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WILLIAMS' BON CHRETIEN, OR BARTLETT.
THE NEW ENGLAND FRUIT BOOK.

BEING

A DESCRIPTIVE CATALOGUE

OF THE MOST VALUABLE VARIETIES OF THE

PEAR, APPLE, PEACH, PLUM, AND CHERRY,

FOR NEW ENGLAND CULTURE.

BY ROBERT MANNING.

TO WHICH IS ADDED OTHER VARIETIES;

ALSO THE

GRAPE, QUINCE, GOOSEBERRY, CURRANT, AND STRAWBERRY;

WITH OUTLINES OF

MANY OF THE FINEST PEARS,

DRAWN FROM NATURE;

WITH DIRECTIONS FOR PRUNING, GRAFTING, BUDDING,

AND GENERAL MODES OF CULTURE.

SECOND EDITION, ENLARGED.

BY JOHN M. IVES.

PUBLISHED BY W. & S. B. IVES, SALEM, MASS.
B. B. MUSSEY, BOSTON.

AND FOR SALE AT THE VARIOUS BOOKSTORES AND SEED ESTABLISHMENTS IN NEW ENGLAND.

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By John M. Ives,

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Massachusetts.
PREFACE.

In publishing a new edition of "Manning's Book of Fruits," it is thought advisable to add outline drawings of some of the best varieties of Pears found in his descriptive catalogue, (most of which we have grown ourselves,) together with a few others of recent introduction. The compiler would briefly say, that in his remarks, drawn from various sources, upon the cultivation of fruit, together with his own limited experience, his object is to render some service to the cultivator, by collecting and condensing from various sources, such directions as seemed of most importance in practice. Some of the varieties of pears, which from farther experience were found not desirable, are omitted in this edition. We have not inserted drawings of apples in the compilation, from the difficulty of identifying this fruit by single specimens. Our object is to bring together the experience of practical cultivators in a condensed form, and at a low price.
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ROOT—SAP, &c.

The root being the commencement and foundation of trees, its office is to collect and apply the food which forms and determines its growth; hence, if the roots grow luxuriantly, the branches will also, and the reverse. It often happens, says Miller, that the roots of trees are buried too deep in the ground, which, in a cold or moist soil, is one of the greatest disadvantages that can attend fruits; for the sap in the branches being, by the warmth of the air, put strongly into motion early in the spring, is exhausted in nourishing the blossoms, and a part of it is perspired through the wood branches, so that its strength is lost before the warmth can reach the shoots, to put them into an equal motion in search of fresh nourishment, to supply the expenses of the branches, for want of which the branches fall off and decay. Most trees will thrive if they have two feet in depth of good earth, especially when their roots spread near the surface; for whether that which supplies food for the tree be a black, yellow,
or brown loam, it can only be furnished within a certain depth from the surface, or within the influence of the sun and air. Large roots, running deep and spreading wide, may be necessary to produce large timber trees, but not fruit trees, for these are more prolific when their roots are much divided or fibrous, and kept near the surface of the soil.

The following remarks upon the theory of the motion of the sap in trees is from the pen of one of our best writers upon horticulture:—"The first motion of the sap in the spring takes place in the branches, and lastly in the roots; the buds, in consequence of the increasing temperature of the air, first swell and attract the sap in their vicinity: this fluid, having lain dormant, or nearly so throughout the preceding winter, becomes gradually expanded by the influence of the solar rays, and supplies the buds with nourishment from the parts immediately below them; the vessels which yield this supply becoming, in consequence, exhausted, are quickly filled with fluid from the parts below them, and in this manner the motion continues until it reaches the roots, the grand reservoir of the sap, by which time the solar heat having penetrated the soil, the roots begin to feel its enlivened influence. The whole body of sap then begins to move upwards, and as soon as the quantity propelled is more than sufficient to distend all the vessels in the stem and the branches, the buds begin to elongate and unfold. From this time, the fluid becoming more expanded every hour, its ascent is simultaneously
increased in force and velocity; the vessels in the branches, being filled to repletion, the buds quickly open, and shoots and leaves rapidly protrude; the leaves attract the sap as soon as it reaches their vicinity, and, by one of the most wonderful processes that can be conceived, the result of exquisite organization, prepare it for the nourishment of the plant. It then returns downward, _betwixt the bark and alburnum_, and in its descent is distributed _laterally_ to every part of the plant, until it reaches (finally) the extremities of the roots."

**TRANSPLANTING.**

In the removal of trees, care is necessary to obtain as much of the roots as possible, and in resetting, that none are doubled back and distorted. Cutting off _smoothly_ the end of each root that may be broken, or cut by the spade, is indispensable, and all fibrous roots that are injured should also be cut _close_ to the root upon which they are attached; the root or stem should be pressed close down upon the soil, so as to place the roots in a horizontal direction, and all of them drawn out straight like a fan, or rays verging from a centre to a semicircle, and the soil thrown evenly over. Trees should not be shaken, or lifted up and down, after the earth is placed upon their roots, as is too generally practised; for when a tree is thus raised up, the smaller roots will be drawn out of their places, and when the stem is thrust down again, the roots being too
weak to force their way back into the soil, will be doubled up, which often causes knobs, and throws out suckers; neither will the earth require to be trodden down hard, but gently; or if the soil be that of a dry or loose loamy nature, setting in puddle (which is to water as you set it) is an excellent process. Copious watering after a tree is set, is often very prejudicial, as it will frequently wash away the soil, and leave open spaces around the roots. Fruit trees should rarely be placed deeper in the ground than they originally stood in the nursery. In removing large trees, it is a good practice to cut off many of the large roots some distance from the tree a year previous to their removal; for, wherever the roots are thus cut through, the new fibres which are emitted (provided the tree is in health) in short tufts, are far more easily taken out of the ground without injury, than if they were longer and more scattered among the soil.

Autumnal planting is often preferred in light sandy soils, and spring planting on soils of a strong and wet nature. From our own experience in setting fruit trees for some years past, we are inclined to prefer the spring, provided it can be done early, particularly for stone fruit. Damp, but not rainy weather should be preferred, particularly in dry soils; nothing is more injurious to any tree than to be taken up, even if immediately afterwards planted, during frosty or dry windy weather. Not only do the roots, under such circumstances, sustain injury during the time they are thus exposed, but
the dry parching atmosphere, which must, in such cases, surround the whole surface of the tree, greatly exhausts it, while it is prevented from absorbing a fresh supply of food from the soil, in consequence of its roots being more or less shortened or diminished by the operation. If trees are found to grow too luxuriantly, and to form only wood for years, even after they are of sufficient size and age for the production of fruit, the earth should be removed just before the frost sets in, and a proportion of the deepest growing roots cut off; thus checking its luxuriousness, and rendering it more fruitful.

The following excellent "Hints for Transplanting" are from the Nursery Catalogue of A. J. Downing, of Newburgh:

"1. Many persons plant a tree as they would a post! The novice in planting must consider that a tree is a living, nicely organized production, as certainly affected by good treatment as an animal. Many an orchard of trees, rudely thrust into the ground, struggles half a dozen years against the adverse condition, before it recovers.

"2. In planting an orchard, let the ground be made mellow by repeated ploughing. For a tree of moderate size, the hole should be dug three feet in diameter, and twelve to twenty inches deep. Turn over the soil several times, and, if not rich, mix thoroughly with it some compost, or well-rotted manure. In every instance the hole must be large enough to admit all the roots easily without bending. Shorten and pare smoothly with a knife, any
bruised or broken roots. Hold the tree upright, while another person, making the earth fine, gradually distributes it among the roots. Shake the tree gently while this filling is going on. The main secret lies in carefully filling in the mould, so that every root may meet the soil; and, to secure this, let the operator, with his hand, spread out the small roots, and fill in the earth nicely around every one. Nine tenths of the deaths by transplanting arise from the hollows left among the roots of trees by a rapid and careless mode of shovelling the earth among the roots.

"3. When the hole is two thirds filled, pour in a pail or two of water. This will settle the soil, and fill up any little vacuities that may remain. Wait until the water has sunk away, and then fill up the hole, pressing the earth moderately around the trees with the foot. The moist earth, being covered by the loose surface soil, will retain its humidity for a long time. Indeed, we rarely find it necessary to water again after planting in this way, and a little muck or litter placed around the tree, upon the newly moved soil, will render it quite unnecessary. Frequent surface watering is highly injurious, as it causes the top of the soil to bake so hard as to prevent the access of air and light, both of which, in a certain degree, are absolutely necessary.

"4. Avoid the prevalent error (so common and so fatal in this country) of planting your trees too deep. They should not be planted more than an inch deeper than they stood before. If they are
likely to be thrown out by the frost of the first winter, heap a little mound about the stem, to be removed again in the spring.

"5. If your soil is positively bad, remove it from the holes, and substitute a cart-load or two of good garden mould. Do not forget that plants must have food. Five times the common growth may be realized by preparing holes six feet in diameter and twice the usual depth, enriching and improving the soil by the plentiful addition of good compost. Young trees cannot be expected to thrive well in sod land. When a young orchard must be kept in grass, a circle should be kept dug around each tree, we think to the extent or spread of the branches. But cultivation of the land will cause the trees to advance more rapidly in five years than they will in ten, when it is allowed to remain in grass."

PRUNING.

In this department of culture no explicit directions will indiscriminately apply to each variety of fruit trees. Peaches, cherries, and plums, are always in the greatest vigor when they are the least maimed by the knife; for when these trees have large amputations, they are very subject to gum and decay; so that it is certainly the most prudent method, with stone fruit particularly, carefully to rub off all useless buds, when they appear. Fruit trees in this latitude should not be pruned in the fall or
winter months, as they are at those times exceedingly apt to crack or canker. The best season for this work is at, or soon after, the swelling of the buds or expanding of the leaves, the sap being then in vigorous motion, the wounds soon heal over. Every limb taken off should be cut close to the main stem; and provided the limb is large, a composition of tar and red ochre, or grafting wax, should be spread upon the end to keep out air and moisture. From the strong growth of fruit trees in our country, and the dryness of its atmosphere, severe pruning is less necessary here than in England, from whence we have derived many of our instructions. Excessive pruning with us is apt to generate suckers, or what is termed water shoots, from the limbs. Judicious pruning, however, will promote health and early fruitfulness. Trees, even of the same species, differing as they do in form of growth, require very different treatment. Coxe, of New Jersey, recommends the practice of forming the heads of trees in the nursery the year before they are removed. Every limb which crosses another should be taken off; the external branches, particularly in apple and pear trees, should be everywhere rendered thin and pervious to the sun. The great principle to be attended to in pruning apple trees, is cutting out all dead, diseased, or useless branches, at their base, and thinning those that are healthy and vigorous, so that the sun and air may penetrate to, (not through) every part of the tree. Few people have confidence enough to do this effectually; but they may be as-
DISEASES—INJURIOUS INSECTS, ETC.

sured that they would have more and better fruit were they to retain one half the number of branches which in general at present exist in most orchards. In speaking as we have of the difficulty there is in giving explicit directions upon pruning, the following remarks of "Salisbury" are very judicious.

"Pruning trees is a work respecting which every gardener pretends to have a competent knowledge, and those who have written on the subject have endeavored to lay down rules for the operation; but I confess, that although I have had considerable experience, for many years, and know the theory on which rules for it may be formed, yet I am incapable of communicating my ideas on the subject, as it wholly depends on the state of the trees; and it would be as absurd for me to tell any one what branches he should cut out, and what leave, by description, as it would be for a physician to prescribe for a patient who labors under a severe and acute disease, on the mere report of the nurse, without a personal inspection of his patient. I must be pardoned, therefore, if I say, that nothing but experience, founded on long observation as to the growth of trees, will ever enable a person to discover the proper art of pruning."

The injuries and diseases to which fruit trees are subject, are often difficult to be accounted for, and various are the methods devised for their correction.
The genus of insects called Aphis, or green fly, one or more species being found upon nearly all our varieties of fruit trees, particularly upon those that are young, are very troublesome. They lodge and live on the points of the young succulent shoots, distorting the leaves and checking the growth. Various washings, compositions, and powderings have been applied for their destruction, among them are the following: — Syringing with tobacco water, lime water, fine air-slacked lime mixed with soot, and strewed over the trees in a dewy morning, burning haulm or straw sprinkled with sulphur to windward of the infected trees. These are generally considered good remedies, but the most effectual in our practice, of late, has been the whale oil soap mixture for the destruction of most insects that infest our trees. The slimy slug, found upon the leaves of our pear trees, may be effectually destroyed by the application of wood ashes, thrown upon the leaves during moist weather. The canker, a disease which injures many trees, causing the bark to grow rough and scabby, and turning the wood into a rusty brown color, is said by some to be owing to a stintiness that takes place in the trees from a bad sub-soil. We apprehend that this disease is often brought on by injudicious pruning, leaving the wounds ragged, and thereby admitting water into the wood, which soon begins to decay; and also from injuries sustained by the bark being bruised by ladders while gathering the fruit. In careless pruning, the dead shoots are often left upon the tree, throughout the summer, which
often brings on the canker. The exuding of gum, a kind of gangrene incident to stone fruit, may be owing, in some degree, to injudicious pruning, bruises, or injuries received in the wood or bark, or by cutting the shoots to short stumps in summer. It is often seen where large limbs have been lopped or broken off. Among the insects destructive to our trees, the borer worm is the most annoying; and we know of no better method to adopt for his extirpation, than that recommended some time since by A. J. Downing, of Newburgh, which is to examine the trees in early spring, as also in the fall, and cutting them out. The method we adopt as a preventive to their again entering, described under the article "Peach," we believe to be one of the most effective. After cutting out these worms, as also all decayed wood from hollow wounds, the holes should be covered from the heat and moisture by applying the following composition, which will ordinarily prevent further decay. It is given thus: Take one pound of Burgundy pitch, half a pound of beeswax, and one pound of tallow, melted and spread upon brown paper or cotton cloth, (the latter is preferable) and applied closely to the wound. This compound we use also for grafting, as it will ordinarily resist the force of rain, frost, drying winds, and the influence of a changeable atmosphere. With regard to what is called fire-blight, which occasionally affects the pear tree during the months of June and July, causing the branch to wither, and which may be caused by forcing, or high manuring, we
having never as yet had any trees affected by it, can only give the directions of others, which is to cut off at once the limb just below the affected part.

**USE OF SALT, ASHES, AND CLAY.**

We commenced our experiments upon the use of salt and saline substances four years since, particularly with the plum tree, and have succeeded to our utmost expectation, having had for the last two seasons of 1832 and 1833, good crops of fruit, where heretofore we rarely obtained a crop of one variety. Our land being of a light loam, exceedingly porous, and consequently subject to drought, we applied, early in the spring, upwards of one hundred bushels of leached, or spent ashes, to about two thirds of an acre, for the purpose of bringing the soil into a more retentive nature. We did not, however, observe much effect produced that summer; but in the following spring, on applying nearly two hogsheads of salt upon the same land, throwing it broad-cast over the whole ground, and around the trees, turning it under the soil a fortnight after spreading it, this appeared to make a decided change in the nature of the soil, it being less subject to drought, and having a better crop of fruit generally, particularly of plums, which induced us, in the following spring, to apply around our plum trees, as also the quince, as far as the branches extended, the same material, placing two thirds more to the plum than to the quince. Salt, as well as saltpetre, is destructive to insects
generally, and as it is, when applied in proper proportion, an excellent manure, particularly to light soil. We recommended to an individual, some three or four years since, who was complaining of the loss of his plums by the curculio, to dig away the soil around his trees early in the spring, as far as the branches extended, even to the laying bare the top roots, and filling the hole with dock mud, green from the sea shore. After this experiment, he informed us that his trees produced more plums the year following than they had done for ten years previous. We have used brine upon gooseberry and currant bushes, for the destruction of insects, with decided benefit, by dissolving salt in water, in the proportion of one pound to about four gallons. We, however, proportion this mixture according to the state of the plant upon which we use it; thus, for the gooseberry, we applied early in the spring, before the leaves or shoots were at all developed, a decoction so strong as to whiten the branches without injuring the future crop of fruit; but on the contrary, after the development of the buds or leaves, we use the proportion named in the article "Gooseberry."

We have used clay to a portion of our soil, with decided benefit, by applying it late in the fall, upon the surface, exposing it to the action of the frost, and when meliorated in the spring, digging it in.
The origin of grafting is lost in the obscurity of antiquity. The art was carried to a great extent in Italy about the time of the Christian era. The varieties best known, and most generally in use are, whip, or tongue grafting, side, or bark grafting, cleft grafting, and saddle grafting. The French have, with their usual faculty of invention, enlarged this number to a great extent. Professor Thoin has described above forty methods of grafting. Inarching, or grafting by approach, is another modification of this art. In the spring of 1840 we restored a dwarf pear tree, which was nearly, or quite dead from the root to three inches above the ground, by planting around it four or five seedling pear stocks, and inarching their tops into the living bark eight inches above the surface of the ground. In the following fall this tree bore nearly half a peck of the green sugar pear. The cleft, or stock grafting, is the most generally practised in New England, and the whip, or tongue grafting, is the mode in use in the best fruit-tree nurseries in England. The former method is performed in the following manner:—The head of the stock or branch being cut off, a slit is made in the top deep enough to receive the scion, which should be cut sloping, like a wedge, so as to fit the slit made in the stock. Care must be taken that the side of the wedge which is to be placed outward be thicker than the other, and in placing
the scion into the slit it must be so adjusted that the rind of the scion join that of the stock; the whole should then be clayed, or covered with grafting wax, to keep out the air. The other method, whip, or tongue grafting, so called from the manner of cutting both the stock and scion in a sloping direction on one of their sides, so that when brought together they fit exactly, and thus may be tied together in the manner of a whip-thong to the handle. In former times this species of grafting was performed without a slit or tongue, and in that case the former term was more applicable. Subsequent practice has added the slit or tongue, which has not inaptly given rise to the latter term. In performing the first, nothing more is required than merely to cut obliquely at corresponding angles to the stock and scion, as that when the incisions are brought together, they fit exactly; then the inner barks of both being brought to unite, on one side at least, a union takes place. The other variety of this mode, that is tongue grafting, is performed as follows:—The scion and stock being cut off obliquely at corresponding angles, cut off the tip of the stock obliquely, or nearly horizontally; make now a slit nearly in the centre of the sloping face of the stock downwards, and a similar one in the scion, upwards; the tongue or wedge-like process forming the upper part of the sloping face of the scion, is then inserted downwards in the cleft of the stock, the inner barks of both being brought closely to unite on one side. Saddle grafting is another method well adapted for standard
trees, particularly when the stock is not much larger in diameter than the scions to be put on them. In performing this operation, the head of the stock is cut in a wedge-like form; the scion is then split up the middle, after which each half is pared off to a tongue shape, and is then placed on the wedge-shaped top of the stock, taking care that the inner bark of both stock and scion join on one side at least; the whole is then tied fast with bast matting and covered with waxed paper.

Grafting under the bark in spring, when the bark will separate from the wood, in the manner of budding, we have practised for many years, with good success. The following are the different varieties of this mode.

In these several modifications of bark grafting, the lower end of the scion must be pared off, and then applied closely to the wood under the bark. Root grafting, which is seldom practised upon fruit trees, is sometimes resorted to when stocks are scarce;
the mode of performing this is generally by cleft grafting. We prefer, however, the whip, or tongue method. Our practice would be, after cutting the roots into lengths of about six inches, well furnished with fibres, then with a sharp knife commence by accurately fitting each scion, covering the cut part with brown paper or cotton cloth, which has been previously covered with grafting wax. Last spring we engrafted the pear upon roots of the quince, and immediately set them out, covering them to within two buds of the scion. Nearly all made a good growth the past summer. In this mode of grafting care must be taken that the roots are kept moist.

In the choice of scions we usually select those from the young wood of the previous season's growth, choosing them from the outside lateral branches in preference to those growing in the centre. These should be cut from the parent tree some time previous to the season for grafting, as it is found to be better that the stock should be in a more advanced state of vegetation than the scion.

**BUDDING, OR INOCULATION.**

*Budding* differs from *grafting* in this, that a portion of a stem is not made to strike root on another stem, but that, on the contrary, a bud is introduced beneath the bark of the stock, and there induced to strike root. Budding is commonly practised upon stone fruits, such as peaches, cherries, and plums, and, provided the stock is small, we
think it preferable to grafting for nearly all kinds of fruit. The object in budding is the same as in grafting, and depends on the same principle; all the difference between a bud and a scion is, that a bud is a shoot or scion in embryo. When grafting has been omitted or has failed in spring, budding comes in as an auxiliary in summer. The season for performing this operation upon pears and apples is from the middle of July to the last of August, but upon stone fruits the month of September is early enough to perform this operation; for when these are budded too early, they are apt to shoot the same year, which shoots, being weakly, are either killed in the winter, or, if they escape the frost, they never make much progress. It is always better that the buds should remain dormant until spring, when they will shoot forth with vigor. The buds used are found in the axillae of the leaf of the present year; the best buds are those on the middle of a young shoot, not those at the lower end. Stocks for budding may, in general, be much smaller than for grafting, as the operation may be performed on the same year’s shoot. The French enumerate twenty-three varieties of budding; but the variety in general use with us is the following, called shield or T budding. It is thus performed: — Select a smooth part of the stock; then with the budding-knife make a horizontal cut across the bark, quite through to the firm wood; from the middle of this transverse cut make a slit downwards, an inch or more long, going also quite through to the wood;
this done, proceed to cut out from the scion the bud, cutting nearly half way into the wood; should the stock be small upon which you are operating, you can take out the wood from the bud with the thumb nail or point of the knife, observing that the eye or germ of the bud remains perfect; if not, and a little hole appears on the under part, it is imperfect, or, as gardeners express it, the bud has lost its root, and another must be prepared. We, however, very rarely take out the wood, but insert the bud with the wood attached. There are precautions, as Lindley justly observes, in budding as in grafting. "It is indispensable that the bud which is employed should be fully formed, or what gardeners call ripe. If it is imperfectly formed or unripe, it may not be capable of that subsequent elongation upwards and downwards, upon which the whole success of the practice depends. Great care should be taken in raising the bark for the insertion of the bud, that the cambium be not disturbed or injured. This cambium is a secretion between the wood and the bark." Seedling trees, which were budded in the summer, should in the following spring, when the bud commences pushing, be cut off slanting, to within three inches of the bud, and not until the second season be finished, or the snag cut smoothly to the bud or shoot. Budding generally succeeds best when performed in cloudy weather, or in the morning or evening; for the great power of the mid-day sun is apt to dry and shrink the cuttings and buds.
RAISING FRUIT TREES FROM SEEDS.

Pear trees for stocks are raised from seeds sown usually in the fall. The most successful experiment in this method, which has come under own observa-
tion, was that of Allen W. Dodge, Esq., of Hamilton, for which he received the first premium of the Essex Agricultural Society in 1843. The following was his method of culture:

"In the fall of 1840 I procured a lot of pumice of the small choke pears, which I sowed in drills on a dry sandy spot of ground. The seed came up well the following spring, and the trees made the first season an average growth of one foot. Being warned by others of the danger to which they would be exposed during winter, I was inclined to use some method to protect them. One advised to take them up, and keep them during the cold weather in the cellar; another proposed to cover them with sea-weed or tan; and a third suggested still another course of treatment. As I knew not which method to adopt, I determined to let them take their chance and winter it out just as they stood. The result was, that no injury whatever befell them; not one tree was destroyed by the cold or frost, or by any other cause.

"The following spring I removed the trees into rows in the nursery, first taking off a part of the tap root. This I found to be of great length, nearly one third longer than the tree itself. This length of root may have kept the trees from being thrown out
RAISING FRUIT TREES FROM SEEDS.

of the ground by the frost, which, as I am informed, is one principal cause of the destruction in winter of young pear trees. As they make but few lateral roots, they are of course more exposed to such an injury than other kinds of young trees. Now if the tap root strikes deep, it has the stronger hold upon the soil; and if it reaches below the frost, it would seem to be entirely removed beyond its action. My soil being very light, the roots of the trees had no difficulty in extending to the length I have mentioned.

"Another benefit, as it seems to me, of a light sandy soil for young pear trees is this, that being so porous, it is less retentive of moisture than stiff and strong soils, which is the kind of soils upon which pear trees are usually attempted to be raised. The wetter the soil, the greater would seem to be the action upon it of the frost. It would freeze and thaw, in early spring, with greater violence to the young roots; such soil would heave more than a dry one, and in heaving would at length throw the tree up by the roots, and expose it to the winds and weather.

"The season after being transplanted, the trees made a vigorous growth. The principal dressing which they received was ashes applied occasionally in small quantities and in its unspent state. In August of that season, the second of their growth, I budded about six hundred of the trees; the rest, not being of sufficient size for that purpose, were left unbudded. The ground upon which they then
and have since stood, is similar to that in which the seed was originally sown, light and sandy; the trees have received no injury whatever from the winter or early spring. I am not aware that a single tree of the lot has ever been thrown up or killed by the frost, and they have never received any protection but from the hand of nature herself.

"My budded trees have made a fine growth the past season; averaging perhaps four feet, some reaching to nearly six feet in height. The trees are healthy and vigorous, and prove most plainly that it is not necessary for us to import pear stocks from France, when they can be raised, as mine have been, at home."

In raising peach trees from the stone, our method has been, to expose the stones to the frosts of winter, and sow in the following spring. In the fall of 1841 we thus exposed half a bushel of stones to the frost, by placing them in a shallow hole in the ground, slightly covered with earth, where they remained until the spring; we then cracked them carefully, and sowed in rows on the 13th of April, 1842, in a light loamy soil. These grew well, and on the first week in September, of the same season, we budded nine hundred out of one thousand trees.

ON PRESERVING PEARS.

Upon the methods resorted to for keeping the finest kinds of pears, much has been written of late
ON PRESERVING PEARS.

years. Summer fruit, those particularly which ripen upon the tree, require to be carefully gathered and placed in a well-ventilated and cool room. The autumn and winter fruit are preserved with more difficulty. It has been generally admitted that our winter sorts should remain upon the trees as long as possible, requiring all the ripening our climate will afford, which is undoubtedly the case. It has been recently suggested that our winter table pears should be gathered earlier than we have heretofore done it, from the fact that many varieties which were gathered the past season of 1843, in October, ripened better than those of the same kinds left upon the trees a month later. We found such to be the case with the "Lewis," and also with the "Bleeker's Meadow." The secret, we apprehend, is, however, not so much in their being thus early gathered, but that they were kept in a uniformly warmer temperature. The remarks of T. A. Knight, the most practical pomologist of modern times, we think rational. He says, "In order to ripen our fine pears, they should be placed in a dry and warm atmosphere."

A writer, (Mr. Walker,) in the January number of Hovey's excellent Magazine, writes:—"The specimens (pears) which were matured in a close desk, the temperature of the room being kept from sixty to seventy degrees of heat during the day, and fifty to fifty-five during the night, were all very much superior to those which matured in a room of lower temperature.
Much difference of opinion exists in regard to the necessity or advantage of sweating fruit previous to its being packed. Some disapprove of the practice, and say that the flavor is thereby considerably injured, and that the fruit does not keep so well; while others contend, and not without apparent reason, that, by getting rid of a portion of moisture, the fruit keeps better, and retains its natural flavor uninjured.

THE APPLE.

Of all the fruit produced in our climate, comprising such an extensive variety, none is brought to so great perfection and with so little trouble, as the apple. The duration of the apple tree is supposed by Knight to be two hundred years. The soil best adapted for the apple, says Rogers, is that of a soft loam, containing some sand; a great depth is not requisite, eighteen to twenty inches being quite enough, provided it be on a dry sub-soil. If the bottom soil is wet, the trees should be set shallow, and the ground drained. Apple trees do not thrive if the roots enter into a cold substratum.

Autumnal planting we prefer in light soil, and spring planting on those of a strong and wet nature. In forming a collection of fruits, it has been justly observed, that it is better to be contented with a few good kinds, that produce well in most seasons, than to plant those for the sake of variety, of which perhaps a crop may be obtained once in three or
four years. The Secretary of the London Horticultural Society, in speaking of the mania for increasing varieties, says, that their catalogue of apples "contains one thousand four hundred kinds, three fourths of which are probably the same fruits under different names, or are unworthy of cultivation."

In making a selection of apples, we should endeavor to fix upon those which are found to suit our latitude. Many varieties of apples, which are first rate in quality when grown in our southern cities,—for example, the Newtown Pippin, and Pennock's Red Winter—are inferior to the Lyscom, Fall Harvey, and many others, when grown in our soil. Beecher, of Indianapolis, In., says, "That the soil and climate so modify the flavor and other qualities of the apple, that there is some reason for believing that an apple, originating on any given soil, will be better than many which are introduced into it; for though the apple is raised with great facility in almost every soil, yet it is probable that each variety affects a particular one. Thus I perceive the most popular apples of New England are natives; for example, the Rhode Island Greening, Hubbardston Nonsuch, Roxbury Russet, Baldwin, and Minister. This, to a considerable extent, is true of the West."

Attention should also be had in the selection of sorts suitable to their destined soils; as some varieties that would succeed well in a strong clay, would languish in a poor light sandy loam. The Baldwin, Yellow Bellflower, and Swaar, flourish well in a light
loamy soil; on the contrary, the Ribstone Pippin, Pickman Pippin, and Red Doctor, require that of a strong and retentive nature. In planting orchards, we should therefore have some regard to these circumstances.

A selection of nineteen varieties we would recommend for a garden:

| Early Harvest,     | Early Sweet Bough,    | Williams's Favorite Red, | Summer Pearmain, | Fall Harvey, | Lyscom,   | Drap d'Or, | Porter,   | Boxford,   | Yellow Bellflower, | Hubbardston Nonsuch, | Pickman Pippin, | Baldwin,   | Danvers Winter Sweet Swaar, | Minister, | Roxbury Russet | Superb Sweet, | Ramsdel's Red Pumpkin Sweet, |

**APPLES.**

No. 1. *Early Harvest.* — This is the earliest apple worthy of cultivation: the form is flat, of medium size; the skin, when perfectly ripe, is of a beautifully bright straw color; the flesh tender and sprightly; if gathered before they are fully ripe, it has too much acidity. The finest fruits are those which drop ripe from the tree; the branches make very acute angles, by which it is readily distinguished from most other trees in the orchard; it bears young. Ripe in July and August.

No. 2. *Early Bough.* — This is a large handsome apple, the form sometimes oblong, the skin a pale yellow, often with a bright red tinge, the flesh
sweet and tender; it is a good bearer, and deserves extensive cultivation. Ripe in August.

[No. 2 is decidedly the finest early sweet apple of its season. It is called, in some parts of New England, "Washington."]

No. 3. *American Red Juneating.*—This apple is of medium size, oblong; the skin is a beautiful red, slightly streaked and mixed with yellow; the flesh is rich, sprightly and good; the tree is of upright growth; it bears well and ripens in August. Although it bears the name of American Red Juneating, we have strong doubts of its having originated in this country; we think it may be the striped Juneating of Ronald.

No. 4. *Summer Queen.*—A large oblong apple, striped with red on a yellow ground; the flesh is yellow, very high flavored, and excellent. The tree is of vigorous growth, and a great bearer. Ripe in August.

No. 5. *Early Red Margaret.*—A middle sized apple; the shape round, somewhat flat; the skin a greenish yellow, striped with dark red; the flesh white, juicy, and agreeable; it bears early and abundantly. Ripe the middle of August.

No. 6. *Summer Rose.*—A very beautiful and excellent fruit; the size is moderate, the form round, the skin yellow, striped, and mottled with red; the flesh is sweet, juicy, and fine. Ripe in August. A great bearer.
No. 7. *Summer Pearmain.*—This apple is of medium size, the form oblong and very regular; the skin a dark red, striped with a small proportion of yellow; the flesh very tender and good, juice not abundant. It is one of our finest summer apples; bears abundantly, and ripens in August and September.

No. 8. *Rambour d'Éte.*—This apple is of large size and flat form; the skin light red, striped with yellow; the flesh is firm, rich and sprightly; the trees assume a spreading form of vigorous growth, and great productiveness. Ripe in September.

No. 9. *Fall Harvey.*—This is a large and handsome fruit, the shape flat with broad ribs extending from the stem to the eye; the skin sometimes a clear bright yellow, but mostly a light yellow, occasionally with a bright red cheek; the flesh yellow, firm, rich and high flavored; it is much cultivated in Essex county, Mass., where it may have originated. It is without question the finest fall and early winter apple. A good bearer, and deserving extensive cultivation.

No. 10. *Drap d'Or.*—A large flat apple, of a bright, but pale yellow color, covered all over with small black pips, (never with a red cheek); the flesh is tender, very light and pleasant; the growth of the tree is large and spreading; it bears well, and should be found in every good collection. Ripe in
September and October. This is the Drap d’Or of Cox and Ronald, but not of Duhamel.

[No. 10 commands a high price in our market.]

No. 11. *Hawthornden.*—This fruit is of medium size; of a flat and very regular form, and remarkably handsome; skin of a pale yellow, nearly white, with a brilliant red on the side exposed to the sun; the flesh white, very juicy, but not high flavored. It bears very young, and most abundantly, every year; it is one of the best market fruits in the fall and early winter months.

[This variety is cultivated in Pennsylvania under the name of "Maiden’s Blush."]

No. 12. *Williams’s Favorite Red.*—This apple originated in Roxbury, Mass. It is of medium size, oblong form, the skin a bright and deep red, the flavor pleasant and agreeable. It is a good bearer and a most beautiful fruit, ripening in August.

[This variety is said to require a strong soil.]

No. 13. *Benoni.*—This fine and beautiful apple was introduced to notice by E. M. Richards, Esq. of Dedham. It is of medium size, form round and regular, the flesh yellow, high flavored and excellent. It bears well, ripens in July and August, and should be found in every good collection.

No. 14. *Red Doctor Apple.*—A large and handsome fruit, of a flat form; striped and clouded
with red, on a yellow ground; the flesh is tender, breaking and high flavored. It bears well, and ripens from October to December.

[This apple is small in our soil, and indifferent in quality.]

No. 15. *Boxford.* — This apple was first cultivated in Boxford, Essex county, where it may have originated. The size is middling, form round, skin striped with red and yellow; the flesh yellow, rich and good. Ripens in the fall months, and is thought to be a fine apple.

No. 16. *Red Astracan.* — This beautiful apple is of medium size, of a round and rather flat form; the skin is dark red, covered with a thick bloom like a plum; the flesh is white, tender, and good, somewhat acid; it keeps but a short time after being gathered, but the beauty of the fruit, and its early and great bearing, render it desirable in every collection, especially if intended for the market. Ripe in August.

No. 17. *Oslin.* — This apple is of medium size, the form flat and regular, the skin a bright yellow, with some dark clouded spots; the flesh firm, of a brisk and high flavor. It bears young and most abundantly, and ripens in September.

No. 18. *Kilham Hill.* — Originated on the farm of Doctor Kilham, in Wenham, Essex county, Mass. The size is sometimes large, the form round, a little
APPLIES.

oblong; the skin yellow, striped with red; the flesh is yellow and high flavored, but soon becomes dry; it bears young and constantly, and ripens from September to November. The tree is of a spreading, but not regular form, and may be known by small warts or protuberances on the bark.

No. 19. **Lyscon.**—This apple originated in Southborough, Mass. It is of medium size, rather oblong, and very regular; the skin dull red with greenish yellow. The flesh is not high flavored, but of a peculiarly mild and agreeable taste. It bears well, ripens in October, and will sometimes keep till January.

[No. 19 is called "Osgood's Favorite," in Essex county, and "Mathis's Stripe," in Worcester county. It is a superior variety, particularly when grown in strong soil.]

No. 20. **Porter.**—Originated on the farm of the Rev. Samuel Porter, in Sherburne, Mass. The fruit is sometimes large, the shape oblong, pointed at the blossom end; the skin of a bright yellow, often with a blush of red on the sunny side; the flesh fine, sprightly and agreeable. It bears well, ripens in September and October, and is a most beautiful fruit, either for the market or private garden.

No. 21. **Duchess of Oldenburg.**—A valuable and handsome apple, said to be of Russian origin. The size is middling, form round and rather flat;
skin of a beautiful yellow, striped with red; flavor very pleasant and good. It bears well, and ripens in September and October.

No. 22. Yellow Ingestrie.—A beautiful apple, raised by Mr. Knight, President of the London Horticultural Society. The size is small, form round and regular; the skin of a golden yellow, with some black spots; the flesh yellow, firm and delicate. It is an abundant bearer, and ripens in October.

No. 23. Red Ingestrie.—This apple is of medium size, of a round form; the skin bright yellow, tinged and striped with red on the side exposed to the sun; the flesh very rich, high flavored and juicy. It bears well, and ripens in October.

No. 24. Franklin Golden Pippin.—This apple is supposed to be of American origin; it is of middle size, the form oval and very regular; the skin of rather a dark yellow, without a blush, but sprinkled with dark-colored specks; the flesh yellow, tender, and very agreeable to the taste. The tree grows well, is of an upright form, and the fruit is ripe in October and November.

No. 25. Kerry Pippin.—Fruit of medium size; the form oblong, flattened at the eye and stalk; the skin a bright yellow, striped and marbled with red; the flesh tender and high flavored. This is a most beautiful variety; it bears well, and ripens in September and October.
No. 26. *Gravenstein.*—Fruit large; the form for the most part oblong, sometimes flat; the skin of a light yellow, striped, and beautifully mottled with red; flesh very fine, with a brisk high flavored juice. This is one of the most valuable apples, ripening in October, and keeping good several months. The tree is of a strong and healthy growth and upright form.

No. 27. *Ribstone Pippin.*—Fruit sometimes large, of a flat form; the skin is a mixture of russet and yellow, with dull red on the side exposed to the sun; the flesh very yellow and firm, with a sharp, rich flavor; the tree is of a spreading, but not very regular form; it bears well, and ripens in the fall and early winter months.

No. 28. *Golden Russet.*—The origin of this apple is unknown; it appears to have been first cultivated in Essex county, Mass. The fruit is of medium size, round, rather oblong, and of a regular form; the skin is a smooth yellow russet; flesh remarkably tender, spicy, and high flavored. The tree is very upright and handsome in its growth; bears abundantly; and is a valuable fruit, ripening in October, November and December.

No. 29. *Blue Pearmain.*—This fruit is large, the form round, the skin red, striped and mottled with darker red, and covered with a bloom like a plum; the flesh mild and agreeable. This is a
most excellent variety. Ripe in October, and keeping till February.

No. 30. *Red Quarenden.*—Fruit of medium size, of a flat form; skin a very dark red; flesh white, juicy, and of a pleasant flavor. Ripe in October and November.

No. 31. *Wine Apple.*—Fruit large, round, sometimes oblong; the skin a bright red, striped with a little yellow, with russet round the stock; the flesh rich and pleasant; the form of the tree is spreading; it bears young and abundantly, and ripens in the autumn and early winter months.

No. 32. *Fameuse.*—Fruit middle size; of a flat form; skin light yellow and green, mixed with pale red and dark red blotches on the side exposed to the sun; flesh remarkably white, tender, juicy and good. This is a very handsome apple. The tree bears well, and the fruit ripens from October to December.

No. 33. *Menagere.*—This apple is said to be of German origin; it is the largest apple we have seen; the form flat, in shape like a large English turnip; the skin of a light yellow; the flesh pleasant, but more adapted to the kitchen than the dessert. It bears well, trained as a dwarf, and ripens from October to February.
No. 34. *Rhode Island Greening.*—This is a well known and favorite apple; the size is large, the shape round, flat at the end; the color, when ripe, a greenish yellow; the flesh yellow, tender, juicy and rich. The growth of the tree is vigorous and spreading. It bears well, and ripens from November to February.

No. 35. *Lovett Sweet.*—This apple originated on the farm of Mr. Lovett, of Beverly, Essex county, Mass. It is of medium size, the form round, the skin, when ripe, a light yellow; the flesh rich, sweet and good. It is highly prized as a winter fruit.

No. 36. *Murphy.*—This apple, in appearance, resembles the Blue Pearmain; the shape is more oblong, the size not so large; the skin light red, streaked and mottled with blotches of darker red; the flesh white, tender and good. It is in use from November to February. Raised from seed by Mr. David Murphy, of Salem, Mass.

No. 37. *Ortley Pippen.*—The size sometimes large, the form oblong; the skin, when ripe, a bright yellow, with a little red on the side next the sun; the flesh yellow, breaking and high-flavored, in this respect approaching to the taste of the Newton Pippen more than any other apple. The tree assumes a handsome, spreading form, bears well, and the fruit ripens from December to March.
No. 38. *Newtown Spitzenburg.* — The size is large, the form round and regular, the skin a dark red, striped, streaked with shades of dull red; the flesh yellow, rich and high flavored. A most beautiful and valuable apple. In perfection from October till February.

No. 39. *White Winter Calville.* — This is one of the most celebrated French dessert apples; the size is large, the form flat, with ribs extending from the stem to the eye; the skin, when ripe, of a bright yellow, sometimes with a blush of pale red; the flesh white, tender and pleasant, without being high-flavored. It is an abundant bearer, and the fruit ripens from November to March.

No. 40. *Pennocks.* — This is a large apple; the form round, rather oblong; the skin a dull red, slightly streaked with yellow; the flesh yellow, sweet and tender; good for the table, and excellent for baking. The tree grows to a large size, and forms an open spreading head. It bears well every year, and is in use during the winter months.

[This variety, as well as Nos. 31 and 38, are finer apples when grown South, than with us.]

No. 41. *Baldwin.* — This fine apple, so well known in New England, hardly needs a description. It is of medium size, the form round, the skin mostly of a brilliant red, with some indistinct yellow streaks; in some situations a large proportion of yellow; the
flesh is very fine, crisp, juicy and rich. It bears abundantly every other year, keeps well through the winter, and although so common, it will bear comparison with the finest of the new varieties.

No. 42. *Lady Apple.*—The size is small, the form flat, the skin at maturity is a bright yellow, with a brilliant red cheek, and very smooth; the flesh white, breaking, mild and agreeable, but not high flavored. The beautiful appearance of this little apple renders it worthy of cultivation. The tree is of more upright growth than any other apple tree in the orchard; it grows to a large size before it produces fruit; it then bears well, and is in use from January till March.

No. 43. *Bellflower.*—This is a large and beautiful apple. The form is very oblong, tapering to the eye; the skin a bright yellow, sometimes without any red, but for the most part the side exposed to the sun has a bright red cheek; the flesh is rich, tender and sprightly; before perfectly ripe it has too much acidity. It bears well, though not abundantly, every year, and ripens in October, and keeps till February. It is a valuable market fruit. The growth of the tree is large and spreading, and if not trained high, the branches will reach the ground when loaded with fruit.

[This variety fruits well in light soil. It is sometimes confounded with the "Monstrous Bellflower," an inferior sort.]
No. 44. *Swaar.* — This is a large apple, the form round, somewhat flat; the skin is very smooth, of a light yellowish green, without any red; the flesh is juicy and well flavored, but not rich. The tree is of spreading and vigorous growth; bears great crops. The fruit ripens from December to March.

[A constant bearer and handsome fruit, deserving extensive cultivation; being one of the finest eating apples, in February and March, we possess.]

No. 45. *Danvers Winter Sweet.* — This apple is of medium size; the form a little oblong, tapering to the eye; the skin smooth, of a light yellow, sometimes with a tinge of red; the flesh firm, juicy and sweet. The tree is a great bearer, of rapid growth, and is worthy of extensive cultivation. It is in use during the whole winter.

No. 46. *Pickman Pippin.* — This apple is sometimes large, the form round, the skin a light yellow, spotted with black points; the flesh hard, juicy, and good for the table, and excellent for the kitchen, having, when cooked, a most agreeable acid. The tree is of an upright growth, bears abundant crops, and the fruit ripens from December to March.

[In strong soil a great bearer. This sort and No. 27 we consider our two best cooking varieties.]

No. 47. *Mela Carla.* — This apple is of medium size and round form; the skin is of a light yellow,
with a bright red cheek next the sun; the flesh white, tender and good, but not rich. It is a good bearer, and ripens from October to March. In our climate this apple is not so good as in its native country, Italy. It is, notwithstanding, worthy of cultivation.

No. 48. *Roxbury Russet.* — This apple is well known, and extensively cultivated in New England; it is of medium size, round, and flat at the ends; the skin of a fine yellow russet, often mixed with dull red; the flesh white, rich and juicy, with a very pleasant acid. It bears well, and can be brought to market later in the spring than any other good table apple.

No. 49. *Hubbardston Nonsuch.* — This apple is large, the form round, somewhat oblong; the skin is red, mixed with a small portion of yellow, streaked and blotched with dark red; the flesh yellow, juicy, and of excellent flavor. The tree is of vigorous growth, a great bearer, and worthy of extensive cultivation. In use from January to March.

No. 50. *Minister.* — This fine apple originated in Rowley, Mass. The size is large, the form oblong like the Bellflower, tapering to the eye, with broad ridges the whole length of the fruit; the skin
a light greenish yellow, striped with bright red, but the red seldom extends to the eye; flesh yellow, light, high flavored and excellent. This is one of the very finest apples which New England has produced. It ripens from November to February, and deserves a place in every collection of fruits, however small. This apple received its present name from the circumstance of the late Rev. Dr. Spring, of Newburyport, having purchased the first fruit brought to market.

No. 51. *Green Sweet.* — This apple is of small size, round, and rather flat; the skin at maturity is a dull green, approaching to yellow; the flesh very sweet and good. It is in use during the winter months, and can be brought to market later in the spring than any other sweet apple. Much cultivated in the north part of Essex county, Mass.

The following varieties are added to this edition by the compiler.

No. 52. *Bevan's Favorite.* — This is one of the earliest and finest apples of New Jersey, supposed to have originated there; the size is medium; form somewhat flat; color yellow, striped with red; flesh juicy; a great bearer; ripening in July.

No. 53. *Superb Sweet.* — A large sized superior sweet fruit; form rather flat; color red, striped; ripening in September and October; raised from seed by Jacob Dean, of Mansfield, Mass.
No. 54. *Strawberry Apple.* — This variety originated in New Jersey; it is an early winter fruit; will keep into spring; color bright red, striped upon a light orange brown; flesh juicy, and peculiarly agreeable.

No. 55. *Ramsdel's Red Pumpkin Sweet.* — This fruit is of good size; of a dark red, covered with a blue bloom, similar to the Winter Blue Pearmain; the flesh is tender and sweet. This tree bears abundantly. It ripens in the fall, and will keep into January. This apple was brought into notice by Mr. Ramsdel, of Connecticut.

No. 56. *Rambo, or Romanite.* — This apple is much cultivated in Pennsylvania; the form is flat; the size medium; the skin a pale yellow, with red streaks towards the sun; flesh tender and sprightly; and is a fine table apple, ripening in the fall and keeping for several months; a good bearer in alternate years. This apple is known by the name of Seek-no-farther, in the Philadelphia market.

No. 57. *Cann Apple.* — This apple, cultivated in West Jersey, takes its name from the peculiarity of its shape. In form it approaches to a cone; the size is medium; color green, with a brownish red near the stem; it is a very sweet fruit, approaching nearer, in this respect, to the Danvers Winter Sweet than any variety we have seen. It is an early winter fruit, and is a good bearer in alternate years.
No. 58. *Quince Apple.*—The tree of this variety is of vigorous growth; the size of the fruit large; the shape flat; the skin, when fully ripe, of a rich lemon yellow; flesh rich and juicy; it is a great bearer in alternate years, and is one of the very best fall apples we possess, ripening in November. Coxé says that it came originally from the State of New York.

No. 59. *Michael Henry Pippin.*—This variety, (supposed to have originated in New Jersey) with us is a large fair apple, of a handsome oblong shape, color when ripe of a light lemon yellow; the flesh is sweet, ripening in November, but keeping well throughout nearly the whole winter. Bears well, not greatly, every year.

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**THE PEAR.**

The pear was probably held in higher estimation by the ancients, than the apple, as Pliny enumerated a greater number. It is a much more hardy and durable tree than the apple, and although longer in coming into a fruit-bearing state, will exist for centuries, in health and vigor. The pear is propagated by seeds, with a view to obtain new varieties, or for the purpose of stocks on which to graft or bud known or approved kinds. Doctor Van Mons, and M. Duquesne, possess eight hundred approved sorts, which they obtained from seeds within sixteen years. Pears, however, are more uncertain from seed, than apples; for by far the greater number thus raised,
being unfit for any other use than to be budded with known sorts. New varieties, says Van Mons, are more likely to be obtained from the seeds of new, than of old cultivated sorts. Among the extended varieties of this fruit, it is rather difficult, (under all circumstances) to select those which are the best for cultivation. We have, however, ventured to admit into our list of outlines, those which, from observation and the opinion of friends, as well as our own limited experience, we could safely recommend as among the best. In raising seedling pears, the ground should be enriched with well-rotted manure, (vegetable decomposition, such as rotten leaves, bark, &c., we think the best, mixed with a portion of air-slacked lime,) the earth should be occasionally stirred between the rows, and all weeds eradicated. (See the article on raising trees from seed.)

Small stocks, measuring from an half to an inch through at the but, should be budded, rather than grafted. The best and most durable stock for standards is the wilding; the quince and white thorn, for dwarfs. There are some pears, (the Bartlett, for example,) which do not thrive well upon the quince, directly. Our method with such has been to graft those sorts that grow well upon the quince, and in the following season re-grafting on these the kinds that do not flourish when placed directly upon this stock. This process of double grafting may be advantageously employed also in bringing pears earlier into fruit. In the spring of 1840, we inserted a graft of the "Cabot" into a dwarf stock, which was but one inch through at the but, and in the fall of 1841, it bore from twelve to fifteen pears.
The effect of double grafting, says Lindley, "is similar to ringing the branches, the obstruction that the sap meets with, in passing through the two places of union, would be tantamount to the limited supply of sap permitted to ascend where a portion of the bark is removed." The quince stock brings the pear into early fruiting, and some varieties are larger upon this stock; still, where a permanent orchard is wanted, we should recommend the natural, or wilding pear. Pears worked upon the white thorn, are said to do better where the soil is a strong clay, than upon the quince. Pears have been grown in Europe upon the mountain ash. We budded twelve small trees of this sort with the Bartlett, and Seckel, in the fall of 1840. A shoot of the ash was permitted to grow in connection with the pear, for the first season. In the spring of the following year, the first shoot (the ash) was then cut off close to the main stem. These trees have made quite as good a growth as upon pear stocks.

The distance at which pear trees should be set in the orchard or garden, depends in some measure upon the soil and aspect; but thirty feet is about the maximum distance in the best soils, and from eight to ten feet, when grown upon the quince or thorn. Trees engrafted or budded upon the quince, should be done as near the root as possible. This budding, which we prefer to grafting, is performed when the bark will separate entirely from the wood, which, in this latitude, takes place in August, and sometimes into September. The following spring, when the bud is developing, cut off the stock to within two
joints of the bud, and not until the next season finish, or cut the snag smoothly to the shoot. At the third season, the trees may be removed to the

situation for fruiting, and in resetting them, the stock should be placed at least one inch below the insertion of the bud as shown in the preceding cut of a trained tree.
Thus setting the stock below the bud or scion will preserve them from the frosts of winter and the borer in midsummer. In order to obtain fruit early upon dwarf pears, the side shoots or spurs should be suffered to remain upon the whole extent of the tree, as they will then ordinarily form fruit buds upon each spur. These trees are admirably adapted for small gardens, occupying but little space, less exposed to high winds; thus affording greater security to heavy fruit. One of the new Flemish pears, the "Duchess d' Angouleme," when grown as a dwarf, produces larger fruit than when upon a wilding. When pears are worked upon the wild species, apples upon crabs, and peaches upon peaches, the scion is in regard to fertility, says Lindley, "exactly in the same state as if it had not been grafted at all; while, on the other hand, a great increase of fertility is the result of grafting pears upon quinces, peaches upon plums, apples upon the thorn, and the like. In these cases, the food absorbed from the earth by the root of the stock is communicated slowly." No other influence have we ever noticed exercised by the scion upon the stock.

Deep soils are not necessary for the pear; from eighteen to twenty-four inches are quite sufficient. Pruning is not often wanted in the culture of this fruit as a standard. Some few kinds there are that resemble the apple in their growth, that require cutting to keep them from superfluous branches; those particularly of pendant or weeping habit. This tree, under good management and in favorable soils,
may be continued in health and vigor for a greater length of time than almost any other fruit-bearing tree. When the pear tree grows too luxuriantly, and consequently unproductive, pruning the roots, or bending the branches downwards, (the latter course we prefer,) will generally check its luxuriant growth, and throw it into a bearing state. The pear being a more hardy tree than the apple, is less liable to the attacks of insects. The most annoying, however, is a species of coccus or miniature tortoise, which attaches itself to the bark. This insect is common to the apple in some gardens. Our method of destroying them is to wash the bark with a strong solution of whale-oil soap and water, applying it with a stiff brush. Young trees are sometimes almost wholly incrusted with this coccus.

A selection of twenty-six varieties of pears we would recommend for a garden:

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No. 1. *Amire Joannet.*—This fruit is small, form oblong; the skin, when ripe, is light yellow, with a small portion of red; the flesh white, and when not overripe, juicy and good. It ripens in July, about ten days before the Petit Muscat, to which it is superior in size and flavor. The head of the tree is open, with a few long and hanging branches.

No. 2. *Petit Muscat.*—This pear ripens immediately after the above; the size is small, the form round, a little oblong, the skin mostly of a clear yellow, with a little dull red; the flesh pleasant and musky, without being high flavored. The tree grows to a large size, with long and hanging limbs, producing its fruit in clusters, and most abundantly.

No. 3. *Madaleine.*—This is the first good pear which ripens immediately following the Petit Muscat. The size is rather small; in rich land they grow large; the skin, when ripe, is light green, approaching to a yellow; sometimes a tinge of dull red on the side exposed to the sun; the flesh white, juicy and pleasant, with a most agreeable acid. Ripe the end of July and first part of August; it bears well every year, and from its open head, requires but little pruning.
No. 4. *Bloodgood.* — This pear was first brought into notice by the late James Bloodgood, of Flushing, Long Island; the size is large, the form nearly oval, the skin a dull yellow, covered with dark russet spots; the flesh tender, melting and pleasant. It comes very early into bearing, and produces abundant crops every year. Ripe in August.
No. 5. *Rousselette Hatif.*—This is a small pear, with a long curved neck; the stem is long and fleshy, in most cases appearing to be a continuation of the fruit; the skin yellow, with brownish russet on the side next the sun; the flesh very fine, rich and high flavored when eaten ripe from the tree; the branches are long, the head of the tree very open, and the produce most extraordinary. It ripens about the middle of August.

No. 6. *Honey.*—This tree was procured from Messrs. William Prince & Sons, of Flushing; but as there are two pears bearing this name, one European, the other American, it is uncertain to which the specimen belonged; in size and shape it resembles the Seckel; the skin is yellow, with a large portion of dull red; the flesh sweet, juicy and good. The tree bears young, and when more advanced promises to be a great bearer. Ripe in September.

No. 7. *Julienne.*—This pear resembles the St. Michael’s, but is much smaller, except on very rich land; the skin light yellow, sometimes with bright red next the sun; the flesh rich, juicy and melting. The tree comes early into bearing, produces abundantly, and is in use from the middle of August to the middle of September; ripening gradually in the house, which renders it very desirable for a market fruit.

[This variety seems to have lost its flavor of late, at least in many localities.]
No. 8. Andrews.—This fruit sometimes at-
tains a large size; the form is oblong, tapering gently from the blossom end to the stem; the skin, when at maturity, is a yellowish green, often with a dull red cheek; the flesh melting, juicy, and high flavored; it is a most valuable pear, producing its fruit early and abundantly. The tree is not of very vigorous growth. Ripe in September and October.

No. 9. **Skinless.** — This pear is of small size, of a long shape, round at the blossom end, tapering to an obtuse point at the stem; the skin is smooth and very thin; the color, when ripe, is a light yellow, with a slight tinge of red; the flesh juicy, crisp, sweet, and very good. The tree produces well, and the fruit ripens in August.

[Hardly worth cultivation in light soils.]

No. 10. **Summer Frankreal.** — This very fine pear is of medium size; the shape oblong, thickest about one third from the eye, sometimes flat like a Bergamot. The skin, when fully ripe, a light yellow; flesh melting, rich and excellent. It is a great and early bearer, ripening in September.

No. 11. **Williams’s Bon Chretien.** — (See Frontispiece.) This fruit is very large; the shape long, round and full, both at the eye and stem, which is short and large; the skin, when fully ripe, yellow, with faint red next the sun; flesh white, melting, and good. The character of this pear is very high;
the tree is of a strong and vigorous growth, bears very young, and yields most extraordinary crops every year. Ripe in August and September.

[This fruit has the remarkable quality of ripening in the house, when not fully grown.]

No. 12. *Dearborn's Seedling.* — This fine and beautiful pear originated at Brinley Place, Roxbury, the seat of the Hon. H. A. S. Dearborn. The fruit is of medium size, round at the crown, diminishing to the stem, around which is a circle of bright russet; the skin is smooth, of a light yellow color; the flesh delicate, melting, and fine flavored, equal to any other pear of the same season. The growth of the tree is healthy and vigorous. It bears well, and the fruit ripens in August and September.

No. 13. *Crawford.* — This pear is very extensively cultivated in Scotland; it is of middle size, round at the eye, diminishing to the stem, and very regular and uniform in its appearance; the skin is entirely of a light yellow; the flesh juicy, tender and good. It bears young, and ripens in August.

No. 14. *Williams's Early.* — This new pear originated on the farm of Mr. Williams, in Roxbury, Mass. It is of middle size, turbinate form, the skin light yellow, with a red cheek next the sun; the flesh melting, sugary and fine. The tree promises to be a great bearer. Ripe in September.
No. 15. *Urbaniste.* — One of the new Flemish pears; the size and form is somewhat like the St. Michael, round and full at the eye, diminishing gradually to an obtuse point at the stem, which is in-
serted in a shallow round cavity; skin light green, nearly yellow, with small spots of dull russet; flesh white, melting and fine. The tree is of handsome form, and grows vigorously; does not bear young, but is productive after it has attained a proper size. Of all the new European pears, this is the best substitute for the old favorite St. Michael's. Ripe in October and November.

No. 16. *Summer Thorn.*—This pear is oblong, of medium size, the skin smooth, and when ripe, of a light green; the flesh melting, juicy, and of a very peculiarly pleasant flavor. It bears well, and ripens in September.

No. 17. *Citron de Sirentz.*—Indifferent; not cultivated at the Pomological Garden of Mr. M.

No. 18. *Valee Franche.*—Astringent, not cultivated at the Pomological Garden.

No. 19. *Chair a'Dame.*—This variety is not retained at the Pomological Garden.

No. 20. *Green Pear of Yair.*—We have discontinued the cultivation of this variety.

No. 21. *St. Ghislain.*—This superior pear is one of the new Flemish varieties; it is of medium size, the shape rather oblong; the skin at maturity is a pale yellow; the flesh juicy, melting and very
delicious. The tree is vigorous, and bears good crops every year. One of the finest of pears, and should be found in every good collection. Ripening in September and October.

No. 22. Cushing. — A native fruit from Hingham,
Mass. The size in rich ground is large; the form oblong, diminishing from the eye to an obtuse point at the stem; the skin, when ripe, smooth, of a light yellow, sometimes with dull red on the side exposed to the sun; the flesh white, melting, sprightly and good. It comes early into bearing, produces well, and the fruit ripens the last of September.

[This pear is, in our soil, equal to the Bartlett, in flavor.]

No. 23. Seckel.—This well known and excellent pear is of small size on poor land; the form is regular, round at the blossom end, diminishing gradually to an obtuse point at the stem; the skin often yellow, with a brownish red cheek, sometimes entirely covered with greenish russet; the flesh melting and of most exquisite flavor; the growth of the tree is slow, with great and unusual symmetry. It produces abundant crops; but in order to obtain fruit of large size, the ground should be rich and the tree pruned with a more open head than is generally thought necessary. Ripens gradually in the house, from the middle of September to the last of October.

[Pear trees seldom thrive when budded upon the apple. No. 23 does better than any other we have tried. They should be placed upon a small tree, and no part of the apple branches suffered to grow in connection.]

No. 24. Jackman’s Melting.—This tree was received from the Messrs. Young, of Epsom, England; it produced its first fruit in 1837; the name is no doubt erroneous, as it is not noticed in the
catalogue of the London Horticultural Society, or in any other work of authority. The fruit is large and very long, the stem short, the skin entirely of a dark red; the flesh juicy and good, but not rich; it is remarkable for its beauty, promises to bear well, and ripens the last of September.

[This pear is very astringent, and hardly worth cultivation, notwithstanding its great size and beauty. In the last Catalogue of the London Horticultural Society, it is called "King Edward."]

No. 25. Johonnot. — Originated in the garden of the late George S. Johonnot, Esq. of Salem. The fruit is of medium size, of a roundish and very unequal form; a little extended, the skin thin, the color a dull yellow, with a large portion of dull brown and indistinct russet; the flesh is very fine, melting and delicious. The tree is not vigorous; it bears well, and is in perfection from the middle of September to the middle of October.

No. 26. Summer Rose. — A pear of medium size; the form flat, resembling an apple, with a long stem inserted in a roundish hollow; the skin is dull yellow, spotted with russet, and mixed with a large proportion of brownish red; the flesh white, juicy, and sweet, with a high and very peculiar flavor. The appearance of the tree is that of a large spreading apple tree; it grows to a large size before producing fruit; it is then very productive. Ripe in August.
PEARS.

No. 27. *Buerre Bosc.*—One of the new Flemish pears; the form is very long, the skin of a light cinnamon russet; the flesh white, juicy, melting and
good. It bears abundantly, and ripens in October and November.

[This fine melting pear is usually of a higher flavor than the Bartlett.]

No. 28. *Jalousie.* — This pear is rather above the medium size; the form round and large at the blossom end, diminishing rapidly to a point at the stem; the skin is smooth, and entirely covered with a cinnamon russet; the flesh white and melting, very pleasant and good. The tree bears well, and the fruit is in use during the whole month of October.

No. 29. *Autumn Superb.* — This is a large pear, full and round at the eye, diminishing to a point at the stem; the skin is yellow mixed with dull red; the flesh melting and good, but not very highly flavored. It bears young and the fruit ripens in October. It was originally introduced from France, and received its present name in this country.

No. 30. *Heathcote.* — This native pear is large on rich land; the form is long, round at the blossom end, and full at the stalk; the skin almost always of a light yellow, seldom a tinge of red; the flesh melting, rich and well flavored. The growth of the tree is handsome and vigorous. It produces abundant crops, and ripens in September and October.
No. 31. *Belle Lucrative.*—The tree which produces this fine fruit, was received from the Messrs. Young, of Epsom, England. The size is large, the form round at the blossom end, tapering gradually to the stem; the skin, when ripe, is a pale yellow, sometimes with a little dull red next the sun; the flesh is melting, sweet, juicy and fine flavored. It bears well. Ripens in September.
and October, and is worthy of a place among the choicest selections.

[This fruit, supposed to be the Fondante d'Automne of the London Catalogue, is decidedly the finest fall pear in our collection.]

No. 32. *Belle et Bonne.*—These trees have been received from various sources, as the Belle de Bruxelles; the fruit is large and round, the skin yellow, sometimes with a little blush on the side exposed to the sun; the flesh very sweet, rich and good. The tree is very vigorous in its growth; does not bear till it has attained a large size; it is then very fruitful. Ripe in October.

No. 33. *Long Green.*—This is one of the best of the old varieties; its form is very long; skin at maturity a light green; the flesh is white, melting and fine flavored. The tree is of vigorous growth, bears well, and the fruit ripens in September and October.

[This is one of the few old varieties that have not as yet shown any signs of decay.]

No. 34. *Henry Fourth.*—This pear is of small size, the form very irregular, oblong; the skin of a dull yellow, mixed with brown and green; flesh yellow, gritty, juicy and melting, with a high and somewhat remarkable flavor. It bears young and abundantly, and ripens in September.
No. 35. *Surpass Vergalieu.*—This tree was received from the late Mr. Parmentier, of Brooklyn, L. I.; as we do not find the name in any European author, it was probably adopted in this country. The fruit is large, form oblong; some specimens nearly round; the skin smooth, of a light yellow with a little red on the side next the sun; the flesh rich, juicy and high flavored. It appears to require a warm sun to have it in its greatest perfection; it bears young, yields large crops of fair fruit every year, and is worthy of extensive cultivation. Ripe in October.
No. 36. *Duchesse d'Angouleme.*—One of the new European pears; the size is very large, oblong, round at the blossom ends, tapering gradually to an obtuse point at the stem, with a knobby and uneven surface; the skin greenish yellow, spotted with small russet points; the flesh very rich, melting and high flavored. It is a good pear on standards in rich ground, larger and better on the quince, trained low; it is very productive. Ripe in October and November.

[The specimen was grown upon the quince.]

No. 37. *Beurre Van Marum.* — This is one of the new Flemish pears; it is of medium size, the form oblong, the skin of a bright yellow, sometimes with a tinge of red; the flesh melting, juicy and fine. It is an early and great bearer, and in perfection about the last of September.

No. 38. *Capsheaf.* — The origin of this pear is unknown; it is much cultivated near Providence, R. I., where it may have originated. The size is small; the form almost round; the skin a light cinnamon russet; the flesh white, melting and juicy, with a pleasant but not high flavor. It bears well, and the fruit ripens in October.

No. 39. *Naumkeag.* — This is a seedling from the garden of the late G. S. Johonnot, Esq., of Salem. The wood and leaf of the tree resemble those of the Brown Beurre; the fruit is large, form
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Oval, rather oblong, full and round both at the blossom end and at the stem; the skin a yellow russet, with much dull brown mixed with russet; flesh juicy, melting and good, with rather too much astringency. A great bearer, ripening in October.

[We should not recommend this variety for general cultivation.]

No. 40. Raymond. — A new fruit, which originated on the farm of Dr. Joseph Wight, of Raymond, Me. It is sometimes large, but generally of a medium size, the shape of the St. Michael's; the skin yellow, with some dull red and russet on the side exposed to the sun; the flesh melting, rich and high flavored, equal to any pear of the same season. The tree is slow and crooked in its growth, but produces well, and the fruit ripens in September and October.

[This variety is small in our soil.]

No. 41. Buffum. — This pear originated in Rhode Island; medium size, the form nearly oval; the skin yellow, mixed with russet and brownish red next the sun; the flesh melting and good, but not first rate. The tree is very upright and strong in its growth; a great bearer, and an excellent market fruit. Ripe in September.

No. 42. Rostiezer. — This tree was received from the Messrs. Baumanns, of Bollwiller. The fruit is of medium size, oblong and pointed at the stem,
the skin covered with light yellow russet; the flesh melting, high flavored, and delicious. It ripens about the first of October; and, so far as we could judge from the first specimens, is decidedly a first rate fruit.

No. 43. Washington.—A native fruit from New Jersey, of medium size; the form is nearly oval; the skin of a light yellow, covered with small brown spots, sometimes a slight tinge of red; the flesh melting and excellent, with an unusual flavor. The tree grows vigorously, bears well, and the fruit
ripens in September. A beautiful and good pear, worthy of cultivation.

No. 44. **Princess of Orange.** — One of the new Flemish pears. In size and form this fruit resembles the St. Michael's; the skin is an orange russet, mixed with dull red; the flesh white, melting and good, but not first rate. Ripe in October. The scions of this pear were originally received from the London Horticultural Society; but a distinguished cultivator from Belgium thinks it cannot be the Princess of Orange of Van Mons.

No. 45. **Gansels Bergamot.** — This has been placed among the old pears; it is only comparatively so, having been raised in 1768; as yet, it shows no indications of decay, such as we see in many of the finest old pears. It has the reputation of being a bad bearer, but in the gardens in Salem it produces good crops. The fruit is of medium size, the form nearly round, the color a dull brown; flesh white, melting and fine flavored. Ripe in October.

No. 46. **Cabot.** — This pear was produced from seed by Joseph S. Cabot, Esq., of Salem. The original tree, after producing the first specimen of fruit, was destroyed by the cold winter of 1831. We were so fortunate as to preserve a scion, from which we obtained fruit the last season, 1837. It is of medium size, of a round form, a little extended;
the skin a light yellow russet, with a small portion of brownish red; the flesh white, melting and fine flavored. It is decidedly a first rate fruit, and worthy of extensive cultivation. The tree is of a strong and healthy growth, bears well, and is in perfection during the whole month of October.

No. 47. *Bon Chretien Fondante.* — This is one of the new Flemish pears; fruit rather large; form regular, oval; the skin a yellowish green, mixed with brown and yellow specks; the flesh yellow, rich and melting; the tree produced fruit the first time, the last season, 1837, and promises to be a first rate fruit. Ripe in October.

[This sort has proved with us very fine.]

No. 48. *Pope's Quaker.* — The origin of this pear is uncertain; it appears to have been first cultivated by a Mr. Pope, a nurseryman near New York. The fruit is of medium size, oblong pear-shaped, the skin entirely covered with yellow russet; the flesh white, melting and good, but not high flavored; the tree is productive. The fruit ripens in October.

No. 49. *Reine des Poires.* — This is a large pear; the form obtusely pyramidal; the skin a dull yellow mixed with red, and red on the side exposed to the sun; the flesh crisp, pleasant and good, but not high flavored; it bears young, and is very productive. Ripe in October. The tree has a great resemblance to that of the Easter Beurré.
No. 50. *Golden Buerré of Bilboa.* — This tree was imported from Bilboa, by Mr. Hooper, of Marblehead; the original name is unknown; in size and shape it resembles the Doyenne Gris, but the skin is of a lighter russet; the flesh is melting, rich.
and of fine flavor; it is a good bearer. Ripens in October.

[This variety grows large and beautiful upon the quince.]

No. 51. **Cumberland**. — A native fruit, from Cumberland, R. I.; the size is large, the form oblong, round and large at the blossom end, tapering to an obtuse point at the stem; the skin of an orange color, with bright red next the sun; the flesh melting, juicy and good, nearly first rate. Ripe in October and November. The tree is of vigorous growth, and bears abundantly.

[ Inferior with us to the "Buffum." ]

No. 52. **Louise Bonne de Jersey**. — Fruit large, oblong, pear-shape; skin yellowish green, mixed with brownish red next the sun; the flesh melting, rich and good. It produced its first fruit the last season, and gives every indication of being a first rate pear, and good bearer. Ripe in September and October.

[This is a fine melting pear.]

No. 53. **Petre**. — This tree was presented to me by Mr. Carr, of the Bartram Botanic Garden, near Philadelphia, where the fruit originated. The first specimens were produced the last season, 1837. The size is large, the form long, round at the eye, and tapering to an obtuse point at the stem; the skin is a dull yellow, mixed with greenish russet; the flesh melting, juicy, and very delicious. Ripe in October and November. It is a pear of the very first rank, and should be extensively cultivated.
No. 54. *Frederic of Wurtemberg.*—This is one of the new Flemish pears, and has been cultivated under the erroneous name of the Capiaumont. The size is large, round and full at the blossom end, tapering rapidly to a point at the stem, which is short and placed on the summit; the skin a bright
yellow, with a brilliant red cheek next the sun; the flesh yellow, melting, rich and excellent. The tree grows vigorously, bears young and abundantly, and the appearance of the fruit is beautiful. Ripe in September and October.

[This variety inclines to overbear, and is then small and destitute of flavor.]

No. 55. *Rousselette de Rheims.* — This pear is of medium size, the form is oval, blunt at the stem; the skin yellow, with much dull red on the side next the sun; the flesh is breaking and fine, with a very high musk flavor; it is best when eaten ripe from the tree. The tree attains a large size before bearing; but when more advanced produces an abundant crop. Ripe in September.

No. 56. *Wilkinson.* — A native pear from Cumberland, R. I.; the size in rich ground is large, the form oblong, round at the blossom end, and at the stem; the skin yellow, seldom (on pear stocks) any red; the flesh white, juicy and melting, with a fine and delicious flavor. The tree bears young, is very fruitful, and in perfection during the months of October and November. If grafted on the quince it is smaller, more prolific, higher flavored, and a brighter red cheek, than if grafted on the pear stock.

[The fruit of this variety is not always fair in our soil.]

No. 57. *Bergamotte d'Automne.* — This pear is of medium size, the form round, a little lengthened
towards the stem, which is short and inserted in a
small cavity; the skin when ripe is a dusky yellow,
thickly sprinkled with greyish spots; the flesh break-
ing, tender, juicy and sweet. It is a good fruit, and
an early and great bearer, ripening gradually in Octo-
ber; distinct from the Autumn Bergamot, described
by Cox, and figured in the Pomological Magazine.

[We have a pear answering to the above description, received
from France, under the name of "Sylvanche Bergamotte,"
which is a great bearer, and the fruit of fine flavor.]

No. 58. **Napoleon.** — One of the new Flemish
pears; the size is large, the form long, round at the
blossom end, contracted in the middle, obtuse at the
stem, which is short; the skin at maturity is a yel-
lowish green; flesh melting and fine, with an un-
usual quantity of juice; in some soils, a little too as-
tringent; tree healthy and strong, bears well, and
the fruit ripens in October.

[This tree has borne with us fine melting pears, without as-
tringency, for two years past. Bears greatly on small trees.]

No. 59. **Moorfowl's Egg, of Boston.** — A pear
of medium size, oval form; the skin light green,
mixed with russet and brown next the sun; the flesh
tender, juicy and good; tree of vigorous growth, and
ripened in November. This we think cannot be the
pear of the same name cultivated in England and
Scotland.

[This variety is the "Long Green" of "Duhamel, and
other European authors."****]
No. 60. *Marie Louise.* — This is also one of the new Flemish pears; the size is large, the form long, tapering from the middle to the eye and stem; the skin is a dusky yellow, sometimes with a large portion of cinnamon russet; the flesh white, melting, juicy, and very delicious; the tree grows crooked,
and the leaves are small and generally hollowed like the bowl of a spoon; it is equal to any other pear of the season, European or American. Ripe in October and November.

No. 61. *Fulton.* — This pear originated on the farm of Mrs. Fulton, Topsham, Maine. The size is small, the form nearly round, a little lengthened, the skin entirely covered with dark russet; the flesh white, melting, juicy and well flavored; the tree bears well, and the fruit ripens gradually in the house, in October and November.

No. 62. *Bleeker's Meadow.* — A native fruit from New York; the size is small, the form round, somewhat flat; the skin, when fully ripe, is yellow; the flesh yellow, melting, juicy and high flavored. The growth of the tree is vigorous; it does not bear young, but as it increases in size it bears well. Ripening in October and November.

No. 63. *Harvard.* — This pear originated in Cambridge, Mass. The size is large, the form oblong, contracted in the middle, diminishing to an obtuse point to the stem, which is inserted in a small cavity; the skin is of a dull russety yellow, sometimes nearly covered with brownish red; the flesh white, juicy and fine, but subject to rot at the core, which is its only defect. The tree is uncommonly strong and upright in its growth; it attains a large size before producing fruit; it is then a great bearer. Ripe in September and October.
No. 64. *Dix.*—This fine pear originated in the garden of Mrs. Dix, in Boston; the size is large, oblong, tapering gently from the blossom end to the stem, which is short; the skin, when ripe, is yellow,
sometimes with a blush of red on the side exposed to the sun; the flesh melting, juicy, and very rich, with a high and most agreeable flavor. In perfection during the months of October and November. The tree is of slow growth, the wood small and thorny; it grows to a large size before bearing; it then produces plentifully.

No. 65. *Newtown Vergalieu.*—We should judge by the name that this pear originated on Long Island; it is of large size, round at the blossom end, tapering to a point at the stem, which is short; the skin of a pale yellow, seldom with a tinge of red; the flesh is sweet, rather dry, not highly prized as a table fruit, but excellent for baking. It ripens in the early winter months, and its productiveness renders it desirable in an orchard. The tree is crooked and strong in its growth, forming a large spreading head like that of an apple tree.

No. 66. *Fig Pear of Naples.*—The scions of this pear were received from the London Horticultural Society. In their catalogue it is described as first rate; the fruit is of large size, form oval, skin a dark brown, with a mixture of red; flesh melting, juicy and good; it is very productive, and bears young. Ripe in November and December.

No. 67. *Sylvanche Verte.*—Identical with No. 68.
No. 68. *Beurré Diel.* — One of the best of the new Flemish pears. The size is very large, tapering gradually from the middle to both the eye and stem, where it is full and thick; the skin, when ripe, of an orange color, with small russet spots; the flesh white,
sugary, rich and delicious; the tree is of a crooked but strong and healthy growth; it bears well, and the fruit ripens in November and December.

[This variety cracked with us in 1842; was fine, however, in 1843.]

No. 69. **Lewis.**—This pear originated on the farm of Mr. John Lewis, Roxbury, Mass. The size is small, the form round, a little oblong; the skin, when ripe, a greenish yellow; the flesh white, melting, juicy and good. The tree is of the most rapid growth; a great and constant bearer. The fruit ripens from November to February.

No. 70. **Prince's St. Germain.**—Produced from seed at the nursery of W. Prince and Sons, at Flushing, L. I. The fruit is of medium size; in form sometimes like the old St. Germain; the skin yellow, with patches of russet, and a dull red cheek on the side exposed to the sun; the flesh is melting and good, but not esteemed a first rate fruit; its abundant bearing, and its ripening gradually in the house during the winter, renders it a very valuable market fruit.

No. 71. **Echasserie.**—This is one of the old French table pears; the size is small, of oval form; the skin, at maturity, a greenish yellow; the flesh melting, juicy and sugary. It is a good bearer, and a favorite winter pear, ripening from December to March.
No. 72. *Passe Colmar.*—This is also one of the new Flemish pears; the size is large, the form round and full at the blossom end, contracting suddenly to the stem, which is about an inch long, and planted in a small and oblique cavity; the flesh is yellow, melting, sweet and excellent. The growth of the tree is vigorous, without any symmetry; its produce very great; it is a favorite, and deserves to be so. We have had them in eating from October to February.
FRUIT BOOK.

No. 73.
No. 73. Bourgmestre, of Boston. — A pear of large size, very long, round at the blossom end, tapering gently to a point at the stem, which is long and fleshy at its junction with the fruit; the skin greenish yellow, (on a quince stock it has a bright red cheek;) the flesh juicy and pretty good, but not rich. Ripe from November to January. This is not the Bourgmestre of the London Horticultural Society's Catalogue. We were inclined to discontinue its cultivation; but its abundant bearing, great size, and beautiful appearance, the two last seasons, have induced us to continue it for further investigation.

["Vicar of Winkfield," of the London Catalogue. The above is a fine market fruit.]

No. 74. Catillac.—This is one of the old French baking pears; it is very large, flat and round at the crown, diminishing rapidly to the stalk, which is an inch in length, obliquely inserted; the skin of a light green, nearly yellow when ripe; the flesh hard and suitable for baking from November till April; very productive.

No. 75. Surpasse St. Germain. — Introduced into England from Flanders, by the late John Brad-dick, Esq. It is of medium size, round at the crown, tapering to the stem, which is obliquely planted; it is of very irregular form; the skin is rough, yellow mixed with dull brown; the flesh coarse grained, sugary and high flavored; it produces abundantly, and the fruit ripens in December and January.
No. 76. *Winter Nelis.*—One of the new Flemish pears; the size and form is somewhat like the Seckel; the skin a greenish yellow, covered with dark spots; in some seasons they have a large portion of dull russet; the flesh yellow, melting, sweet, and very high flavored; a very fine pear, ripening during the months of December, January and February.

[This fine fruit with us averages larger than the "Seckel."]
No. 77. *Beurré d'Aremberg* — A new Flemish pear; in good ground it is usually of a large size; the form oblong, thick at the crown and stalk; the skin, when ripe, a dark yellow, mixed with russet specks; the flesh white, melting, rich and sweet. It is in eating during the winter months, and has the reputation of being one of the most valuable winter pears.
No. 78. *Easter Beurré.* — The size of this pear is large; of an oval form; the skin, when ripe, is dark yellow, covered with russet spots; the flesh yellow, melting and high flavored. It bears abundant crops, grafted either on the pear or quince; keeps till May, and is the most valuable late winter pear yet known.

[This variety was in eating with us in March, 1844. Melting and of fine flavor.]

No. 79. *Black Pear of Worcester.* — Fruit large, oblong; skin rough, covered with dull russet; the flesh hard and coarse; suitable for baking during the winter and spring; it produces abundantly; the branches of the tree, when loaded with fruit, bend to the ground like the weeping willow.

[This variety is more productive and better for general culture than No. 81, which has, in many localities, somewhat degenerated.]

No. 80. *Pound Pear.* — This is one of the largest pears: its origin unknown, but supposed to be European; the form oblong; some of the pears are thickest in the middle, tapering to the crown and stem; the flesh coarse and astringent. It is a great bearer, and the best winter baking pear, being one of the most profitable fruits for the market. The extensive cultivation of Nos. 79, 80, and 81, in large orchards, would produce greater and surer income, for the capital employed, than any other investment.
No. 81. *Beurré d'Amaulis.*—This new pear is said to have been received from France. Size large; color green, inclined to yellow, covered over with
numerous red or russet spots; flesh melting and juicy; flavor sweet and excellent; tree vigorous. Ripe in August and September.

No. 82. *Stevens’s Genesee.* — This pear, supposed to be a native fruit, having been first brought into notice by a Mr. Stevens, near Rochester, N. Y. It is an early fall variety, ripening the first of September; the size is large; flavor sprightly and good.
No. 83. *Flemish Beauty.* — *Belle des Flandres.*

This newly introduced pear is of large size; color greenish russet and handsome, ripening in October and keeping into November; the tree is vigorous,
and promises to be a great bearer; flesh yellowish white, sweet and excellent. One of the best pears, and should be found in every good collection.

No. 84. *Josephine or Jaminette.*—This new Flemish pear is of good size; flesh melting, flavor
sweet, not high; ripens in November and December; a good bearer, particularly upon the quince, and is a desirable variety.

No. 85. *Hunt's Connecticut.* — This early winter fruit, introduced by Dr. Hunt of Northampton, is a profitable variety for cultivation. The tree bears early and abundantly; fruit of medium size, rather oblong, and an excellent cooking pear late in the fall.

No. 86. *Beurre Romaine.* — This tree we received from Prince's Nursery, at Flushing, some years since, under the above name. It bears young and constantly. The fruit resembles somewhat in form, as well as in its time of ripening, the "Urbaniste," which name was affixed to specimens sent to the Massachusetts Horticultural Society. It is, however, a distinct variety, and resembles the "Bezi Montigny" more than any sort we have as yet seen, differing only in the deeper cavity around the stem. This fruit ripens in September and October, and is a fine melting pear.

No. 87. *Glout Morceau.* — A new Flemish pear; the size is sometimes large, the form rather oblong, round at the crown, diminishing suddenly to the stalk, which is inserted in an oblique cavity; the skin is a dull green, nearly yellow when ripe, mixed with russet blotches; the flesh white, juicy and excellent; the growth of the tree is crooked.
and bending; it produces well, and the fruit ripens gradually from December to February. The French nurserymen still continue the cultivation of this pear under the name of the Beurré d'Aremberg.

[There are a number of new varieties of Pears, of recent introduction, and of desirable kinds, which we have not as yet fruited; among them are the following:

- Belmont . . . . . November.
- Beurré Crapaud . . . December.
- Columbian Virgalieu . . December.
- Hacon's Incomparable . November and December.
- Beurré Bronze . . . Winter.
- Van Mons Leon Le Clerc . Winter.

This last is said by Thompson, of the London Horticultural Society, to be "the best pear in the world, combining the properties of large size, handsome appearance, and rich flavor."

- Lawrence . (Native Fruit) December to February.
- Mac Laughlin " "
- Muscadine . . . . . September.
- Ambrosia . . . . September and October.
- Althorp Crassane (Knight) November and December.
- Comte de Lamy (Lon. Hor. Soc.) September and October.
- Passans du Portugal . . August.]

THE PEACH.

The peach is generally supposed to have originated in Persia and China; some, however, have considered it really indigenous to America. Hennipen, who has given us the first description of the re-
regions of Louisiana, in his voyage down the Mississippi, describes the peach he observed *in all parts* of those regions, as being of immense size, which has led some to conclude, that as those latitudes correspond with the part of Asia, where this tree is deemed indigenous, they are natural to Louisiana. Botanists, in common with the French cultivators, regard the peach and nectarine as merely varieties, and not distinct species. Scientific cultivators of Europe have endeavored to make an arrangement of this fruit into divisions, and sub-divisions. With us this would seem to be a difficult process, as thousands of sub-varieties are constantly being produced from the seed, and we therefore ordinarily make but two divisions, under the terms freestone, and clingstone; *the former*, those whose pulp or flesh separates freely from both skin and stone; *and the latter*, those whose flesh is firm, and adheres both to the skin and stone. It would also be exceedingly difficult to make a correct systematic arrangement of the kinds found in the nurseries, as those known in many nurseries by one name, are distinct varieties. We have received from different sources, the "Noblesse," and the "Vanguard," which, upon fruiting, appeared identical; the "Early York," and "Early Royal George," one and the same. We do not, however, mean to be understood that it is difficult to depend upon obtaining fine fruit, but simply that there is so much confusion as to the original names, that it is next to impossible, (as so many varieties nearly or quite approximate to each other in quality, time of
ripening, &c.) that an entirely correct catalogue can be expected. The Grosse Mignonne, a superior fruit, is called by McIntosh, (in consequence of the great number of its synonymes,) "The Peach of an hundred names." Nearly, if not all those, however, which are cultivated in the nurseries as early fruit, are of fine quality. Late peaches, such as Heath's clingstone, Ward's late red, and some others, are hardly worth setting in this region, as they will not ordinarily ripen their fruit. The peach tree should be trained low, as in high training they are exceedingly apt to die from the lower branches upward. When small trees are set, they should be carefully examined, to see if any gum exudes, and the worm which causes it cut out. A box, without top or bottom, or, in other words, four pieces of wood, from eight to ten inches in height, should be placed around the tree, sunk about two inches below the surface, into which place fine charcoal, which will ordinarily keep out the borer, who generally enters the tree at, or near the surface of the ground. We have protected our trees the past season from the worm, by taking thin lead, (such as we find in tea chests,) and cutting it into strips of nine inches in width, bending them close around the tree, three inches below the surface of the ground, extending upon the trunk six inches above the earth.

In order to keep this tree low, the long shoots should be shortened in July, to about one half their length, always cutting at or near a single, and not a double bud. Young peach trees should never be
placed upon the site of old roots of others. They thrive best in new virgin soil, not highly manured. In light and dry soil, early autumn planting will answer, but early spring we generally prefer. Care should be taken in transplanting, *not* to place the roots too deep in the soil, for from this circumstance more trees are injured than by almost all other modes of planting put together. The following are among the most desirable kinds.

| Crawford's Early Rareripe. | Hastings's Rareripe Rareripe President. |
| Early Royal George. | Red Cheek Melacaton. |
| Red and Yellow Rareripe. | Washington Freestone. |
| Early York. | George the Fourth. |
| Malta, or Maltese. | |

No. 1. *Early Ann.* — This is a small round fruit, with a greenish white skin; flesh melting and good. The tree does not attain a large size; a freestone, ripe in August.

No. 2. *Early Royal George.* — The size is large, the form round, the skin of a bright yellow, with a large portion of deep red on the side exposed to the sun; the flesh melting and delicious; it is a great bearer, and one of the most superior peaches we have ever raised; a freestone, ripe in August.

No. 3. *Red Rareripe.* — This is a large freestone peach; form nearly round; the skin of a very bright yellow, with a light red cheek; the flesh very rich and excellent. Ripe in August.
No. 4. **White Rareripe.**—This peach is of large size, the form somewhat oblong, the skin a pale yellow, nearly white; flesh white, juicy and of fine flavor. Ripe in August.

No. 5. **Red and Yellow Rareripe.**—A large round freestone peach; the skin of a deep orange yellow, with a dark red cheek; the flesh deep yellow, rich, sweet and luscious. The tree is an abundant bearer; and a most valuable peach—ripening in August.

[This variety ripens with us nearly a month earlier than the Royal George Freestone.]

No. 6. **Grosse Mignonne.**—This is a large, round and most beautiful freestone peach; the skin deep yellow, with a brownish red cheek next the sun; flesh light yellow, fine and delicious. A peach of the highest character. Ripe in August.

[This sort, and the Malta, are our best peaches.]

No. 7. **Red Cheek Melacaton.**—A large freestone peach, of an oblong shape, the skin of an orange yellow, with a dark red cheek; flesh yellow, melting and rich. Ripe in September.

[This variety has not ripened with us for the past two years until the last of October. It is the best late peach we cultivate.]

No. 8. **Malta.**—This peach is of a large size; form round, rather flat at the stem; the skin a light
green, mottled and blotched on the sunny side with
dull red; the flesh greenish yellow, red next the
stone, with a most superior flavor; a freestone peach.
Ripe in September.

[This variety, although not a great bearer, is the most deli-
cious peach in our grounds.]

No. 9. President.—A large and most superior
freestone peach; the form roundish oblong; the
skin pale yellow with a bright red cheek; the sur-
face covered with small red spots, which give it a
rich and beautiful appearance; the flesh white and
high flavored; one of the best of peaches. Ripe in
September.

No. 10. Belle de Vitry.—This peach is of
large size; the form round, a little oblong; the skin
a dull yellow and red; the flesh melting, juicy and
excellent; between a freestone and clingstone. Ripe
in September.

No. 11. White Blossom.—Of medium size,
oblung; the skin a very light yellow, nearly white;
the flesh white, melting and extremely juicy, with a
most agreeable acidity. Ripe in September. We
have found this a hardy peach, and most certain
bearer in our climate. We have for several years
reproduced them from the stone. The blossoms
are clear white, and the young wood resembles that
of the willow tree.
No. 12. *Orange Freestone.*—This peach is of medium size; the form round; the skin a deep orange yellow; flesh yellow and sweet, but rather dry; a beautiful and good fruit. Ripe in September.

No. 13. *Congress Clingstone.*—The size is large, form round; skin yellow and bright red; flesh rich and excellent. Ripe in September.

No. 14. *Oldmixon Clingstone.*—Large, round and rather flat; skin whitish yellow, with a bright red cheek, beautifully spotted with red dots. Of all the clingstone peaches this is the most delicious; a great bearer, ripening its fruit gradually in September. We have cultivated this peach, and the Catharine and old Newington, and could never perceive any difference in the fruit or trees.

No. 15. *Heath Clingstone.*—Fruit large, oblong; skin of a delicate cream color, sometimes with a faint blush on the sunny side; flesh rich, very juicy, and fine flavored. Ripe in October, and we have eaten them produced in our own orchard in the highest perfection, on Thanksgiving day, November 30th.

[This sort rarely ripens upon open standards.]

The nectarine and the apricot, so nearly allied to the peach, we should not recommend for cultivation upon standards, but inoculated upon the plum stock,
and trained as espaliers upon walls or fences. They often produce fine fruit, particularly the apricot. The following are among the best varieties of the latter fruit: — Peach, Apricot, Moorpark, Holland, and Hemskirke.

Added to the list by the compiler.

No. 16. *Crawford's Early.* — This is a large sized fruit, the form round, the skin of a beautiful bright yellow, with a large portion of red on the side exposed to the sun; the flesh melting; a freestone, and a popular early variety, ripening in August.

No. 17. *Cooledge's Favorite.* — A large sized, rather oblong peach, of fine flavor, and a popular fruit in the market. Ripe in September.

No. 18. *Early York.* — The peach we cultivate under this name resembles the Royal George, in form, flavor, color, and time of ripening; it is, however, a much greater bearer, and is the most profitable variety for fruiting we possess.

No. 19. *George the Fourth.* — An excellent peach, of medium size, and globular shape, of a pale yellow color in the shade, and dark red next the sun; flesh yellow, but red at the stone, from which it separates. Originated in New York; ripe in September.
THE PLUM.

The native country of the plum is supposed to be Asia. The majority of our finest varieties have been introduced from France. Of sixty-four sorts, described by Professor Bradley, not one has other than a French name. Since his time, however, a great variety have been produced in England and in this country, and new sorts are constantly being produced. Corse, of Montreal, has brought forward many fine plums. Among those kinds which have originated from seed in our country, the Washington, Imperial, Bleeker's, Cooper's, Roe's Autumn, Cruger's Scarlet, Pond's Seedling, and Corse's varieties, are among our best native plums. The plum tree flourishes best in a rich sandy loam, neither too dry nor too moist; a cold, wet, clayey soil, or dry sandy situation, is not so favorable. They appear to thrive best in our neighborhood, near the borders of the sea; which we think is owing to their being in such situations not so subject to the insect called curculio, which perforates the fruit. We have since 1841 applied annually, in the spring, coarse salt around these trees, with good effect, spreading upon the top of the ground, as far as the branches extend, about one inch in depth, and in the course of a fortnight after its application, turning it under the surface nearly the depth of a spade. In 1843 we fruited thirty varieties, all ripened, with the exception of Coe's Late Red. The following, from a
practical cultivator of this fruit, we would recommend:—"When this tree has arrived to maturity, and ready to bear, the soil around, to the spread of the branches, should be thrown into a hard texture of the consistency of a gravel walk. A pig or poultry yard, with a hard pan, is a fine position for a plum nursery. The advantages are, a more stinted, and, consequently, a less exuberant growth of the branches, a greater supply to the fruit, and a prevention, in some degree, from the attack of the curculio, as that insect, not meeting with a proper soil to deposit its egg, will take shelter elsewhere."

Removing the soil from around these trees to the extent of its branches, even to the laying bare the top roots, and filling the hole with fresh sea mud or salt sand, is found beneficial to the production of its fruit. Many set their plum trees too deep, particularly in rich soils, causing them to produce strong watery shoots, growing so late as to be imperfectly ripened. "They require," says Kennedy, "like all other stone fruit, to be planted on a dry sub-soil; in such situations they bear high flavored fruit in great quantities. They are not so large as when planted in strong earth, but the quality and richness of the flavor make amends for that deficiency." M'Intosh observes, "That in planting this tree the tap-roots should be shortened, and the others spread out in a regular manner near the surface, so that they may enjoy the warmth of the sun, heat and air, which is necessary for the welfare of all fruit-bearing trees. If planted in too rich a soil, they become so luxuri-
ant in growth, as to require immoderate pruning to keep them within due bounds; and excessive pruning, in such cases, only tends to aggravate the evil."

Plum trees are subject to a disease which has been so destructive to them, as to have destroyed nearly all the damson plums heretofore so common in our neighborhood. It appears at first a greenish brown excrescence, which soon becomes black. Various are the hypotheses which have been given as to the cause of these warts. Some have attributed it to the quality of the soil, others to a redundance of nourishment, which distend the cutaneous vessels by an extravasation of the sap; others to a much more rational and philosophic solution, attributing it as the work of an insect. In our examinations, &c. for five years on this subject, it was not until the spring of 1843 that we were able to find an insect in these excrescences while in a green and fresh state; and have heretofore been inclined to adopt the theory of the distension of the cutaneous vessels, considering the worms which we have repeatedly found in these warts, when black, to be a consequence and not a cause of this disease. We now consider this excrescence analogous to that which we find upon the swamp pink, or azalea, called by boys swamp apples, which has always been supposed by botanists to be caused by an insect. The only remedy that we have found effectual has been the amputation of the diseased limb. These excrescences always extending themselves upwards, and not downwards, upon the branches, would seem to prove that the disease
either enters, in some manner, into the circulation, or that the insect always ascends.

We have not, as yet, found any variety that is entirely exempt from this fatality, but some appear to be more subject to it than others; which may, however, be attributed more to the locality than to any thing else. One thing we feel confident of is this, that the most effectual way of eradicating them from our gardens, is not only to examine the trees carefully in spring, cutting off every branch as soon as they appear upon it, but inducing those who may have them in their inclosures contiguous to ours, to do the same. Among the kinds which have fruited with us, we would recommend the following:

Green Gage, Imperial Gage,
Purple,
Bolmar's Washington, Violet Perdrigon,
Italian Damask, Orleans,
Coe's Golden Drop, Large Long Blue,
Blue Imperatricc, Roe's Autumn Gage,
Cruger's Scarlet, Duane's Purple,
Sharp's Emperor, Red Gage,

No. 1. _Italian Damask._—Fruit of medium size, round; skin dark blue, nearly black; stem half an inch long, inserted in a small round cavity; flesh yellow, juicy, and high flavored. A freestone, a great bearer, and one of the best early plums. Ripe in August.

No. 2. _Morocco._—A fine and very productive variety; the size is rather small, nearly round; the
skin a dark purple, covered with a blue bloom; flesh greenish yellow, juicy and good. A clingstone, ripening in August.

No. 3. Prince’s Imperial Gage.—Originated at the nursery of William Prince & Sons, Flushing, N. Y. Fruit nearly as large as the yellow egg plum; of an oval form; when fully ripe the skin is yellow, with streaks of bright yellow and green indistinctly seen; the flesh rich and sweet. The most productive and profitable of all the plums. Ripe in August.

[This variety succeeds well upon the peach, budding it as near the root as possible. We have trees received from Albany for Jenkinson’s Imperial, which are identical with this plum.]

No. 4. Brevoort’s Purple Washington.—Produced from the stone of Bolmar’s Washington, by Mr. Brevoort, of New York. Fruit of large size; form round, and nearly oval; skin dark blue, covered with a bloom; the flesh sweet and good. A free-stone, ripening in September. The tree is of vigorous growth and very productive.

No. 5. Orleans.—This is a well known and productive plum; the fruit is sometimes large, the form round, the skin dark, approaching to a purple, with a thin blue bloom; the flesh yellow, firm and good, with some astringency near the stone, from which the flesh separates. Ripe in August.

No. 6. Kirk’s Plum.—Fruit large, round; skin
dark purple, covered with a dense bloom, which adheres firmly to the skin; flesh yellow, juicy and rich. A very productive freestone plum, ripening in August.

No. 7. *Purple Gage.*—Fruit of medium size, nearly round, a little flattened at the ends; skin of a violet color, with a light blue bloom; the flesh greenish, rich and high flavored. A first rate freestone plum, a great bearer. Ripe in August.

[This sort, and No. 9, are the finest flavored plums in our collection. This variety hangs longer upon the tree than the Green Gage.]

No. 8. *Large Long Blue.*—The origin of this fine plum is uncertain. The tree which produced the specimens was procured from the nursery of the Messrs. Landreth, Philadelphia. The size is large, the form oval, very long; the skin blue, nearly black, covered with a thick bloom; the flesh yellow, rich and excellent; it hangs a long time on the tree, ripening gradually, and is well adapted to the market, bearing carriage better than most other plums. It is a great bearer, a freestone. Ripe in September.

No. 9. *Green Gage.*—The finest of all plums; of medium size, round; the skin a greenish yellow, when very ripe nearly yellow, mottled with red near the stem; flesh sugary and of delicious flavor. In our own exposed grounds, and in grass, it bears abundant crops, not being subject to rot like many
fine plums. A freestone, ripening in August and September.

[The varieties of plums which we have received from Europe under the names of Drap d'Or, and Golden Gage, have proved to be the above. We have a tree received from the South, for the Green Gage, that produces fruit resembling the Yellow Gage of the London Horticultural Society's Catalogue.]

No. 10. *Bleeker's Gage.* — Produced from seed by the Rev. Mr. Bleeker, of Albany, N. Y. The form oval, nearly round; skin a dark yellow, with dark red spots and blotches; the flesh is rich and excellent, a great bearer. Ripe in September.

No. 11. *Cooper's Plum.* — Produced from a stone of the Orleans, by Mr. Joseph Cooper, of New Jersey; the size is very large, round, a little oblong; the skin a dark purple; flesh greenish yellow, rich and good. It ripens in September; produces abundant crops; but is very subject to rot at the period of ripening.

[We received this fruit from Europe under the name of "La Deliciouse." ]

No. 12. *Elfrey.* — This is a plum of small size and oval form; the skin dark blue; the flesh dry, firm and of fine flavor. The trees produce abundantly. A freestone — ripening in September.

No. 13. *German Prune.* — Fruit of medium size; form oval, diminishing towards the stem; the
skin purple with a blue bloom; the flesh rich, sweet and delicious. It produces abundantly; it begins to ripen in August, and can be eaten from the tree for a month or more.

No. 14. Duane's Purple.—This is a plum of an extraordinary size; the form round; the skin a dark purple; flavor good. The origin of this plum is uncertain; it ripens in September, and has the reputation of being a fine fruit.

No. 15. Bingham.—Fruit large; the form oval; skin a bright yellow, spotted and blotched with red; the flesh yellow, rich and delicious. A clingstone—ripening in September.

No. 16. Washington.—This very superior plum originated in New York; the size is very large; form oval; skin an orange yellow, speckled with red; the flesh yellow, sweet and excellent; highly esteemed as a first rate plum. Ripe in September.

No. 17. Italian Prune.—The size is large; form oblong; the skin dark purple, covered with a bloom; flesh greenish yellow, firm, dry and fine. It bears well, and the fruit ripens in September and October.

No. 18. Diamond.—This new plum originated in England; it is of the largest size, oblong; the
skin purple, nearly black, covered with a thick bloom; the flesh firm and good, but not rich; the tree is of rapid growth—an extraordinary bearer. The fruit ripens in September.

No. 19. *Blue Imperatrice.*—Fruit of medium size; shape oblong, tapering to the stem; the skin a dark purple, covered with a light bluish bloom; the flesh yellowish green, firm, rich and sweet. A clingstone. A great bearer. It hangs on the tree a long time, and is in use in October and November.

[This variety bears greatly upon small trees.]

No. 20. *Coe's Golden Drop.*—This beautiful new plum is of large size; the form is oval, with unequal sides; the skin a golden yellow, spotted with rich red points and small blotches, on the sunny side; the flesh yellow, sweet and delicious. A clingstone—an abundant bearer. Ripening gradually in September, October and November. Of all the late plums this is decidedly the best and the most profitable which can be cultivated.

[This variety, as well as No. 19, requires a warm exposure to ripen its fruit. The tree makes a great growth when worked upon the peach root.]

The following varieties are added to this edition.

No. 21. *Cruger's Scarlet Gage.*—This showy scarlet plum, of the size of the green gage, and a
great bearer, originated near Newburgh, N. Y. Flesh yellow, sweet, and of good flavor, ripening from September to October, and is the least liable to drop from the tree than any other in our collection.

No. 22. *Roe's Autumn Gage.* — This plum we received from A. J. Downing, & Co. Newburgh, N. Y. It is a fine, late fruit, coming into eating just after the above variety; the form is oblong, color orange yellow, good size, and great bearer; flavor sweet and rich, ripening in October.

No. 23. *White Sweet Damson.* — This seedling plum is a great bearer, ripening gradually from September to October; flavor sweet, not rich; color light yellow, but its fruitfulness and its early bearing render it worthy of cultivation. Raised in Essex county, Mass.

No. 24. *Sharp's Emperor.* — The fruit of this variety is of the most beautiful red; form inclined to oval, resembling the imperial gage; flavor sweet. The tree bears well, and is worthy a place in every fruit garden.

No. 25. *Dana's Yellow Gage.* — This plum, a native of Ipswich, Mass., we received from Mr. Manning; and it is said to be exempt from the warts which injure most trees. We have not, as yet, observed any of these excrescences upon the tree, which is large. The fruit is of a pale yellow color, medium
size, flesh juicy and sweet, and the tree promises to be a good bearer.

PLUM STOCKS FOR PEACHES.

In England, where peaches are invariably raised upon walls, or trellises, they almost universally make use of the plum as a stock to graft upon. In our country, where peach trees grow so luxuriantly, we should not recommend this stock, as the scion not only overgrows it in a short time, producing an unsightly appearance, but is exceedingly apt to be blown down by the wind; the roots of the plum being of a much slower growth, are not sufficiently large and expanded to support the larger top or branches.

Budding the peach upon this stock, even to the height of six or eight inches from the ground, we have found no security from the ravages of the borer, as that insect will pass over the plum, and enter into the peach at, or just above the junction. We have generally preferred to bud on stocks of seedling peaches, considering them decidedly superior to the plum, particularly when wanted for standards.

THE CHERRY.

The wild cherry is a native of many parts of the world, and has been cultivated in the East from the Christian era. Cherries were exposed in the streets
of London in 1415, much in the manner they are at present. McIntosh remarks, that cherries have not multiplied so fast into varieties as most other fruits. Forsyth describes eighteen sorts; Lindley twenty-eight; Nicol eight; Rogers twenty-five; the Horticultural Society of London, fifty-seven; and Loudon, twenty-three. This tree will accommodate itself to a variety of soils, but the best is that of a light loam upon a dry sub-soil, and in an airy exposure, not shaded by larger trees. In planting this, as with other fruit trees generally, we prefer the autumn for light soils, and spring, for those of a heavy and wet nature; and also to transplant in moist weather. Standard cherries, when once established, require very little pruning. They in general produce fruit upon spurs which proceed from the sides of the two year, three year, and older branches. These spurs continue to make their appearance along the whole length of the shoots. It should be borne in mind that immoderate pruning is highly injurious to the cherry, and also to the plum. The following are some of our best varieties of cherries.

Black Tartarian.  Napoleon.
Honey Heart.  Mottled Bigarreau.
Black Eagle.  Manning’s Fine Red.
Elton.  Davenport’s.
Black Heart.  Gridley.
White Bigarreau.  Manning’s Black Bigarreau.

No. 1. *Mayduke.* — Fruit of medium size, round; the skin, when fully ripe, very dark red; the flesh tender, juicy, and good. It is very productive, and the fruit ripens the last of June.

No. 2. *Davenport’s.* — This fine cherry origi-
nated on the farm of Mr. Davenport, in Dorchester, Mass.; the fruit is large, skin bright red; the flesh firm, and of excellent flavor. It is an early and most extraordinary bearer. Fruit ripe early in July.

No. 3. Black Tartarian.—One of the finest and most productive cherries; the size is large, heart-shaped; the color, when fully ripe, is black; flesh dark red, tender, and of superior flavor. Ripe early in July.

No. 4. Napoleon Bigarreau.—The tree of this variety is remarkable for the vigor and beauty of its growth; the leaves are large and smooth. It is a fine large white cherry, ripening in July. As they have just come into bearing upon small trees, we cannot as yet say how productive they may be.

[This variety is more productive in our soil, than No. 3.]

No. 5. Black Heart.—A well known and favorite cherry, of medium size; the skin, when at maturity, is black; flesh dark red, tender, and of fine flavor. Ripe in July. Very productive. We seldom see this cherry brought to market perfectly ripe; when suffered to remain on the tree till they have acquired their proper color, they are very superior.

No. 6. Florence.—This cherry resembles the White Bigarreau, but is a little more oblong; the flesh more tender, and ripens a few days earlier. Very fine and productive.
No. 7. *Elton.* — A new and very fine cherry, raised by Mr. Knight, President of the London Horticultural Society. It is of medium size, long heart-shape; of a beautiful cream color, marbled with bright red next the sun; flesh rich and excellent. It is ripe about the first of July, and promises, when the tree has attained a proper size, to be a great bearer.

No. 8. *White Bigarreau.* — One of the largest and finest cherries; the form obtuse, heart-shaped; skin pale yellow, with a bright red cheek; flesh very firm, juicy, sweet and fine flavored. Ripe in July. This cherry has the reputation of being a bad bearer. In our orchard it bears abundantly, and, owing to the hardness of its flesh, is not liable to injury from birds; on this account it is highly deserving of cultivation.

No. 9. *Black Eagle.* — This is a new cherry. The size is sometimes large, shape nearly that of the black heart; skin a very dark purple; flesh tender, of superior flavor; the young trees bear well. Ripe in July.

No. 10. *Gridley.* — Originated on the farm of Mr. Gridley, in Roxbury, Mass. Fruit of medium size, nearly round; skin black; flesh firm, rather dry, of good flavor, and a most abundant bearer. Ripe in July.
No. 11. *Downer.*—This fine cherry originated in the garden of Samuel Downer, Esq. in Dorchester. It is a large, round cherry, of a light red color; flesh firm, and of a fine sprightly flavor. It ripens in July, and is very productive.

No. 12. *Late Duke.*—The size is large, heart shape, rather flat; the skin a shining dark red; flesh tender, juicy and good. It is a great bearer. Ripe late in July.

No. 13. *White Mazzard.*—A new fruit, which originated in the Pomological Garden, from a stone of the White Bigarreau; it is of the size, form, and color, of the Elton; the tree is of a handsome and upright growth, and bears well. Ripe in August.

No. 14. *Plumstone Morello.*—This is the largest and finest of the acid cherries; the skin is very dark red, when fully ripe it is nearly black; flesh dark red, and of a sharp, rich, and agreeable flavor. A great bearer; it remains late on the tree in a sound state.

Added by the compiler of this edition.

No. 15. *Manning’s Black Bigarreau.*—This cherry, a seedling from the White Bigarreau, is of a fine sprightly flavor, flesh firm, a great bearer, not subject to rot at the time of ripening, which is in the middle of July.
No. 16. *Mottled Bigarreau.*—This is also a seedling of Mr. Manning's from the White Bigarreau; it is a superior large and sweet cherry, ripening from ten days to a fortnight earlier than its parent, and less liable to rot on the tree; we consider it as good a variety as we possess. Ripe in July.

No. 17. *Early Red and Yellow.*—Fruit medium size, obtuse, heart-shaped, light red on a yellow ground; sweet and juicy, a great bearer, and the earliest cherry we cultivate, ripening in June. This variety was raised by Mr. Manning from the seed of the White Bigarreau.

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**THE GRAPE.**

Great difficulties are attendant upon the raising of foreign grapes in the open air, except in our cities, where, *occasionally,* a crop is obtained of the Chasselas or Sweetwater. In this compilation we intend to confine ourselves to out-door culture, and of the variety which we have cultivated for ten years past, viz., the "Isabella," a native grape, introduced from South Carolina some years since by William Prince, of New York. This vine is extraordinary for the vigor of its growth and great productiveness. A single one planted on Long Island, produced, in 1820, eight bushels. It is a late fruit, and consequently in a shady situation, or upon an open trellis, rarely ripens its berries. It should be trained to a
wall, fence, or outbuilding, where it can receive the sun's rays nearly the whole day, at least from nine o'clock in the morning to three or four in the afternoon. We recommend this grape, from the circumstance that we have never, as yet, been able to find any other variety which, upon the whole, is preferable. The "Catawba," considered by Adlum to be worth all others as a wine grape, we have found to be a still later variety, having cultivated it for two years without ripening a single bunch. In the cultivation of the Isabella we have found the following method, (which we tried a few years since,) to accelerate the growth of this vine, as well as its flowering, viz. — Remove the top earth from around the trunk as far as the roots extend, and then place large stones upon the surface, watering occasionally, particularly in dry weather, with soap suds. These stones retain the heat, which they received from the sun's rays during the day, a great part of the night. We know of no fruit which will, with such certainty, annually produce a crop, as this variety of grape. This vine is so luxuriant in its growth, and the immense quantity of wood which it annually produces, requires frequent use of the pruning knife, as it will always set more fruit than it can bring to maturity, which but serves to weaken and exhaust the plant. The importance attached to this point of culture, in reference to the capability of the vine for fruiting in foreign countries, as stated by Miller, is "That when gentlemen let out vineyards, there is always a clause inserted in their leases, to direct how
many shoots shall be left upon each vine, and the number of eyes to which the branches must be shortened.” This is done to prevent the exhausting of the roots, and rendering them so weak as not to recover their wonted strength for several years. The pruning of the Isabella grape here is generally done in the fall, which should be done at or soon after the gathering of the fruit; for by this early pruning, the buds are said to push earlier in the following spring. We have generally performed this in March. This season is often objected to, from the fear of their bleeding; this, however, rarely takes place, provided it is performed early, and the section which is laid bare be presented to the sun’s rays, which will almost invariably close up the sap vessels. They should, therefore, be cut from the outside, inward, in an oblique direction.

In the cultivation of this grape, we have found that the shoots which come out from the main stock, nearest the ground, should be trained up for annual bearers, and that in the summer pruning, the laterals which spring out from the joint upon the strong wood should not be broken out close to the fruit bud for the next season, (as is often done to the loss of fruit,) but cut off above the first joint. The laterals or side shoots containing bunches of fruit, (two bunches, at the most, should be suffered to remain upon one shoot,) should be topped when they are about six inches in length, always leaving one joint beyond the fruit; the tendrils should also be taken off near the branch, for if left they will often entwine themselves round the adjacent shoots, and cripple
them. The proper soil for the grape vine is of more importance than is generally supposed; for, as Hoare remarks of English culture, (which will apply in a great measure to our own,) "that vines may be seen in all parts of the country, the fruit on which looks well during the early part of the season; but when the ripening season arrives, the berries become green and hard, or otherwise they shrivel and decay. These results are sure to be produced when the roots grow in a soil that is too wet and adhesive, and into which the sun and air cannot freely penetrate."

The Isabella vine will grow most luxuriantly in rich, deep soils, producing large shoots and leaves, but the shoots and fruit ripen later, if they ripen at all. The best soil we consider to be that of a light loam, not deeper than twenty inches, mixed in with bones, old mortar, oyster shells, &c. "Retentive clays," as Loudon justly observes, "are the worst soil for the vine;" they are particularly so if upon a wet and cold sub-soil.

The grape is easily raised from cuttings; these must be taken from shoots of the last summer's growth, taken off the vine previous to the swelling of the buds in the spring; shorten these to three joints, and, when they admit, let each cutting have about an inch of the previous year's wood at its bottom; they may be planted either in nursery rows, or in places where they are finally to remain, observing to plant them somewhat slanting, and so deep that only one joint or eye may appear above ground. Vines are also propagated by layers of young shoots, or with part of the branch they proceed from; laying
them from three to four or five inches deep in the earth; leaving three eyes of the shoot out of the ground, and shortening the top if too long. Or, you may make layers in large pots, placed near the vine; and either draw the layer shoot through the hole at the bottom of the pot, and fill up the pot with earth, or bend the layer into the top of the pot a proper depth into the earth. In the former method, a strip of bark should be taken off quite round the branch, or a piece of wire drawn tightly around, at the place where the roots are wanted. In either method, when the layers are rooted next autumn, cut them off from the parent vine.

Upon the subject of manuring vines, the following, from one of the most distinguished writers on Agricultural Chemistry of modern times, Doctor Justus Liebig, of Europe, appears to us rational, as it seems to follow nature in her modes of enriching the soil.

"I remember, (says Fauenfelder,) that twenty years ago, a man called Peter Muller, had a vineyard here, which he manured with the branches pruned from the vines, and continued this practice for thirty years. His way of applying them was to hoe them into the soil, after having cut them into small pieces. His vineyard was always in a thriving condition; so much so, indeed, that the peasants here speak of it to this day, wondering that old Muller had so good a vineyard, and yet used no manure."

Another example of this method of manuring
vines, is from Wilhelm Ruff, who says, "that for the last ten years, I have been unable to place dung on my vineyard, because I am poor, and can buy none. But I was very unwilling to allow my vines to decay, as they are my only source of support in my old age; and I often walked very anxiously among them, without knowing what I should do. At last, my necessities became greater, which made me more attentive, so that I remarked that the grass was longer in some spots, where the branches of the vine fell, than on those where there were none; so I thought upon the matter, and then said to myself, if these branches can make the grass strong and green, they must also be able to make my plants grow better, and become strong and green. I dug, therefore, my vineyard as deep as if I would put dung into it, and cut the branches into pieces, placing them in the holes, and covering them with earth. In a year I had the very great satisfaction to see my barren vineyard become quite beautiful. This plan I continued every year, and now my vines grow splendidly, and remain the whole summer, green, even in the greatest heat. All my neighbors wonder very much how my vineyard is so rich, and that I obtain so many grapes from it; and yet they all know that I have put no dung upon it for ten years."

This proves, says Liebig, that a vineyard may be retained in fertility without the application of animal matter, when the leaves and branches pruned from the trees, are cut into small pieces and used as a manure.
THE QUINCE.

This fruit is a native of Austria and other parts of Europe, and was introduced into England at an early period, from whence we probably received it. They are said to have been early used in Europe for hedges and fences to gardens and vineyards. The medicinal properties of this fruit was at one time in repute. There are two well known varieties, viz.: the apple or orange, and the Portugal or pear-shaped. The former, which is the best known in New England, has leaves of a more ovate form, and bark of a lighter color than those of the latter. They both produce the finest fruit when grown in a soft moist soil, and warm exposure, and can be produced by cuttings in such soil. These trees, or bushes, should be planted from ten to twelve feet apart, requiring little pruning. They should, however, be kept free from suckers, and all old decayed wood. They are easily grafted under the bark in early spring, or budded in August and September. The orange we have considered to be earlier in its ripening, and larger sized fruit than the Portugal. McIntosh remarks that he has always observed the quince to succeed the best on the alluvial banks of rivers. There has been an increased attention to the cultivation of the quince, for a few years past, as a market fruit.

THE RASPBERRY.

This fruit, which has improved greatly under cul-
tivation, is easily grown, as the old plants send up, annually, a plenty of suckers from their roots, which should be taken up in autumn or spring, and planted where they are to remain. Among the varieties which we have seen, the Franconia Red, Gowen's Seedling, (which resembles this variety) and the White Antwerp, are the most desirable sorts. In the selection of young sucker shoots to set in the spring, choose those that are of strong growth, from three to four feet high, detached from the old stools with good roots, prune the top to the first good bud, plant them in rows four feet and a half, or five feet asunder, by three feet; prune out all dead stems, of the last summer bearers, from the old roots, as the same shoots or stems never bear but once, being succeeded by young shoots produced from the root, every summer, which becomes barren next year, and perishes the following winter, and should be now cut out as above, close to the ground; part of the young shoots should also be cut away, leaving but four or five of the strongest on each stock. Prune off the tops of those that remain, leaving them about five feet high, which increases the size of the fruit, as well as to encourage the growth of suckers for the following year. This cutting, however, should not be done in the spring, until all chance of severe frost is over. The stems should afterwards be tied lightly together at the top, or to stakes placed in the ground. With regard to the proper soil for this fruit, different opinions have existed. McIntosh says, "all that is required, we think, is a deep, rich, and humid soil,
for upon shallow, dry, and poor soils, they neither produce such fine fruit, nor do the plants last as long. In deep alluvial soils, this fruit attains a perfection seldom seen elsewhere."

Cultivators generally approve of a soil of the above description, and most of them recommend a situation either naturally or artificially shaded. This is very necessary here, under our July and August sun, that the plants should be grown in a half shady position. Some cultivators, with the view of obtaining large fruit, cut away all the suckers, and also the young wood; by that means larger fruit is obtained, but the plants are rendered useless for future bearing, and are consequently destroyed, and fresh plantations must be formed.

STRAWBERRY.

There are numerous varieties of this fruit, and new sorts are constantly being produced in Europe, as well as in our country. The late president of the London Horticultural Society, of London, Thomas Andrew Knight, had not less than four hundred varieties of this fruit in his garden, almost all of his own raising. Few plants multiply more readily than the strawberry, either by suckers from the main stem, or by runners, which extend to a considerable length, and strike root at every joint, from which a new plant springs. These, when rooted, are separated from the parent, and planted out where they are to remain. They are also in-
creased by seeds; but unless, in the case of the Wood, and Alpine sorts, this is rarely attempted. These sorts are thus raised by many. The seeds are sown in the spring, in a bed of light, rich mould, and by August the plants will be of a proper size for setting out. These differ from other sorts in quickness of bearing, as most others sown in the spring, will not produce fruit under two years. The Alpine will continue to bear fruit throughout the season; but although a constant succession of fruit is obtained through the season of vegetation, the supply is but very limited, and it is consequently not a profitable variety for common culture. There are a number of fine varieties in general cultivation, prolific, and of fine flavor. Among those we should recommend Hovey's Seedling, a new and very large variety; Bishop's Orange, Warren's Seedling, and the Early Virginia; these are all desirable sorts; the last named variety is generally considered to be the most profitable for an early market strawberry.

"With respect to the season for planting this fruit, opinions are somewhat at variance; some recommending autumn, and others, spring; (we prefer the latter in our region.) If the plants are strong, and have been selected from the earliest runners, they will succeed very well if planted in the fall. Garnier, an English cultivator, makes his beds in August, or as soon as the fruit is gathered. Keen, however, says, he has "always found the spring better, planting them in beds containing three or four rows, and the plants in each row at a certain distance from
each other, leaving an alley between each bed the distance of the rows.” Lindley “prepares the ground for his plants by trenching twenty inches deep, and adding a quantity of half-rotted dung; the roots of strawberries, penetrating as they do to a considerable depth, it is at their extremities that they, in common with all plants, take up their nourishment.” He plants in beds of four rows each, with alleys from two feet, to two feet and a half, between the beds. The stronger growing sorts are set fifteen inches apart between the rows, and the same distance between each plant. The medium sized growers (Early Virginia) are allowed twelve inches each way; and the smaller growing, such as the Alpine, twelve inches by nine. Shaded and dark situations, or under the drip of trees, although sometimes chosen, are unfavorable for this fruit. They ought to be accommodated with an open, airy, and warm exposure.

“After the plantation is once made, the principal attention required is, keeping the ground free from weeds by repeated hoeing. The practice of Keen is not only to keep the ground clear from weeds, but on no account to allow any other crop to be planted between the rows; and I recommend (says he) to scatter some loose straw, or long dung, between the rows, as it serves to keep the ground moist, enriches the strawberry, and forms a clean bed for the trusses of fruit to lie upon; and thus, by a little extra trouble and cost, an abundant crop may be obtained.”
Some cultivators recommend cutting off the leaves of strawberry plants in autumn; while others, with better reason, highly disapprove of this course, as also the practice of digging between the rows in autumn. Knight, and also Young, says, "that this practice of digging shortens the lateral roots, and the plants not only lose the true sap, which such roots abundantly contain, but the organs themselves, which the plants must depend upon for supplies of new food in the spring, must be, to a considerable extent, destroyed." Strawberry beds in this latitude should be covered in the fall with leaves, straw, litter, or seaweed; this last article we have used in preference to any other material, as it is not subject to heat and rot, and is more easily removed in the spring.

The method of cultivating the strawberry in hills we approve, particularly for the larger growing varieties. Cutting off the runners as they appear; the roots will, under this treatment, throw out a greater quantity of fruit, and larger berries. This course of culture is peculiarly well adapted for a weedy soil, as these are more easily eradicated from around the plants.

THE GOOSEBERRY.

The Gooseberry, in its wild or uncultivated state, is found in most countries of Europe, as also in this country. They have increased in size under cultivation, and the varieties are now so extensive, that their names alone would occupy more space than
could be appropriated in this compilation. Seven hundred and twenty-two are enumerated by Lindley; these are divided or classed according to their colors, white, green, yellow, red, and dark purple. These differ much in quality; some of the largest fruit, having a thick skin, are fit only for cooking, while others are fine for the table. In our importations of this fruit, we have invariably sent for those only which are considered the best table varieties, without regard to names. The gooseberry bush will flourish in almost any soil, but that which is humid and richly manured will produce the largest fruit. "The best soil," says Rogers, "is a fine fresh loam, neither too heavy nor too light, eighteen inches deep, and if resting on a sub-soil of clay, so much the better." They should be set in the most open and airy situation in the garden; as in a confined and close location, as well as in the hot sun without a good circulation of air, they are exceedingly inclined to mildew. To destroy the green worm, as also the small orange-colored aphides, which often injure the bushes and destroy the fruit, we sprinkle the plants with salt and water early in the spring, before the leaves are developed; the mixture may then be made so strong as to whiten the branches, without affecting the future crop of fruit. Should the leaves or buds be in part expanded, the brine should be greatly reduced, say one quart of salt to about eight gallons of soft water, applied over the bushes from the rose of a watering pot. One of the best situations for this fruit is upon moist and warm hills.
These bushes are easily raised from cuttings, provided you have moist soil, by placing them into the ground immediately upon the falling of the leaf, when the shoots of the summer are well ripened, or very early in the following spring. These should be taken from the strongest and cleanest shoots of the last summer's growth, rubbing off the buds to within three or four at the top; they should then be inserted from three to five inches deep, according to the nature of the soil and situation; all buds that may push below those left at the top, to form the head of the bush, should be cut away. Gooseberries bear their fruit on the last year's shoots, and on short natural studs or spurs; they will continue to bear on the same buds or spurs for many years, especially if the branches are kept open and free for the admission of the sun and air. To have large fruit, they should be trained to resemble a well formed tree in miniature; the ground around the bushes should be enriched with well-rotted manure; cut out all decayed or irregular branches, let none be permitted to grow across each other; also the superabundant lateral shoots of the last summer, on the old wood near the ground, only retaining here and there one in vacant parts, to form successional bearers, and to supply the places of unfruitful branches.

THE CURRANT.

Both the black and red Currant are indigenous to Britain. The white, which is supposed to be a
hybrid, accidentally produced by culture, and has been brought to a high degree of cultivation by the Dutch, (who do not however claim it as a native of Holland,) are the varieties which our gardens at this time present. They are all justly considered to be among our most desirable and wholesome fruits. Lindley describes six sorts, and the Fruit Catalogue of the London Horticultural Society enumerates fourteen. The following, under our own cultivation, we consider among the best:

Large white Dutch, amber colored fruit and large bunches.
" red " dark red fruit and long bunches.
English black, . dark purple fruit, full bunches.
Champagne, . . a pale red fruited sort, rather acid.

The same instructions for the culture of the gooseberry will apply in the main to this fruit, with the exception that they do not require the like airy situation, as they are not liable to mildew. Both fruits do better when set in open inclosures than against fences or walls. High manuring is as essential for the production of large berries in the currant as in the gooseberry. Autumnal planting is preferable to the spring. They should be set at about five feet distance each way, and no branches suffered to grow within five or six inches from the ground, all the laterals below this being rubbed off, and the bushes grown in the form of a small tree. The insects which infest the gooseberry are the same with this fruit, and the same method used for their extermination. Currants and gooseberries, when planted by the sides of walks and alleys, are very cumber-
some in general. It is better to plant them in quarters by themselves, and to make new plantations every fifth or sixth year; for young plants produce handsomer fruit than old ones, and more plentifully.

FRUIT TREES, GIRDLED BY MICE.

The meadow or field mouse frequently injures or destroys trees, particularly in winter, when there are deep snows, by gnawing the bark quite round the limb through into the wood.

The best method to preserve such trees, is to procure long scions, and, as soon as the bark will peel, which will take place on the movement of the sap, to insert them by bark grafting or inarching one end under the living bark below the debarked circle, and the other under the corresponding bark above; then take strong bass matting, and bind it closely above and below, covering the whole with a composition of clay, cow manure, and hair finely incorporated, in order to keep out the sun and air. Each end of the scion must be pared away upon one side, previous to their being set, as described in the article "Grafting under the Bark."

The above process is more successful upon the apple, pear, and quince, than upon the plum, cherry, or peach.
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