo Gazette* we extract the following account of the mode of culture as there practiced :

“Not alone from the increased area will there be a larger quantity of celery in after years, but there is being more raised from the same land each year, as the gardeners become proficient in raising it, for it is comparatively a new industry for Kalamazoo. Instead of rows being five and six feet apart, as the books advise, they are raising it successfully three feet apart, and instead of five and six inches apart in the rows, it is raised half that distance, and as close as one's fingers for the last or winter crop, so double the crop is raised from the same land.

“Gardeners who have read books on celery raising say Kalamazoo men can teach the authors their A. B. C's in that business. Peter Henderson, the great New York gardener, advises to store it for winter by packing in shallow trenches, covering with lumber, marsh hay, etc. J. W. Wilson estimates that it would cost him \$300 for lumber to secure his crop in that manner. The Kalamazoo way is to dig about two feet below the surface; then board up about two feet above; then on a frame six feet high, 12 foot boards meet and slant down the sides, with windows, all of which is banked and covered with manure. They are usually built 24 feet wide, and 40, 75 or 100 feet long. If

the building is 50 feet long it will hold 50,000 celery; 100 feet long, 100,000 etc. It is built on upland, if possible, for marsh is too damp and cold. When first put in the houses it is green, but bleaches in a few weeks. They pack as close as it will stand, putting boards every few feet to prevent heating and rotting. People can keep their own celery as well as apples or potatoes, by putting some marsh soil in the bottom of a barrel, packing the celery, root down, not sideways, and keeping where it will not freeze. It is desirable to keep it growing. The sprouts may run over the top of the barrel, but will be no disadvantage. Put in green, and it will bleach, and you can wash, trim, as you wish for the table. One of the most annoying jobs in the business is the tying in half-dozen bunches. The long-felt want is for some Yankee to invent a self-binder.”

CURRENTS.

If there is any living thing that possesses the Christian virtue of returning good for evil in a higher degree than the Currant-bush, we should like to know its name. Neglected and despised in an out-of-the-way corner, half-smothered under a tumbled-down garden-wall, or on a rubbish heap where nothing else could grow, a few Currant-bushes are frequently tolerated, and never thought of until the scorching July sun makes our system long for cooling and refreshing fruit acids. It is then that we call to mind our patient Currant-bushes, and become eager to gather—without blushing—their bright, glossy clusters, as interest for the worthless spot we have suffered them to occupy. Perhaps the advent of the Currant-worm is only a blessing in disguise, sent to teach us more charity and wisdom, and to compel us to give better treatment to our much misused bushes.

Try it for once to give the Currants a respectable place in the garden, and cultivate them like any other shrub or plant which you expect to bear fruit, and you will soon become convinced that "it pays" to give fair play even to a Currant-bush.—*American Garden.*

A CHANCE FOR BOYS.

Boys on farms want spending money, and are often sorely troubled to obtain it. Their best chance appears to be in cultivating some crop at home that requires small capital and a small amount of land for its production. The small fruits are excellent in these respects. They can generally be disposed of to greater advantage in country villages, or even among neighboring farmers, than in large cities, as there is no expense for packages, transportation, or for selling. The country boy can take his own fruit to his customers, sell it by measure, and pocket the proceeds. Probably the most profitable fruits to raise are strawberries and grapes, although blackberries and raspberries sell well in their season. Strawberries offer many advantages over other small fruits. It costs little to get a start with them. A hundred plants set out in a rich place after the bearing season will produce a thousand plants by fall. They will produce a good crop the year after they are transplanted. No implements are required for their cultivation except those found on every farm.

It takes but a small patch of land to produce 50 quarts of strawberries per day during the bearing season, and there are few places where they will not bring at least six cents a quart. By having late and early varieties, the strawberry season may be extended several weeks. There are few persons who will deny themselves strawberries. Grapes have some advantages over

strawberries. They are not as perishable, and may be transported long distances without injury. Mature grape vines are almost sure to produce a crop every year. There is little trouble in keeping grapes till Thanksgiving and Christmas, when there is always a demand for them at good prices. With grapes and strawberries to dispose of, any farmer boy can keep himself supplied with money and have some to lay up for a rainy day.—*Fruit-Grower.*

DO BEES INJURE GRAPES?

The above question has so often been asked, and so often been answered in the affirmative by persons who never took the pains to ascertain the truth of their assertions, that I now venture a few words.

I wish to relate a series of experiments made at the residence of one of the Western Illinois Bee Keepers' Society.

This gentleman was showing to a friend a bunch of grapes which, having been purposely placed in one of his hives of bees, had been left untouched, though it had remained there several days.

"Well," said the friend, "it might be that in a hive they don't work on the grapes; but, out-doors, where they generally get their honey, they will certainly cut the berries open."

"We can try," said the bee keeper.

All his grapes were being gathered that day, and as bees were thick among the vines just then, everything was suitable for the experiment. The two friends, therefore, took all the damaged berries from quite a number of bunches in the same spot and left them ungathered. A few hours after all the crop of grapes had been gathered except these particular bunches, they again went to the vineyard and found the grapes as they had left them. The bees were almost all gone.

"I do not think that only a few like this could do much harm," said the friend, "but you can't make me believe that if a large number of hungry bees had tried to get the juice of a bunch of grapes they could not do it."

Just as they were coming near the house, they noticed that a number of bees, having gone home a while before with a load of grape juice, were greedily coming back to the place where barrels of grapes had been left a few minutes, before being taken to the cellar.

"Now," said the friend, "is our chance."

They carefully took away everything in which the bees could find grape juice, picked up all the bruised berries scattered here and there, and left nothing to eat for the bees but one bunch of perfectly whole grapes.

The bees at once clustered upon it, and so many were there, that they hid the bunch completely. The friend looked at them with a smile of triumph. After a while they examined the bunch again; it was as shiny as a freshly-blackened stove. The bees had rubbed off all the bloom, but not one berry was opened.

The bee keeper then, with a needle, made a small puncture in one of the berries, the bunch was left in the same place, and when examined on the following day it was found that the bees had drunk the juice as far as their tongues could go, but they had not torn the skin open any further.

I could further say that the bee keepers' society of Bordeaux (France), thinking that bee culture in that locality might interfere with the wine interests, made continued experiments the whole summer long, with all possible kinds of fruit, with results like the above. Let me add that the juice of grapes there is much sweeter, and consequently more tempting for bees than it

is here.—*American Wine and Grape Grower.*

THE BIDWELL STRAWBERRY.

The American Agriculturist says: "After a careful inspection of the Bidwell strawberry, on various soils, and in different conditions, we feel like congratulating those who have received the plants as premiums. The productiveness of the plant is simply wonderful, and that is one great point in the strawberry, while it runs of unusually uniform size. With our present knowledge, if asked to name a strawberry which we would prefer to the Bidwell to send out as premiums, we could not do it, as we do not know of any one berry that we can so confidently recommend for general cultivation. The leading strawberry of the last two years has been the "Sharpless," and an admirable fruit it has proved to be. The markets are an excellent test of the value of a fruit, and the Sharpless has appeared in great abundance. As compared to the Bidwell, we should say that it did not equal that in productiveness, and was not so firm for shipping—still the Sharpless will long hold a prominent place in the list of first-class strawberries." *Purdy's Fruit Recorder* says: "We obtained from three different parties in Michigan, all of whom had their plants direct from Bidwell, fifteen thousand plants. Then to make sure that our plants were the same as Mr. Roe's, (who is properly and carefully cautioning the public against spurious plants), a friend ordered from him a few plants, which were set on our grounds. The three lots from Michigan and those from Mr. Roe have all proved the same, so we do not question the purity and genuineness of our plants, and further the shape of the fruit is of that peculiar cast shown in the drawing given by us, which was copied from the *American Agriculturist*."

describing this sort in an article written by Mr. Roe. The fruit is of the meaty, luscious character of the Sharpless, but more sprightly, and for us better, in sugar and cream; and judging from these late spring set plants, the large size and uniformity of the berries, the fine clusters show to us it is a variety of a high order of excellence. Right alongside of our plantation of this sort we have a bed of Sharpless, set two weeks earlier, the first spring, and having a much better start. Yet the show of fruit in the Bidweil is as fine as those on the Sharpless.

THE PANSY.

We wish all the lovers of flowers among our readers to understand that no flower we cultivate in our gardens is more worthy of attention than the Pansy. The Pansy has long been a favorite with the florists of England, but the English varieties, though very large and perfect flowers, are of a loose, straggling habit of growth, and under ordinary culture seem unsuited to our warm and dry seasons. The Germans have produced varieties much better suited to our wants. The flowers give a great variety of colors, mottled, striped, crimson, and other colors, bordered with white, looking so nearly like the fancy geraniums that a single flower would be taken for a pelargonium, sky-blue, and almost black. The plants have a very compact habit, and flower very freely, from fifty to a hundred blossoms being often seen on a single plant at one time. The flowers are borne on a short, strong stem, and stand erect, above the leaves, producing a most charming effect.

The German varieties are very hardy, and if seed be sown in a hot-bed or cold frame in April, or even in the open ground in May, a good show of flowers will be had during the latter part of summer and until they are covered with

snow. They are the first flowers seen in the spring, and even a mild spell in mid-winter is improved to produce a few blossoms. From early spring until the middle of June every plant is almost a bouquet of flowers. If the weather is dry and hot after this time, and the bed exposed, the flowers after this will be small until the cool nights, and dews, and rains of autumn. From this, until heavy frost and snow, the pansy bed will not be surpassed by any in the garden.

Late in the spring an examination of the bed will show many young plants produced from the fallen seeds of the past summer. These can be transplanted to a new bed, and if they produce superior flowers this course may be continued; but if the flowers exhibit deterioration in size, form or coloring, obtain fresh imported seed, and start a new bed. We cultivate flowers for the pleasure they afford us, and there can be no pleasure to any person of taste or intelligence in half doing any work, or in producing inferior flowers. All will therefore like to learn how to grow the pansy well. Select a place for the bed, if possible, where the soil is cool and shaded a little from the noon-day sun,—the north side of a fence, or building, or where trees will afford a shade, at noon, though not too much, or the plants will become "drawn," that is long, slender, and weak. Give a heavy dressing of cow manure and dig the soil very deep—eighteen inches at least.

Make it fine and mellow, and do this work in a dry time, when the soil can be well pulverized. When prepared, set out the plants, and water until they are established. In such a bed you will have abundance of flowers during the whole season, though in very dry weather it is best to give a good watering—a thorough soaking—occasionally.

THE CARDINAL FLOWER.

(Lobelia cardinalis.)

This beautiful native we find advertised in some seed catalogues, among the novelties of the season. This is a move in the right direction, and this brilliant and gorgeous flower which has been growing wild in our meadows and along our brooks ever since man first set foot on our soil, and no one knows how many millions of years before, is probably a novelty to many who have lived a life-time within a short walk of its native habitat. We search the wide world over for "novelties," while here they are growing around us in splendor and brilliancy. Nothing more dazzlingly beautiful can be imagined than a bed of Cardinal Flowers in autumn, when in full bloom, grouped in a shady spot on a smooth, velvety lawn with a group of Cannas or Rhododendron as a back-ground.

THE CARNATION AND PICOTEE.

PROPAGATION BY LAYERS.

The proper season for layering is June or July. When the time arrives for performing the operation, procure a quantity of small hooked pegs; then take a trowel and remove the earth to the depth of an inch or so directly under the shoot to be layered. Take the shoot in one hand, and with the finger and thumb of the other hand remove the leaves from the body of the shoot, and shorten those at the top an inch or so. With a thin, sharp knife, cut through the strongest joint on the body of the shoot, cutting upward until within a short distance of the next joint, and if the joints are close it may be necessary to cut through more than one. The slit may be from one to two inches in length. Then press the centre of the shoot down to the earth, being at the same time careful to keep the slit open and the top in an upright position; take one of the pegs and

secure it in this situation. A little clean sand placed around the cut will aid in the formation of roots. In September or October the shoots thus layered will be rooted sufficiently to separate from the parent plant, when they may be cut away and removed to winter quarters.

PROPAGATION BY PIPINGS.

This is a simple operation, yet requiring great care and attention to insure success. Prepare a small bed in some partially shaded part of the garden, composed of the same materials as that recommended for the seed bed, but with a larger portion of sand. Select the strongest short-jointed shoots, and cut them off immediately below the second or third joint from the top of the shoot.

As fast as prepared in this manner, place them in a pan of rain water to prevent flagging. Plant these shoots, or pipings, as they are called, as soon as a sufficient quantity is prepared in the bed, an inch and a half asunder; water slightly through a fine rose, and after the leaves are thoroughly dry, cover with a hand glass and shade from the mid-day sun. Pipings may be prepared in July or August, and if closely covered with a hand or bell glass, and shaded from the sun, will scarcely require any water until rooted. If they should need water, it will be found, in most cases, sufficient to pour a little on the outside of the glass. This will moisten the earth inside, and prevent the cuttings of pipings from drying.

POT CULTURE FOR EARLY FLOWERING.

In September or October, provide a sufficient number of pots, six or eight inches in diameter at the top. Make a compost of two parts turfy loam, one part of thoroughly rotten hot-bed manure, and one part of clean lake or river sand; place on the bottom of the pots a layer of broken crocks, and on

this place a small quantity of the prepared compost. Take the plant in one hand by gathering the leaves together so that the roots may be all clear; hold the plant in the pot in such a way that the roots may lie lightly on the mould; then with a trowel in the other hand commence filling up the pot with the compost all around the roots of the plant. When this is accomplished, release your hold of the plant and take the pot in both hands, holding on by the rim, and give it a few sharp raps on some solid substance. This will settle the earth better than by pressing it with the hand. Give a slight watering from a water can with a fine rose, and the operation of potting is complete. In November place a hot-bed frame in a sunny and sheltered situation, and place on the inside of this six or eight inches of tan bark; plunge the pots in this up to the rims, put on the glasses, water moderately, and during mild weather give plenty of air. In very severe weather cover the frame with straw or mats to protect the plants from frosts, but in mild weather the covering must be removed, otherwise the plants will become weak. In spring the plants may be removed to the garden or other suitable quarters.

THE PINK

is hardier than either the Carnation or Picotee, and will thrive in any good garden soil with even ordinary care, but to grow and flower it in perfection, beds similar in form to those recommended for the Carnation must be prepared for them. The component parts of these beds should be three-quarters good loamy turf and one-quarter two years old well rotted cow dung. These materials must be trenched to the depth of eighteen inches or two feet deep, well mixed, and the surface raked smooth. Introduce the plants to the beds thus prepared, in

September, and plant them in the same manner as Carnations. In the following spring the plants will begin to show their flower stems. The largest and strongest of the plants will throw up numerous stems; these should be nearly all cut away at least a month before their time of bloom, leaving only the strongest stems, and removing from them the weakest buds. No plant, however strong, should be permitted to mature more than ten or twelve good full flowers.

TREE PLANTING.

The following extracts from an appeal to the people of Manitoba by Mr. H. P. Bonney, now of Hamilton, Ont., are well worthy of attention by the farmers of Ontario. We are fast making our country a treeless prairie, and already need to take up the subject of tree-planting in good earnest:

It is now over two years since I first devoted my attention to the subject of tree planting, and the more I learn of it the more I become convinced of the necessity of some means being taken to get our farmers to take a like interest in arboriculture, and I am sure that as soon as we all lay the matter to heart it will not be long before quite a change for the better in the appearance and climate of our country will take place, and our prairies will be more beautiful both to the eye and feelings than they are at present. Our timber, in fact all the timber of the North American continent, is rapidly being used up. It is not 400 years yet since Columbus first landed at San Salvador; yet in that comparatively short space of time the forests of America have dwindled down to one-fourth their original size, and as our population increases the consumption becomes more rapid, and unless we set to work energetically, and at once, to plant trees, it will not be many years

before our forests will be things of the past, and how shall we manage then? We want shelter from such storms as the one that caused such loss of life in the Northwestern States in January, 1873. (Remember that storm passed over Manitoba, too). We want to see our grain stand up instead of lying down, as it only too often does now-a-days. We want to get rid of our hail storms and check the progress of the insatiable "hopper," and tree planting is the only remedy for all these evils.

To surround ourselves with trees will make us happier, richer and better—for man generally feels a better man when living in the midst of beauty than he does when living in a dull, monotonous plain.

BOOK NOTICES.

The *Agricultural Review* and Journal of the American Agricultural Association for May, contains an exhaustive article on the Cattle Industries of the United States, by Hon. J. B. Grinnell of Iowa, giving a complete history of cattle breeding, the development of the industry, and a detailed description of cattle raising on the Plains in the Western States and Territories; showing the lands best adapted to the business, and describing the methods of herdsmen owning from 500 to 20,000 head each.

The number also contains articles by Hon. Cassius M. Clay, Dr. Peter Collier, Prof. J. P. Stelle, Hon. T. Bowick of England, Col. Robert W. Scott of Kentucky, Dr. E. Lewis Sturtevant, and other practical and scientific writers.

The January number and Supplement contained the proceedings in full of the Great National Agricultural convention recently held in New York, including addresses and papers by Hon. J. F. Kinney, Francis D. Moulton, Dr. John A. Warder, Rear-Admiral Amen, Gen. H. E. Tremain, Hon. N. T.

Sprague, X. A. Willard, Seth Greene, and other leading writers and speakers.

The thirteen papers on Ensilage, giving full directions for growing the crop, building silos, and preserving the fodder, by the ablest practical experimenters in the United States, comprising the fullest, most reliable and most valuable information on this subject yet published.

The *Agricultural Review* is published quarterly with supplements, and is pronounced by the highest authorities the most valuable publication of its class issued.

Terms.—\$3.00 per year. Edited and Published by Jos. H. Reall, Secretary of the American Agricultural Association, 26 University Place, New York.

The American Exposition of Products and Manufactures, being inaugurated by the Association, gives unmeasurable value to the *Agricultural Review*.

THE AMERICAN ENCYCLOPEDIA OF AGRICULTURE.

This work, as the name indicates, is, in point of fact, an Encyclopædia of Agricultural Knowledge. It is a truthful record of agricultural progress, and not of methods that have gone out of date. It is a handsomely bound volume of 1,100 pages, of which 38 pages are devoted exclusively to the household department. The important subjects of economic entomology, forestry, agricultural geology, the grasses, farm laws, manures, ornithology, horticulture and veterinary science, and in fact all other subjects of special interest in a volume of this kind, are concisely considered. A needed work has been supplied, and it is one every progressive farmer should have in his library. It is a library of itself. Edited by the Hon. Jonathan Periam, and published by Rand, McNally & Co., Chicago.

WITHERED FLOWERS.

'Twas on a bitter winter's day,
I saw a strange, pathetic sight;
The streets were gloomy, cold, and gray,
The air with falling snow was white.

A little ragged beggar child
Went running through the cold and storm;
He looked as if he never smiled,
As if he never had been warm.

Sudden, he spied beneath his feet
A faded button-hole bouquet;
Trampled and wet with rain and sleet,
Withered and worthless, there it lay.

He bounded, seized it with delight,
Stood still and shook it free from snow,
Into his coat he pinned it tight,—
His eyes lit up with sudden glow.

He sauntered on, all pleased and proud,
His face transformed in every line;
And lingered that the hurrying crowd
Might chance to see that he was fine.

The man who threw the flowers away
Never one-half such pleasure had;
The flowers' best work was done that day
In cheering up that beggar lad.

Ah, me! too often we forget,
Happy in these good homes of ours,
How many in this world are yet
Glad even of the withered flowers!

St. Nicholas.

THE SHARPLESS STRAWBERRY.—I will give my experience. Have only raised one crop of berries, the plants being set a year ago last spring. They were extra strong, vigorous plants, were set in common clay garden soil. The berries were the largest I ever saw. They astonished every one that saw them. I weighed several that weighed an ounce each. Their shape is irregular, but their flavor is delicious, as all will testify who tasted them. They stand up well from the ground as any berry possibly could, as heavily loaded with fruit as my plants were. I filled a pint cup rounding full, one day, from some I had been picking, to let my neighbours, who were present, see how many berries it would take to do it; poured them out and counted them. There were thirteen berries. I may say with truth, there were no small berries on the vines, the smallest being about like a medium sized Wilson's Albany Seedling. I have had considerable experience in the culture of strawberries, but never saw anything to equal the Sharpless.—MRS. J. McRAE, in *Prairie Farmer*.

MOUNTAIN MAHOGANY.

A remarkable wood, known as "mountain mahogany," is said to grow in Nevada. A local paper thus describes it: "The trees do not grow large. A tree with a trunk a foot in diameter is much above the average. When dry the wood is about as hard as box-wood, and being of very fine grain might, no doubt, be used for the same purposes. It is of a rich red color and very heavy. When well seasoned it would be a fine material for the wood-carver. In the early days it was used for making boxes for shafting, and in a few instances for shoes and dies in a quartz battery. Used as a fuel it creates an intense heat. It burns with a blaze as long as ordinary wood would last, and is then found (almost unchanged in form) converted to a charcoal that lasts about twice as long as ordinary wood. For fuel it sells much higher than any kind of wood; indeed a cord of it always brings the same price as a ton of coal. The only objection to it is that it creates such an intense heat as to burn out stoves more rapidly than any kind of coal, however bad."—*Journal of Science*.

JAMES VICK.

As we go to press the telegraph brings the sad intelligence that James Vick, the well known and everywhere esteemed horticulturist, is dead. American horticulture has lost a most devoted and enthusiastic promoter; and every lover of flowers in all this broad continent will feel that a much-honored friend and counsellor has fallen.