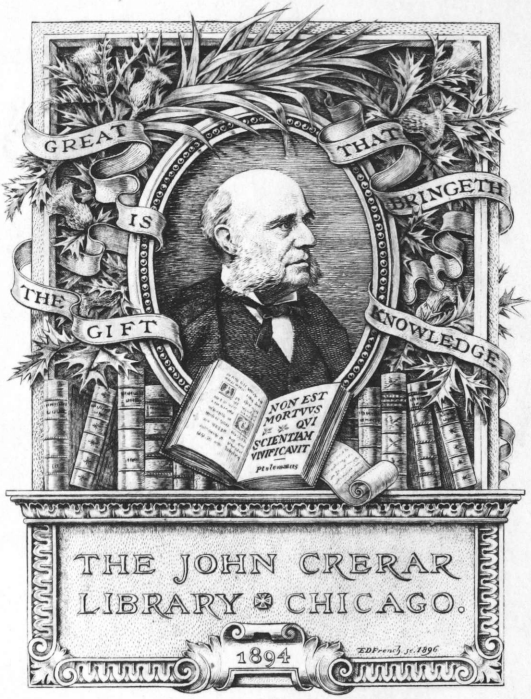
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1894

THE

HAND BOOK:

OR

ANNUAL RECORD

OF

Horticultural & Agricultural Statistics,

COMPILED FROM VARIOUS SOURCES.

BY WM. P. SHEPPARD,

PROPRIETOR OF THE HORTICULTURAL AGENCY.

NEW YORK:

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PREFACE.

In presenting the first issue of the HAND BOOK to our patrons, a brief outline of the motives leading to its preparation, and of the sphere it is intended to occupy, may, very properly, be expected.

The relation we have sustained for many years past to the large and growing body of Horticulturists, Seedsmen, &c., of the American Continent, as the great medium of communication in their foreign interests, &c., has subjected us to a multitude of enquiries upon all matters pertaining to these particular branches.

Some of our Seedsmen have expressed to us the want of a more thorough and complete descriptive Seed Catalogue than has heretofore been issued.

Nurserymen have desired condensed lists of the New Plants, Flowers, &c. of each year; also, a reliable list of American and Foreign Nurserymen, Florists, &c., and it is with the view of meeting these wants, as far as may be, that we have undertaken this enterprise.

The design of the HAND BOOK is to furnish Seedsmen, Horticulturists, &c., with a review of each year's progress in a convenient form, and as a ready reference for those who have neither the time, means, nor inclination to peruse the numerous publications necessary to obtain the desired information.

How far we have succeeded in this undertaking, we leave with our friends to decide.

WM. P. SHEPPARD.

MAY, 1860.

INTRODUCTORY.

Intelligence is the basis of successful progress in every branch of human enterprise, alike essential to the Agriculturist, the Horticulturist, and Florist, as to the Professional man, the Merchant or Mechanic.

That the votaries of science, in their untiring zeal, have materially aided, and are still greatly aiding the progress of Agriculture, Horticulture, and their kindred arts, is undeniable.

That, in order to secure complete and universal success, all engaged in these pursuits should become thoroughly conversant with the *laws of vegetable life and growth*, the *nature of soils and manures*, the *structure of plants*, their *adaptation*, &c., is equally undeniable.

The means of gaining these ends are within the reach of all, and those who will not avail themselves of the same, are without excuse, and, though they be ever so skillful in practice, the onward progress of united science and skill, will, sooner or later, leave them far behind, and thus render that which should be a source of pleasure and profit, an almost intolerable burden.

Agricultural and Horticultural Societies are established in every section of our country, through the medium of which, the deductions of science, and the results of skill, from all the varied climes and latitudes, are brought into happy unity.

Do you ask how you may be informed of all these progressive movements? nothing is easier!

Throughout the length and breadth of the land able and energetic Agricultural and Horticultural journalists are actively engaged in spreading, broadcast, the record of every desirable acquisition, as fast as produced, and with the valuable array of talent now exercised in the columns of the many journals already established, and in successful operation, nothing remains but for you to send for a specimen copy of each, which will be cheerfully furnished by the respective publishers. The expense will be trifling, and out of the great variety, you certainly cannot fail to find one or more, suited to your individual need.

For list of these journals, see page 146.

The HAND BOOK comes, not as a substitute for any, but as an auxiliary to all.

AUTHORITIES CONSULTED.

The works consulted and from which extracts have been made in the preparation of the HAND BOOK are as follows :

Description des Plantes Potagères, par Vilmorin-Andrieux et Cie., Paris ;
Morton's Cyclopedia of Agriculture ;
Gardeners' Chronicle, London ;
Reports of the United States Patent Office ;
Le Bon Jardinier, Paris ;

And others quoted in the body of the work.

Also in the Lists of New Plants and Flowers, we have in many instances adopted the descriptions of Mr. Robert Hogg, Vice-President of the British Pomological Society ; Co-Editor of the "Cottage Gardener," &c.

GARDENING.

SELECTION AND SITUATION OF THE SOIL.

In selecting the site for a garden, the soil is of secondary importance; for, in this respect, it may be improved every year by trenching, draining, manuring, or by bringing good earth or other materials to the favorite spot. Indeed, some persons choose a heavy, moist, or wet soil for a garden, in order to show their skill and perseverance in its improvement; to which nothing more contributes to its productiveness than trenching the ground deep, and throwing it up into rough ridges for the frost to act upon during the winter, as well as the sun in summer and early spring. The soil, in all cases, when properly prepared, should be deep and rich, and dry and friable enough to admit of cultivation a day or two after a rain, and tenacious enough to withstand a drought. In most cases, this can be accomplished by under-draining with burnt clay pipes, or tiles, buried about three feet below the surface, communicating with a main drain leading to an outlet or a dry well. These tile drains may be laid parallel to each other, about ten feet apart, with a descent into the larger drain of at least two inches to every hundred feet. The effect of this drainage is to render the soil dryer and warmer during the colder and rainy months of the year, and to aërate and fertilize it at all times. The crops will come forward several days earlier, will be more abundant, and suffer less from drought than they otherwise would do.

The best soil for a garden is a rich, deep loam. By a *loam*, is meant a mellow, fertile soil, not stiff and greasy, like clay, nor very loose and open, like gravel and sand, but having these earths in such proportions as, in the blending, the exclusive characteristics of each disappear. A loam may be clayey, sandy, or calcareous; and when it is dark-colored, abounding in vegetable and animal substances, rotted into earth or vegetable mould, it contains rich nourishment for plants. The most desirable soil for a garden cuts like butter—does not stick obstinately, but is short, tolerably light, breaking into small clods, is sweet, well tempered, without crusting or chapping in dry weather, or turning to mortar when it is wet. Sandy or peaty soils are specially good for particular kinds of plants, and most flowers; but for general fertility, the soil just described is the best.

It may be termed a "sandy loam;" but a "clayey loam"—that is, a loam with a great proportion of clay in it—is suited to many plants; for instance, the common bean. A good under-soil is very important; for a very hard clay below, or gravel, if near the surface, is very bad, though in opposite respects. A hard clay bottom will not allow the rain which falls to pass through it. Hence the upper soil will be in a state of mortar during winter; and in spring and summer, it will harden and crack. If a too open under-soil be near the surface, the rain will pass downwards too rapidly. A soil resting on a rock is often shallow, poor, hungry, and quickly becomes dry after a rain. A chalky soil is very good, provided there be a sufficient depth of earth over it. If it be mixed with sand, it is all the better for it. The best kind of under-soil is a sandy or calcareous one, that will allow moisture to pass with moderate rapidity through it; such an under-soil, having no bad qualities in it, will nourish the roots of plants which strike deeply, instead of stopping or preventing their extension.

In respect to the situation of a garden, it ought to have a southern aspect, slightly inclined towards the east, in a northern climate, and it is desirable that it should be within sight of the house. According to Cobbett, it is advantageous to have the northerly end of the garden quite level, and the remainder sloping gently towards the south. He asserts that some plants, such as the strawberry, produce more abundantly upon level ground, from which moisture does not escape too quickly; and that others, as early broccoli, early cabbage, winter spinach, and early peas, succeed best on a slope, say about one foot in thirty, which prevents the accumulation of water, in winter, about their roots. A flat garden, however, will be found the most luxuriant in summer, when it is most desirable that the moisture should not run away. If practicable, a small stream of water should be brought into the garden by means of a water-ram, or some other economical contrivance, which will be a great convenience for irrigating the beds in dry weather. If a stream is not at hand, water may be caught in cisterns or tanks from the farm buildings, and distributed to the plants by means of gutters or pipes.

ENCLOSING AND LAYING OUT.

A garden should be well protected from animals, and chilling or tempestuous winds, by a substantial enclosure, consisting of a good wall of earth, brick, or stone, or by a close board fence or quickset hedge. If it be of a good size, and properly attended to, it will afford an abundance of excellent vegetables, as well as of fruit, for family use. Cherries and plums may be planted near the house, as they would not be so liable to be attacked by pilferers and birds. Summer pears and apples next, and winter and baking sorts farthest off. Gooseberries, currants, and strawberries will grow between the standard fruit trees, or around the beds or plots of vegetables. Raspberries and flowers are suitable for the borders and walks. Early peaches, apricots, nectarines, vines, and figs, in a northern climate, may be trained near the sunny sides of the buildings or walls.

A garden is best laid out in rectangles, varying in dimensions according to its size and shape. These should be separated by alleys from three to four feet in width, crossing each other at right angles, and intersecting the principal walks. In a large garden, it is desirable that there should be five of these, one along each of the four walks or other boundaries, and another across through the centre. In small or moderate-sized ones, fewer alleys, or walks, will be necessary. The manner of laying out and making walks is as follows: First, leave a border near the walls or hedges as wide as the wall is high; then, with a line, mark out the width of the walk, or path, dig the mould out of this space, and spread it over the borders or beds, filling the hollow with stones, brick-bats, or other dry rubbish, on the top of which a coat of gravel may be laid six inches thick. If the under-soil be quite dry, or is under-drained with tiles, no rubbish will be necessary. An edging of dwarf box may be planted with regularity along the borders of the walks, which should be kept closely clipped at the height of three inches, to prevent the harboring of slugs or snails. The best way of laying out a garden on very sloping ground is in flat terraces, or steps, one above another.

PREPARATION OF THE SOIL.

A garden is such a source of pleasure and comfort that no trouble ought to be thought too great for improving it; but, fortunately, in many cases, the materials which are most wanted to improve the quality of the surface soil are found directly under it, and only need be dug up and mixed with it. For instance, a clay soil can be rendered less clayey, after it is deeply drained, by mixing with it gravel or sand; and a sandy or gravelly soil may be made more solid by mixing with it a good quantity of clay; so may the most spongy peat be reduced to a solid and fertile soil by being incorporated with other earths and with manure. A clayey soil may also be made lighter by mixing with it road-scrapings, coal ashes, building rubbish, or any other substances that will tend to separate the particles of clay.

The best preparation of the soil for a new garden, after the necessary draining, is trenching it to the depth of two feet, and laying a liberal supply of dung at the bottom. If the surface be a thick sod, or lea, that should likewise be laid at the bottom, where it will serve partly as a manure. The soil should be "ribbed up" so as to expose as much of it as possible to the action of the frost, which causes stiff land to crumble to pieces, and is also beneficial in killing the roots of weeds, and the eggs and larvæ of insects or worms. The "ribbing" is done by placing three spades of earth, one above the others, in the course of the digging. It is not necessary, however, to rib the whole of the surface soil, as those spaces which are intended for the immediate planting of fruit trees, or to be otherwise cropped before early spring, need not be done. Every vacant space which is not to be ridged or trenched in winter, ought to be thoroughly and deeply dug before cold weather sets in, to clear the ground of the roots of weeds, and to bring up such manures as may have filtered downwards, to the action of the frost. On a deep winter digging, the

productiveness of the next year's crop mainly depends. It is the foundation of all good culture in climates subject to frosts, and is so needful a preparation, that if it be neglected, the failure of many crops will be certain.

MANURES.

As a general practice, stable or barnyard dung, sufficiently rotted to destroy the vitality of the seeds of weeds and other foul plants contained in it, well incorporated in the soil, perhaps, is the best manure for a garden that can be applied. A compost made of a mixture of the dung of various kinds of animals, and the refuse of decaying parts of garden vegetables, or the leaves of trees, doubtless is one of the most appropriate fertilizers that can be applied. In cases where these manures cannot be obtained, guano, poudrette, bone-dust, super-phosphate of lime, charcoal, gypsum, oyster-shell lime, common salt, or dressings of soot, wood ashes, soap-suds, or other liquid manures, may be used with advantage instead. All of these, however, should be cautiously employed, as a misapplication would often be followed by injurious results.

The dung may be dug into the squares of the garden which requires manuring, as well as into the borders designed for fruits or flowers; and if the soil be poor, it ought to be mixed with it throughout. The parts intended for parsnips, carrots, and beets, should always be dunged, at the winter-digging, as experiment has proved that if the seeds of these plants be sown in freshly-manured ground, the roots are apt to fork, or run to "fingers and toes;" that is, to divide into two or more irregular parts. The best mode of using stable or yard manure is in a compost, as most of the garden productions, stone fruits, flowers without exception, and small seeds generally, are raised from fertilizers in this form. Horse-dung is used for hot-beds, and when perfectly rotten, it is adapted for most kinds of plants. Cow-dung may be advantageously mixed with it, in many cases; and from the slowness with which cow manure decays, it may be almost universally employed for bulbs. But after all, liquid manure, whether directly from the cattle, or made from water poured on the dung of cows or sheep, collected in a tub or other vessel, prepared for the purpose, if judiciously administered, is perhaps the most active of all fertilizers, guano not excepted.

The proper time for applying liquid manure is just before a rain or when the soil is already wet. If poured or sprinkled around the plants when the earth is dry, the sun or air will draw away the moisture, and leave most of the fertilizing matter near the surface, which would otherwise be conveyed to the rootlets, thereby affording the benefits desired.

SELECTION OF SEEDS AND TESTING THEIR VITALITY.

In choosing seeds, the fullest and plumpest in form are usually the best, and the plants springing from them will be strong or feeble, according to their vigor. As a general rule, old seeds are not to be depended upon. Those which are of an oily character, in particular, very soon fail after maturity; while others, if kept in a cool, dry state, retain their

vitality for a considerable length of time. Keeping them damp, which makes them grow, if properly sown, causes seeds to rot when not sown.

The vitality of some of the more common garden seeds, when kept under favorable circumstances, may be relied upon for the following periods:

Parsnip, rhubarb, and other thin scaly seeds, for one year.

Balm, basil, beans, cardoon, carrot, cress, Indian cress, lavender, leek, okra, or gumbo, onions, peas, peppers, rampion, scorzonera, thyme, tomato, wormwood, and small herbs, in general, for two years.

Artichoke, asparagus, corn-salad, egg-plant, endive, Indian corn, lettuce, marigold, marjoram, mustard, parsley, rosemary, rue, skirrit, spinach, and tansy, for three years.

Borage, borecole, broccoli, Brussels sprouts, cabbage, cauliflower, radish, sea-kale, tarragon, and turnips, for four years.

Beet, burnet, celery, chervil, cucumber, dill, fennel, hyssop, melon, pumpkin, sorrel, and squash, five to ten years.

In order to test the vitality of seeds, sow a few in a pot or box of earth, and keep it warm and moist, exposed to the sun for a while, and if good, they will begin to sprout and grow; by counting the number of growing ones, the proportion of living to dead ones can be approximately ascertained, and the quantity be soon calculated.

Onion seed, soaked a few minutes in cold water, and then boiled half an hour in hot water, will begin to germinate, if vitality remains.

Indian corn, peas, and numerous other seeds, soaked four hours in a tepid solution of chloride of lime and water, mixed in the proportion of one-fourth of an ounce of the lime to a gallon of water, and then sown in the ordinary way, have been known to throw out germs in twenty-four hours.

Steeping in tepid water for twenty-four to forty-eight hours, and then coating them in plaster or ashes, will hasten the germination of most dry and hard seeds.

SOWING.

It has long been observed that Nature, in her operations, is so uniform, that the periods in which certain plants and trees unfold their flowers and leaves, is an almost unerring indication of the forwardness of spring. By *spring* is meant the period when vegetation starts; when buds begin to swell, or when the leaves or flowers put forth or unfold. The time when our common cultivated fruit trees exhibit the petals of their flowers, with few exceptions, is the proper season for sowing gardens, in general, in open culture; but for some months later, the seeds of many kinds of vegetables are sown for succession, or for the next year. Some few sorts, as cabbages, lettuces, carrots, peas, beans, &c., are sown in autumn or early winter, to take their chances of resisting the frost, and coming in early the next summer or spring.

Table I, page 11, will serve in some measure as a guide for general sowing near some of the principal points in the Union.

It is to be understood, however, that all seeds sown at the times of the flowering of the trees named therein, will not certainly spring up and grow;

for this, after all, will depend upon the state of the soil, whether stiff, moist, or dry, the prevalence of rain, and the occurrence of frost or blighting winds. For instance, many kinds of seeds, as cabbages, radishes, carrots, beets, delicate flowers, &c., followed, when sown, by a drought of several weeks, with the surface of the ground heated to a high degree by the sun, will fail to grow. The effects will prove equally disastrous by long-continued rains, which will surfeit the ground with moisture or incrust the surface with a dense stratum of clay.

Dry weather is the best for sowing, because the earth is then in a pulverulent or crumbling state, fit to receive the seeds, instead of clogging around them, and when the rake or other implement for making the surface perfectly free and fine can be used with the most effect.

With regard to the depth necessary to cover the seeds, experience teaches the gardener better than any rules which can be given. It is obvious that a small tender seed requires the merest sprinkling of sand or very light loam, barely enough to shade it and preserve moisture; whereas a pea or bean, which has a very tough covering, will bear a heavy coat of clay, and will soon force its way through it, when other seeds would not vegetate at all. In a sandy soil, seeds may be covered deeper than in a clayey one; an inch of clay might smother a seed which could bear an inch of sandy loam without injury or loss. Again, it is a mistake to suppose that all kinds of seeds must be well buried, in order that the young plants proceeding from them may have a good hold of the ground; because seeds, in general, when they begin to grow, plunge their rootlets downwards and throw their stems upwards; consequently, with a few exceptions, all the spaces between the surface of the soil and the seeds are occupied by the lower parts of the stems, and not by the roots.

WATERING, OR IRRIGATION.

As watering will sometimes be necessary to assist the germination of seeds after they are sown, if the weather be dry, and the growth of the plants after they are up, due precaution should be observed as to the time of performing the operation. As a safe rule, neither seeds nor plants should be watered except when the sun has gone down; because its rays act suddenly upon the moistened plants, and destroy their leaves, as if by frost; and upon moistened ground, where the seeds have not yet appeared, the effect of watering in sunshine would be to draw forth the moisture from the place watered, and make it dryer and harder than before. Watering in sunshine causes the leaves to blister. In viewing Nature when rain is falling, the cloud from which it descends acts as a screen between the earth and the rays of the sun. This shows that watering, which is a substitute for natural rain, should not be applied when the sun is shining. When summer rain is falling, the air becomes moist, and the sun, while its warmth is still acting, does not counteract by its fiery rays the good effects of that moisture, and the soil is then softened and disposed to the entrance of the genial rain; everything then favors the growth of the plant. But this is not so when artificial watering takes place. The air is then dry, and the sun draws away, early in the morn-

ing, the moisture which the watering imparted the evening before. The most beneficial watering is that which is applied before rainy weather, because, in such case, its good effects are not counteracted by the rays of the sun.

The best water for using in a garden is that which contains an abundance of fertilizing substances, such as that from cess-pools, ponds, &c. Rain water also is good. When spring or well water alone is employed, it should be exposed for some time to the sun and air before it is used.

A good liquid manure for watering plants may be made by mixing twelve gallons of water with four pounds of Peruvian guano, and allowed to stand twenty-four hours. The liquid may be applied with great advantage, particularly to flowers in pots, which would otherwise have been killed if the guano had been administered in a dry state. The same guano will serve three times, each time being covered with twelve gallons of water.

HOEING AND WEEDING.

One of the most important points to be observed in the management of a garden, is to stir the soil often during the season, particularly in time of drought, in order to prepare it more readily to receive and retain moisture from the atmosphere, and to prevent the plants from becoming stunted in their growth. But, let it be remembered, *never work the ground when it is heavy or wet;* for this will render it lumpy or compact during the rest of the season.

The hoe is the most convenient implement for cutting away the young annual weeds from every space where it can be introduced without injury to the plants that remain; but the fore-finger and thumb must also be used among the close-growing plants, such as onions, carrots, and parsnips, to thin and completely clear them from the weeds which the hoe cannot touch without hurting or cutting away the others. Among vegetables, such as turnips, cabbages, peas, beans, &c., the hoe executes the work well. All that the gardener can safely do, in general, is to remove the weeds as they come up, and thus prevent the exhaustion of his ground and the injury of his plants through their means. A stirring and cleansing of the soil is the best remedy one can recommend.

ROTATION OF CROPS.

By "rotation," in a kitchen garden, is meant a regular succession of crops, so that the same kinds shall not immediately follow each other. For, as plants of the same sort consume similar elements of food contained in the soil, it follows that their continued cultivation will more or less deprive the land of the constituents upon which they feed.

The simplest rule, as to rotations of annual and biennial vegetables is, that they should succeed each other as nearly as possible in different classes. For instance, the leguminous class, (peas and beans,) which have deep-growing roots, should be followed by some of the numerous cabbage tribes, such as cauliflower, broccoli, and turnips. The onion

or bulbous class may best succeed the carrot or parsnip, or any other deep-rooted kinds.

Let it be remembered that no soil to which manures can be applied ever requires what is called "rest," as it never becomes "tired," as it were, of producing. All that is necessary to be done is to refresh it with those substances which may have been consumed by the plants it has nourished. If left uncultivated by the hand of man, the land will produce rotations of natural grasses, weeds, or trees, rather than remain at rest.

The greatest profits are realized in a garden in which the crops are raised and consumed in rapid succession. The market gardener who can clear out a square of any particular vegetable in a single week, and immediately re-sow or re-plant it with another, makes more off his ground than he who disposes of his crop slowly, and yet does not break up a square before the whole has been cleared off. Care should be taken, if possible, to finish one row of vegetables before another is entered upon, in order to prepare the ground, without loss of time, for the commencement of a new rotation, which may be proceeded with by gradual planting or sowing. Thus, instead of selecting up and down in a square the most forward cabbages, it may be better, when the ground is wanted—and the season presses—for a new crop, to cut all the heads of one row before any of another is begun, although they may be a little more advanced. The loss of a good season may be the consequence of waiting for a further growth, even for a single day. By taking care not to sow nor plant more space with any crop than will be wanted at any particular season, no loss of time nor of ground will ensue. Allowances, however, should always be made for failures and waste.

The seasons should also be attended to, so that each rotation may come as nearly as possible in its proper month or week, or in its due turn. The peculiar condition of soil, aspect, and shelter, however, may render a garden, or particular portions of the same, better adapted than others for certain kinds of crops. In such cases, the regular and usual rotations may be dispensed with; but still, many changes may be made in the successions of even a few vegetables cultivated in those particular localities or parts of a garden.

TABLE I.—*Periods of flowering of orchard fruit trees at various points in the Union.*

NAMES OF PLACES.	Plum.	Pear.	Peach.	Cherry.	Apple.
St. Mary's, Georgia, and southward.			Oct. 21 to Feb. 20		Oct. 21 to Feb. 20
Natchez, Miss	Jan. 23 to Feb. 15		Feb. 15 to March 1	Jan. 23 to Feb. 15	Mar. 4 to Mar. 27
Savannah, Ga	Feb. 15 to March 1		Feb. 15 to Feb. 28	February 25	March 1
Tuscaloosa, Ala	February 15	April 1	April 20		April 1
Camden, S. C			February 26		March 17
Chapel Hill, N. C		Mar. 15 to Mar. 19	Feb. 28 to March 2	March 6 to April 4	Mar. 12 to Mar. 26
King George C. H., Va.	April 15	April 8 to April 11	March 15 to April 12	March 28 to April 11	April 1 to April 23
Baltimore, Md			March 30 to April 12	April 4 to April 16	April 10 to April 25
Indianapolis, Ind			April 6	April 6	April 6
Columbus, Ohio	April 14 to April 25	April 8 to April 27	April 5 to April 27	April 9 to April 29	April 8 to May 5
Philadelphia, Pa			April 1 to May 15	April 7 to May 22	April 12 to May 25
Athens, Ill		April 19 to April 28	April 13 to April 25		April 21 to April 25
Perth Amboy, N. J	April 26 to May 7		April 11 to May 6	April 18 to May 7	April 26 to May 9
New Haven, Conn			April 24 to May 11	April 29 to May 8	May 6 to June 3
Sandusky, Ohio	April 30		April 12 to May 1	April 21 to May 4	April 28 to May 13
Muscatine, Iowa	May 3	May 3 to May 6	April 30 to May 3	May 1	May 3 to May 8
Meadville, Pa		May 12	May 7		May 15
Cambridge, Mass	April 30 to May 12	April 30 to May 12	April 28 to May 16	May 2 to May 25	May 6 to May 28
Londonderry, N. H		May 15	May 1 to May 17		May 21 to June 4
Madison, Wis			April 30 to May 5	May 1 to May 15	May 4 to May 18
Rochester, N. Y		May 7 to May 11	May 5 to May 16	May 15 to May 16	May 13 to June 1
Saco, Maine	May 5			May 5 to May 15	May 13 to May 20
Montpelier, Vt			May 25	May 10 to May 25	May 20 to June 10
Belfast, Maine			May 28	June 1	May 30

TABLE II.—*For determining the number of hills, plants, trees, &c., which may be grown on an acre, where sown or planted at any of the distances apart as indicated. If the quincunx method be adopted, an acre will contain nearly one-eighth more.*

DISTANCES APART.	Number of plants, &c., to an acre.
3 inches by 3 inches	696,960
4 " by 4 "	392,040
6 " by 6 "	174,240
9 " by 9 "	77,440
1 foot by 1 foot	43,560
1½ " by 1½ "	19,360
2 feet by 1 "	21,780
2 " by 2 feet	10,890
2½ " by 2½ "	6,969
3 " by 1 foot	14,520
3 " by 2 feet	7,260
3 " by 3 "	4,840
3½ " by 3½ "	3,555
4 " by 1 foot	10,890
4 " by 2 feet	5,445
4 " by 3 "	3,630
4 " by 4 "	2,722
4½ " by 4½ "	2,151
5 " by 1 foot	8,712
5 " by 2 feet	4,356
5 " by 3 "	2,904
5 " by 4 "	2,178
5 " by 5 "	1,742
5½ " by 5½ "	1,417
6 " by 6 "	1,210
6½ " by 6½ "	1,031
7 " by 7 "	888
8 " by 8 "	680
9 " by 9 "	537
10 " by 10 "	435
11 " by 11 "	360
12 " by 12 "	302
13 " by 13 "	257
14 " by 14 "	222
15 " by 15 "	193
16 " by 16 "	170
16½ " by 16½ "	160
17 " by 17 "	150
18 " by 18 "	134
19 " by 19 "	120
20 " by 20 "	108
25 " by 25 "	69
30 " by 30 "	48
33 " by 33 "	40
40 " by 40 "	27
49½ " by 49½ "	16⅔
50 " by 50 "	17
60 " by 60 "	12
66 " by 66 "	10

TABLE III.—*Showing the quantity of seeds usually sown in a garden of half an acre.*

Asparagus	1 oz.	Melons	½ oz.
Beans, an assortment	3 quarts.	Onions	2 oz.
Beets, an assortment	4 oz.	Okra, or gombo	½ oz.
Broccoli	½ oz.	Parsley	1 paper.
Cauliflower	½ oz.	Parsnips	1 oz.
Cabbage, an assortment	4 oz.	Peppers	1 paper.
Celery	½ oz.	Potatoes	1 bushel.
Cress	8 oz.	Pot herbs	3 papers.
Cucumber	½ oz.	Pumpkin	½ oz.
Carrot	1 oz.	Peas	8 quarts.
Early Corn	1 quart.	Radish	8 oz.
Egg Plant	1 paper.	Salsafy	½ oz.
Endive	½ oz.	Squash	½ oz.
Leek	½ oz.	Spinach	8 oz.
Lima beans	1 quart.	Sweet herbs	3 papers.
Lettuce, an assortment	1 oz.	Tomatoes	1 paper.
Mustard	4 oz.	Turnips	2 oz.

TABLE IV.—*Showing the quantity of seeds usually sown upon one acre.*

		BROADCAST.	IN ROWS OR DRILLS.
Barley	Bus.	1½ @ 2	
Beans	Bus.	2 @ 3	1½ @ 2
Beets	Lbs.		5 @ 6
Broom Corn	Bus.		1 @ 1½
Buckwheat	Bus.	1 @ 1½	
Carrots	Lbs.		2 @ 3
Clover	Lbs.	10 @ 15	
Cotton	Bus.		2 @ 5
Flax	Bus.	1½ @ 2	
Grasses—Blue Grass	Lbs.	10 @ 15	
" Orchard Grass	Lbs.	20 @ 30	
" Ray Grass	Lbs.	10 @ 15	
" Red Top	Qts.	12 @ 24	
" Timothy	Qts.	12 @ 24	
Hemp	Bus.	1 @ 1½	
Indian Corn	Bus	1 @ 2	
Lucerne	Lbs.		8 @ 10
Millet	Bus.	1 @ 1½	¼ @ ½
Mustard	Qts.	8 @ 16	
Oats	Bus.	2 @ 4	
Onions	Lbs.		4 @ 5
Parsnips	Lbs.		4 @ 5
Peanuts	Bus.		1 @ 2
Peas	Bus.	2 @ 3	1 @ 1½
Potatoes	Bus.		4 @ 12
Rice	Bus.	1½ @ 2	
Rye	Bus.	1 @ 2	
Turnip	Lbs.	2 @ 3	
Wheat	Bus.	1 @ 2	

TABLE V.—*Showing the Standard Weights per Bus. of various Seeds.*

STATES.	BARLEY.	BEANS.	BLUE GRASS.	BUCKWHEAT.	CLOVER SEED.	CORN.	FLAX SEED.	HEMP SEED.	PEAS.	POTATOES.	OATS.	RYE.	TIMOTHY SEED.	WHEAT.
Alabama,														
Arkansas,														
California,														
Canada,	48	60		48	60	56	56		60		34	56	48	60
Connecticut,	48	63		48	60	56	56	44	64	60	32	56	45	60
Delaware,														
Dist. of Columbia,	47	63		48	68	58			64		32	58		60
Florida,														
Georgia,														
Illinois,	44			40		56					32	54		60
Indiana,	48	60	14	50	60	56	56	44		60	32	56	45	60
Iowa,	48	60	14	52	60	56	56	44		60	35	56	45	60
Kentucky,	48	60		52	60	56	56				33	56	45	60
Louisiana,														
Maine,														
Maryland,														
Massachusetts,	46	60		46		56			60	60	30	56		60
Michigan,	48			42	60	56					32	56		60
Mississipi,														
Missouri,	48	60		48	60	56	56		60		34	56	48	60
New Hampshire,														
New Jersey,	48			50	64	56	55				30	56		60
New York,	48	62	14	48	60	56	55	44	60	60	32	56	44	60
North Carolina,														
Ohio,	48	56			64	56	56				32	56	42	60
Pennsylvania,	47	63		48	68	58			64		32	58		60
Rhode Island,										60				
South Carolina,														
Tennessee,														
U. S. Custom Houses,	47	63		48	68	58			64		32	58		60
Vermont,	46			46		56				60	32	56		60
Virginia,														
Wisconsin,	48			42	60	56					32	56		60

TABLE VI.—*For the reciprocal conversion of French, British, and United States Weights and Measures.*

Feet.	Metres.
1 =	0.30479
2	0.60959
3	0.91438
4	1.21918
5	1.52397
6	1.82877
7	2.13356
8	2.43836
9	2.74315

Yards.	Metres.
1 =	0.91438
2	1.82877
3	2.74315
4	3.65753
5	4.57192
6	5.48630
7	6.40068
8	7.31507
9	8.22945

Square feet.	Square metres.
1 =	0.0929
2	0.1858
3	0.2787
4	0.3716
5	0.4645
6	0.5574
7	0.6503
8	0.7432
9	0.8361

Acres.	Hectares.
1 =	0.40467
2	0.80934
3	1.21401
4	1.61868
5	2.02336
6	2.42803
7	2.83270
8	3.23737
9	3.64204

Cubic feet.	Cubic metres.
1 =	0.02832
2	0.05663
3	0.08495
4	0.11326
5	0.14158
6	0.16989
7	0.19821
8	0.22652
9	0.25484

Wine gallons.	Litres.
1 =	3.78521
2	7.57041
3	11.35562
4	15.14083
5	18.92603
6	22.71124
7	26.49645
8	30.28165
9	34.06686

Metres.	Feet.
1 =	3.2809
2	6.5618
3	9.8427
4	13.1236
5	16.4045
6	19.6854
7	22.9663
8	26.2472
9	29.5281

Metres.	Yards.
1 =	1.09363
2	2.18727
3	3.28090
4	4.37453
5	5.46817
6	6.56180
7	7.65543
8	8.74906
9	9.84270

Square metres.	Square feet.
1 =	10.7643
2	21.5286
3	32.2929
4	43.0572
5	53.8215
6	64.5858
7	75.3501
8	86.1144
9	96.8787

Hectares.	Acres.
1 =	2.47114
2	4.94229
3	7.41343
4	9.88457
5	12.35572
6	14.82686
7	17.29800
8	19.76914
9	22.24029

Cubic metres.	Cubic feet.
1 =	35.31658
2	70.63316
3	105.94975
4	141.26633
5	176.58291
6	211.89949
7	247.21607
8	282.53265
9	317.84924

Litres.	Wine gallons.
1 =	0.26419
2	0.52837
3	0.79256
4	1.05675
5	1.32093
6	1.58512
7	1.84930
8	2.11349
9	2.37768

Imperial gallons.	Litres.
1 =	4.54346
2	9.08692
3	13.63038
4	18.17384
5	22.71730
6	27.26076
7	31.80422
8	36.34768
9	40.89114

Wine gallons.	Imperial gallons.
1 =	0.83311
2	1.66622
3	2.49933
4	3.33244
5	4.16555
6	4.99867
7	5.83178
8	6.66489
9	7.49800

Winchester bushels.	Hecto-litres.
1 =	0.35237
2	0.70474
3	1.05711
4	1.40949
5	1.76186
6	2.11423
7	2.46660
8	2.81897
9	3.17134

Winchester bushels.	Imperial bushels.
1 =	0.96945
2	1.93889
3	2.90834
4	3.87779
5	4.84724
6	5.81668
7	6.78613
8	7.75558
9	8.72503

Avoirdupois pounds.	Kilo-grammes.
1 =	0.45354
2	0.90709
3	1.36063
4	1.81418
5	2.26772
6	2.72126
7	3.17481
8	3.62835
9	4.08190

Troy grains.	Grammes.
1 =	0.06479
2	0.12958
3	0.19438
4	0.25917
5	0.32396
6	0.38875
7	0.45354
8	0.51834
9	0.58313

Litres.	Imperial gallons.
1 =	0.22010
2	0.44019
3	0.66029
4	0.88039
5	1.10048
6	1.32058
7	1.54068
8	1.76077
9	1.98087

Imperial gallons.	Wine gallons.
1 =	1.20032
2	2.40064
3	3.60096
4	4.80128
5	6.00160
6	7.20192
7	8.40224
8	9.60256
9	10.80288

Hectolitres.	Winchester bushels.
1 =	2.83791
2	5.67583
3	8.51374
4	11.35165
5	14.18957
6	17.02748
7	19.86539
8	22.70331
9	25.54122

Imperial bushels.	Winchester bushels.
1 =	1.03152
2	2.06303
3	3.09455
4	4.12606
5	5.15758
6	6.18909
7	7.22061
8	8.25213
9	9.28364

Kilo-grammes.	Avoirdupois pounds.
1 =	2.20486
2	4.40971
3	6.61457
4	8.81943
5	11.02429
6	13.22914
7	15.43400
8	17.63886
9	19.84371

Grammes.	Troy grains.
1 =	15.434
2	30.868
3	46.302
4	61.736
5	77.170
6	92.604
7	108.038
8	123.472
9	138.906

NOTE.—The elementary equations used in the above computations are as follows: For *Extension*, 1 Metre = 39.37079 inches. For *Weight*, 1 Kilogramme = 15,434 troy grains.

DESCRIPTIVE CATALOGUE

OF

CULINARY VEGETABLES AND OTHER GARDEN PLANTS.

ARTICHOKE, COMMON.

Cynara scolymus	Of Botanists.
Artichaut	French.
Artischoke	German.
Alcachofa	Spanish.

The common artichoke is a perennial, from Barbary and the south of Europe, cultivated more for luxury than profit. The flower-heads, in their immature state, contain the edible part, which consists of that portion of the fleshy receptable that adheres to the scales, called the "bottom." It is entirely different from the Jerusalem artichoke, which produces tubers, difficult to eradicate when once introduced into a garden.

The two principal varieties are the "Globe," erroneously called "Green Globe," and the "French" or "Green." The former produces large globular heads, of a dusky purple color, with thick, succulent scales, and is the best for general culture. The latter has a large oval head, with open scales, and is much esteemed by the French. The heads are boiled, and eaten with butter and salt. The bottom of these heads is very fleshy, and is cooked in various ways, sometimes being dried for winter use. The Italians make a preparation called *gobbo*, by bending down the stem of the plant to a right angle, and binding together the stalks and leaves, which they cover over to blanch. The result is a lump, which is eaten raw in winter, with salt, as a substitute for radishes.

Culture.—The artichoke may be propagated by offset-suckers, separated in the spring. When raised from seed, let them be sown early in the spring, say at the time of the flowering of the peach, (See Table I, page 11,) in drills a foot apart, and four inches asunder along the drills. The next spring, transplant to permanent beds in hills, three feet apart, each way, with three plants to a hill. It requires a deep, rich loam, abounding in moisture, and may be protected in winter by covering with litter or earth. Its culture in this country is confined principally to the South.

ARTICHOKE, JERUSALEM.

Helianthus tuberosus	Of Botanists.
Topinambour	French.
Erdartischoke	German.
Pataca	Spanish.

This plant flourishes best in a light, rich soil, with an open exposure; but it will resist any degree of cold incident to the United States. It

may be cultivated by planting middle-sized tubers or cuttings of the large ones, with one or two eyes preserved in each, at the period of the flowering of the peach, and even earlier if the ground will admit. The only attention necessary in its culture is to loosen the surface, a little of the earth being drawn up about the stem. The roots may be increased in size by pinching off the tops just previous to flowering.

The tubers may be taken up in the autumn as wanted for use; and as soon as the stems have entirely withered, they may be raised from the ground, as completely as possible, and preserved in sand for winter consumption.

ASPARAGUS.

Asparagus officinalis	Of Botanists.
Asperge	French.
Spargel.	German.
Esparragos	Spanish.

A perennial, cultivated for the early shoots, which are highly esteemed. There are several names given in some catalogues, which indicate different varieties, but there are only two of distinct character. The kind with reddish-purple shoots, growing close-headed to large size, is more generally cultivated, and is sold under the name of "Giant." The other variety is of a bright green color, with a round top. Either will grow to a large size in good soil, with proper management.

Culture.—Soak the seed twenty-four hours in tepid water, and sow early in spring—say at the time of the flowering of the peach—thinly, in rows a foot apart, and keep clean by frequent weeding and hoeing. At one or two years old, transplant to permanent beds. Many persons are apt to think the largest of everything among vegetables is the best, and usually order two or three-year-old roots; but good-sized asparagus roots of one year's growth are decidedly preferable for making new beds. The ground should be trenched, or dug over, two feet deep, burying plenty of manure, and mixing it thoroughly with the soil. Lay out the beds four and a half feet wide, and draw three drills, fourteen inches apart, and six inches deep, lengthwise of each bed; place the roots in them, a foot apart, in their natural position, and cover four inches deep. A rich sandy loam is most suitable. Every autumn, after clearing off the stalks, spread on a covering of manure, to be forked in, with a good dressing of fine salt very early in the spring. A new bed should not be cut over before the third year.

BALM.

Melissa officinalis	Of Botanists.
Mélisse.	French.
Melissenkraut	German.
Melisa	Spanish.

This hardy, herbaceous plant has a citron-like scent and an aromatic flavor. It is principally cultivated for making a grateful drink for the sick.

Culture.—The soil best suited to its growth is one which is rather poor and friable, but more inclined to clay than sand; manure is never

required. In a high northern climate, an eastern aspect is best. It is propagated by root-division, of which the smallest piece will grow, and by slips of the young shoots. By the first mode, any time during the spring and autumn will answer, but by slips only in the spring or early summer. If divisions of an old plant are employed, they may be planted at once where they are to remain, a foot apart; but if by slips, they must be inserted in a shady border, to be thence removed late the following autumn to their final sites. At every removal, water must be given, if the weather be dry, until they are established. During the summer, they require only to be kept clear of weeds. Late in autumn, the old beds, which may stand for many years, require to be dressed, their decayed leaves and stalks cleared away, and the soil loosened by the hoe.

The plants may be gathered for drying about the time of flowering; but if the leaves are required to be used green, at any season they can be obtained. For drying, the stalks are cut with their full clothing of leaves to the very bottom, and the operation gradually completed in the shade.

BASIL.

Ocymum basilicum	Of Botanists.
Basilic commun.	French.
Basilienkraut	German.
Albahaca	Spanish.

Of basil, there are two kinds, the sweet-scented, (*O. basilicum,*) and the dwarf bush, (*O. minimum,*) the qualities of both of which are the same, but the former is principally cultivated for culinary use. The young leaf-tops are employed in making salads and soups, their flavor resembling that of cloves. The supply is never failing during summer in a mild climate, as they shoot out rapidly for successive use.

Culture.—In a northern climate, the seed is sown on a very gentle hot-bed, under glass, about the end of March or the beginning of April To raise plants for the principal or main crop, the frames should be filled with compost to within three or four inches of the glass, or very shallow frames may be used. When the plants are up, give a little air by tilting the lights; and as they advance, and the weather becomes warmer, give them more air, until the lights may be taken off altogether during the day, and put on at night. By this management, good hardened plants will be fit for removing towards the end of May or the beginning of June, into warm borders or beds of light, rich earth. If the weather be dry at the time of planting out, let the beds be previously well watered, and the planting done in the evening. Lift the young plants from the seed-beds with a small fork or trowel, and insert them with care from eight to ten inches apart each way, and water them to settle the earth to the roots. Attend to earth-stirring, and water when required, until the plants are well established. If green tops are required for earlier use, sow in pots, pans, or boxes, and place in any heated structure having a due degree of temperature.

BEANS—FIELD AND GARDEN.

Faba vulgaris	Of Botanists.
Féve de marais	French.
Puffbohne, Gartenbohne . . .	German.
Haba comun	Spanish.

There are two strongly-marked and well-defined classes of the common bean, both of which are included botanically under one species, namely, *field* and *garden*, although some of the early sorts and sub-varieties may be cultivated in either. As yet, they have not been much grown in the United States, as they are thought to be unsuited to withstand the heats of summers, and are not so well adapted to our economy as other products.

Of "Field Beans," the following are the principal sorts cultivated on the Continent of Europe and the British Isles:

Common Scotch or Horse Bean.—Height of straw, four feet; color of seed, light brown, or buff, producing, when ground, a rich, cream-colored meal. Yield, per acre, 30 bushels, or 1,800 pounds. Three bushels are required to sow an acre, when the seed is dibbled four inches apart, (two beans in each hole,) in twenty-seven-inch rows; and when drilled, about another bushel is necessary.

Common Tick or Horse Bean.—This sort occupies the same position in England that the preceding does in Scotland. Although shorter-strawed, with seeds a third smaller, and adapted to lighter soils, it is quite as prolific. The seeds are also rounder, plumper, and less dimpled. When dibbled singly, four inches apart in twenty-four-inch rows, 65,340 beans are required to the acre, or 72¼ pounds; or if two seeds are dropped in each hole, double the weight will be required.

Heligoland Bean.—This is a hardy variety, well adapted for rich alluvial soils. The straw is short, the seeds small, round, of a bright chocolate color, three or four growing in a pod. The interior of the kernel is white. When dibbled four inches apart in twenty-four-inch rows, two beans in each hole, 99½ pounds are required to sow an acre; and when drilled by a machine, in rows varying from twenty-four to twenty-seven inches distant, about 165 pounds are necessary for an acre.

Purple Field Bean.—The average length of the straw of this sort is about four feet. The seeds are darker colored than the Heligoland, shorter, rounder, and a little larger, four or five growing in a pod. It is later than any of the other spring small-seeded beans, and not quite so productive.

Russian or Winter Field Bean.—This is the hardest variety known, and is sown in Scotland in October, where it stands through winters of average severity. The stalks are three to four feet long, seeds smaller than the Scotch bean, of the size and color of the Tick bean, but having a greenish tinge on one side below the eye.

Annfield Bean.—This is the largest-seeded of all the field beans. The height of the stem ranges from four to five feet; pods, about four inches, containing three or four seeds in each. It appears to be adapted to superior soils, being moderately productive and rather early.

Early Mazagan.—This variety is suitable both for field and garden culture. The stalks are four or five feet long, producing long narrow pods, containing four or five seeds to each. It requires good land in high condition, and should be cultivated in wide rows, either dibbled or drilled.

Long-Podded Bean.—This sort is also adapted either for the garden or the field. The stalks are stouter and rather taller than those of the Early Mazagan, having longer pods and larger seeds, but in other respects are nearly identical.

Of "Garden Beans," there are cultivated on the British Isles at least twenty well-defined varieties, including the Early Mazagan and the Long Pods, last named.

Common Long Pod, when grown in gardens, is much heavier and larger-grained than when cultivated in the field. Period of sowing, the same as the Early Mazagan—harvest time, later by a week or ten days.

Child's New Early Long Pod.—Seeds, smaller than the last, but more prolific.

Dutch Long Pod.—Seeds about the size of the Broad Windsor—an excellent bearer, but late.

Green Long Pod, Green Nonpareil, Green Genoa.—The seeds of this variety are smaller and later than the Common Long Pod, but of excellent quality. They retain their green color after they are ripe and dried.

Sword or Turkey Long Pod.—Adapted for early sowing—very productive.

Early Hang-down Long Pod.—Seeds smaller than Common Long Pod.

Johnston's Wonderful Long Pod.—Resembles the Windsor, except that the seeds are smaller and more elongated.

Sangster's Imperial Long Pod.—Resembles the last in general appearance—seeds a little larger.

White Blossom.—The seeds of this variety, when ripe, are jet black; the kernels being as pale as those of the other sorts. The size is about the same as the common horse bean, but flatter.

Red Blossom.—This variety is beautiful and highly ornamental, when in full bloom—the color of the flowers varying from a pale hue to the deepest red. The seeds are of a rusty-brown.

Windsor Bean, Broad Windsor, &c.—A superior sort for a well-sheltered garden, particularly valuable, from its habit of ripening unequally—some pods being quite full, while others are in various stages of filling—yielding a convenient supply daily for a considerable length of time.

Green Windsor.—The seeds of this variety, like those of the "Green Long-Pod," retain their green color when ripe; but in other respects, it is similar to the Common Windsor, except in their smaller size.

Dwarf Fan or Cluster.—This is the shortest-stalked and earliest of all, being only about two feet in height. It is very prolific, having cylindrical pods with flat seeds.

Marshall's Prolific Dwarf.—As its name implies, is very prolific.

Toker.—Another productive variety, with a stem five feet high, bearing broad pods, containing from three to four whitish beans in each.

CULTURE.—Plant as early in the spring as the ground can be worked, say at the period of the flowering of the peach, from two to four inches asunder, in drills from twenty-four to thirty inches apart. As soon as the plants are in full blossom, and the lower pods begin to set, pinch off the tops. This will insure a filling of the pods, and hasten the maturity of the seeds.

A strong heavy soil, with a considerable proportion of clay, is almost indispensable for a good crop of this class of beans.

BEANS—LIMA.

Phaseolus lunatus	Of BOTANISTS.
Haricot de Lima	FRENCH.
Bohne von Lima	GERMAN.
Haba vástago de Lima .	SPANISH.

This bean, with the "Sieva," forms a distinct class, and is much esteemed at their season on our tables. The "Large Lima" has broad, rough, rather full pods, with large, white seeds. It is a high runner, and bears profusely until killed by frost, unless it is dried up by the sun. When planted too early, the seeds are apt to rot in the ground; and if the eyes are not placed downward, it will be uncertain whether they come up at all. The hills may be formed and poled before planting, from three feet and a half to four feet apart, and the beans stuck into the earth around the poles, and lightly covered about an inch, with the hand. This operation should be done in warm sunny weather, after rather than before a heavy rain.

The "Small Lima," *Carolina*, *Sewee*, *Sieva*, or *Saba*, resembles the preceding, but is inferior to it in rich buttery flavor; but it is earlier, more hardy, and surer to produce a good crop.

BEANS—KIDNEY, RUNNERS.

Phaseolus vulgaris	Of BOTANISTS.
Haricot à rames	FRENCH.
Strangen-Bohne	GERMAN.
Frijol vástago.	SPANISH.

There are numerous varieties of the kidney runners at present in cultivation, both for market and private use. The following are the varieties usually grown:

Large French Soissons.—A large, white, flat, kidney-shaped bean, slightly crooked, and resembling the "Case-knife," except that it is not so early, and the pods not so flat and long. Excellent shelled, both green and dry.

Early Dutch Case-knife.—This is one of the earliest and prolific sorts, having very long flat pods, containing white seeds, which are good green or dry. They are sometimes used as "snaps," but principally shelled.

Newington Wonder.—An early and most prolific bearer, with long, slender pods, filled with small drab-colored leaves.

Horticultural Cranberry.—Pods striped with red. Seeds oval, medium size, light-red and cream-color, speckled. Used both in the pod and shelled; very productive and good dry.

White Cranberry.—Seeds white, same shape as the last, but smaller, with rounder pods. Very tender and rich-flavored, but an indifferent bearer.

Red Cranberry.—Color of seeds, deep-red. Growth similar to the White, but more prolific, with pods less tender.

Common White English Runner.—This variety is considered as occupying an intermediate position between the true Dwarf Kidney and the Scarlet or White Runner. The seeds are large, flat, and kidney-shaped. The plant attains a height of about three feet.

BEANS—KIDNEY, DWARFS.

Phaseolus vulgaris	Of Botanists.
Haricot nain.	French.
Zwerg-oder Busch-Bohne . .	German.
Frijol enano	Spanish.

Under the name of "Dwarfs" are classified all the low-growing sorts, called, in different catalogues, *Bush, Bunch, Snap, String,* or *French* Beans. There are numerous varieties under cultivation, from which the following are selected:

Common White Kidney.—Cultivated in the field, in France, for its ripe seeds, but not adapted for using green, in consequence of the toughness of the inner skin of the pods. The seeds are white, round, and small, growing in long cylindrical pods.

Dwarf Canterbury.—A much-esteemed variety for using green, the pods being remarkably tender; good, also, for pickling. Seeds white, straight, slightly flattened, and growing in straight, narrow pods.

Round, Light-dun Kidney.—Grows very low and close. Seeds small, of a light-dun color, growing in short pods having a tough skin, on which account it is not liked.

Haricot flageolet à grain vert, a French variety, of dwarfy growth; excellent for table, both green and dry.

BEANS—FLOWERING, RUNNERS.

Phaseolus multiflorus	Of Botanists.
Haricot d'Espagne.	French.
Grosse bunte Bohne	German.
Judia vástago de España . . .	Spanish.

Of this class of beans, there are two varieties, the "Scarlet" and the "White," both of which are cultivated principally for ornament. They differ from other beans in springing out of the ground with the seed-leaves detached.

Scarlet Runner.—The most productive, perhaps, of all the kidney beans. It is cultivated for the beauty of its flowers, as well as for the economical uses to which its pods and seeds can be applied. The seeds are remarkably plump, kidney-shaped, and of a deep purple, approaching almost to black on the sides, apparently interspersed with cream-colored patches, which predominate on the edges.

White Runner.—This variety is considered as occupying an intermediate position between the true dwarf kidney and the runner. The seeds

are large, flat, and kidney-shaped, the whole plant differing but little from the last named, except in its seeds and flowers, which are white.

CULTURE.—All the Kidneys are so extremely sensitive of frost and cold, that it is useless to plant them before the middle of spring, when the ground has become light and warm. Plant two or three inches apart, in two-and-a-half-foot drills, in a light, rich soil. Hoe often, but only when dry, as earth scattered on the leaves, when wet with dew or rain, will cause them to rust, and greatly injure the crop.

BEET.

Beta vulgaris	Of BOTANISTS.
Betterave	FRENCH.
Runkelrübe	GERMAN.
Remolacha	SPANISH.

The beet, in some of its varieties, is universally cultivated, even in the smallest gardens, and is used as an esculent in all stages of its growth. The following are the principal sorts:

Early Flat Bassano.—This variety, originally from Italy, is chiefly valued for its early maturity, coming into use a week or ten days sooner than any other sort. Roots flat, turnip-shaped, light red; flesh white, circled with rose-color; leaves very small, light green, veined with red. It is very tender and juicy, and will grow to good size on light soil, but will not keep through the winter unless sown quite late.

Early Blood Turnip Beet.—The standard early sort. Blood-red, turnip-shaped, with small top, tap-root; very tender, and good for early use and late keeping. It is indispensable in every garden, however small.

Early Yellow Turnip or Orange.—Is longer oval-shaped than the Blood Turnip; flesh yellow, very tender and juicy. It keeps well, and will serve for both summer and winter.

Early Half-long Blood.—Intermediate between the Early Blood Turnip and Long Blood, both in shape and earliness. It grows large and tender, and keeps well.

Long Blood Red.—The common long winter variety; deep-red; grows to large size, mostly in the ground; is sweet, tender, and keeps well.

Smooth Long Dark Blood.—This is a long smooth beet, growing to good size, half out of the ground, with few or no side roots; color, dark blood-red; top small, dark-red and upright growth; keeps well. Sow in drills fifteen inches apart, and thin to eight inches. It is apt to be tough when sown too early.

Early Scarcity Beet.—A light-red beet, growing much out of ground, to a very large size in good soil. It is much like the Mangold Wurzel, differing from it in being more turnip-shaped, with smaller tops. This and the two following require to stand one foot apart in two-foot drills, to attain their full growth.

Long Red Mangold Wurzel.—A large long variety, grown for stock-feeding. It stands a good deal out of the ground; color, light-red; flesh, white and rose-colored; leaves green, veined with red. It is early, and is sometimes used for the table when young.

Yellow Globe Mangold Wurzel.—A large, round, orange-colored variety, of excellent quality, which keeps better than the Long Red, and produces better crops on shallow soil.

White Sugar Beet.—This grows to large size, much above ground; roots half long, white; leaves green; considerably grown in this country for feeding, but is inferior to the Mangold Wurzel for that purpose. In France, it is cultivated extensively for the extraction of sugar.

Swiss Chard or Silver Beet.—This variety of beet, sometimes called "Sea Kale Beet," is cultivated for its leaf-stalks, which are served up much like asparagus, and for its leaves, cooked as spinach. If cut often, new and more tender stalks will be reproduced.

CULTURE.—For early sorts, as soon in the spring as the ground will admit, in drills fourteen inches apart, and reduce the plants at weeding to six inches asunder along the drills. For late crops, sow about the middle of spring. All the varieties succeed best on a deep, rich, sandy loam, and require to be thinned when small, and kept clear from weeds. Soak the seed in tepid water for twenty-four hours, preparatory to sowing; drain off the water, and keep the seed in the dark, by covering the vessel containing it, or otherwise, until it begins to sprout; then roll it in plaster, and sow immediately in fresh-prepared ground.

To preserve beets during winter, bury them in long narrow trenches, mixed with sand, below the reach of frost, or cover them with light sand or light earth in a cellar. They should not be allowed to wilt; for, if they once become shrivelled, they will never recover their firm, brittle texture.

BENE PLANT.

Sesamum orientale	Of BOTANISTS.
Sésame	FRENCH.
Sesamkraut	GERMAN.
Aljonjoli.	SPANISH.

No plant, probably, yields a larger proportion of oil than the present. It is cultivated in the Middle and Northern States, principally for medical purposes. A few leaves, when green, plunged a few times in a tumbler of water, forms a thin, tasteless jelly, much used to cure summer complaints in children.

CULTURE.—Sow in drills three feet apart, leaving the plants six inches apart at the time of weeding, as soon as the frost is out of the ground. Poor land is best suited to its production. It will throw out a great profusion of leaves by pinching off the top when about half grown.

BORAGE.

Borrago officinalis	Of BOTANISTS.
Bourrache	FRENCH.
Borretsch	GERMAN.
Borraja	SPANISH.

The young leaves of this annual, which smell somewhat like a cucumber, are used in salads or boiled as spinach.

CULTURE.—For spring and summer sowing, any light soil and open

situation may be allotted, provided the former be not particularly rich. The plants intended to stand the winter in a northern climate will do best in a light, dry soil, near the southern shelter of a fence. The seed may be sown at the period of the flowering of the peach for summer use, and in August and September for autumn or winter, in shallow drills, a foot asunder. When of about six weeks' growth, the spring plants are to be thinned to twelve inches apart, transplanting those which are lifted at a similar distance. At the time of transplanting, if at all dry weather, they must be watered until established. Water must also be frequently applied, if necessary, to the seed-bed of the summer and autumn sowing.

BORECOLE, OR KALE.

Brassica oleracea acephala	Of BOTANISTS.
Chou vert	FRENCH.
Blätter-Kohl	GERMAN.
Breton	SPANISH.

"Borecole," "Kale," or "Green Kale," are general terms applied to the class of cabbage which does not head, but is used as an esculent in their open growth. When used, the crown or centre of the plant is cut off, so as to include the leaves, which usually do not exceed nine inches in length. It boils well, and is most tender, sweet, and delicate, provided it has been duly exposed to frost.

The following are the two principal varieties:

Green Curled Scotch is the kind most generally cultivated. It is very hardy, and, like the Savoys, is improved by a moderate frost. The stems rise about two feet, and produce an abundance of dark-green curled and wrinkled leaves.

Dwarf Curled Kale, or German Greens.—This variety is more dwarfy; leaves yellowish green, very finely fringed. It makes excellent winter and spring greens, when set out in a light cellar, or otherwise protected from the severity of the weather. In the South, however, and even in warm soils and exposures in the Middle States, borecole will stand the winter in open beds without any protection.

CULTURE.—Sow in a seed-bed about the middle of spring, and, when of suitable size, transplant to eighteen or twenty inches apart, each way, and cultivate as cabbages.

BROCCOLI.

Brassica oleracea botrytis	Of BOTANISTS.
Chou brocoli	FRENCH.
Brocoli, Spargel-Kóhl . .	GERMAN.
Bróculi	SPANISH.

Broccoli is nearly allied to the cauliflower, and may be regarded as a variation of that delicious vegetable. It is hardy and surer to head, but inferior in flavor.

The following are the best varieties:

Early Purple Cape.—This is the most valuable kind for the North, producing large, close heads, of a brownish purple, and has an excellent flavor.

The White Cape is a later sort, and should be sown at the North very early in the spring. The heads, when perfected, are large, white, and compact, so nearly resembling the cauliflower that it is sometimes called "Cauliflower Broccoli."

CULTURE.—Sow thinly in a seed-bed, about the middle of spring, and transplant and cultivate according to the directions for winter cabbages, burying the seeds not more than half an inch. The plants in the seed-bed are very apt to run up tall and slender, unless they are kept thinned, and free from weeds. When they begin to flower, break the large leaves over the heads to protect them from the sun, and gather them before they commence running up to seed. Those crops which have to stand the winter in the open air will be greatly benefited by the application of common salt, at the rate of ten bushels to the acre. It should be sown in autumn over the bed, on a dry day.

BRUSSELS SPROUTS.

Brassica oleracea bullata	Of BOTANISTS.
Chou de Bruxelles	FRENCH.
Grüner Sprossen	GERMAN.
Breton de Bruselas	SPANISH.

This plant rises two or three feet high, and produces from the sides of the stalk numerous little sprouts, resembling cabbages, one or two inches in diameter. The leaves, which look like the Savoy, should be broken down in the fall, to give the little cabbages room to grow. They are used for fall and winter greens, and, being quite hardy, should be sown and treated like Scotch kale.

BURNET.

Poterium sanguisorba	Of BOTANISTS.
Pimprenelle	FRENCH.
Becherblume, Gartenbibernelle .	GERMAN.
Pimpinela	SPANISH.

The leaves of this perennial, which taste and smell like cucumbers, when bruised, are used in the composition of salads and soups. It delights in a dry, unshaded, and indifferent soil, abounding in calcareous matter, with the addition only of a dressing of bricklayer's rubbish or fragments of chalk. A small bed will be sufficient for the supply of a family.

CULTURE.—This plant may be propagated either by seeds or by slips and a division of the roots. The seeds may be sown from the blossoming of the red-flowered maple to that of the apple, if the weather is sufficiently open; but the best time is in autumn, as soon as it is ripe. It may be thinly sown in drills, six inches apart, and not more than half an inch deep. Keep the plants clear of weeds, and, when two or three inches high, thin to six inches apart. If propagated by partings of the roots, the best time is in September and October. They are planted at once where they are to remain, and only require occasional watering until established.

CABBAGE, COMMON.

Brassica oleracea capitata . . . . . Of BOTANISTS.
Chou pommé ou cabus . . FRENCH.
Kopfkohl. . . . . GERMAN.
Repollo . . . . . SPANISH.

The cabbage is one of the most important vegetables, and, in some of its varieties, is universally cultivated.

The following are among those most esteemed:

Winnigstadt.—This variety, all things considered, is the best in cultivation for general use. It comes both early and late, is remarkably solid and hard, even in summer, and keeps well in hot weather and cold. The heads are regularly conical, excessively full, and surmounted with leaves. The stalk, or stump, is short and rather thick, and the eating qualities of the head good.

Early York.—This is one of the earliest and most valuable of the spring and summer varieties, and would justly stand at the head of the list. Heads small, rather heart-shaped, firm, very tender, and excellent flavored. The true Early York is of very dwarfy growth, with close heads, and may be transplanted fifteen or eighteen inches apart.

Early Wakefield.—An English variety, of the same shape and about as early as the above, and nearly as large as the Oxheart. It is a favorite with market gardeners.

Large French Oxheart.—A most excellent variety from France, which is taking the place of many others, to come in after the Early York. It grows low on the stump, and heads very close and firm, with but few loose leaves; color, yellowish-green. There is a sub-variety of this, which is smaller, and but little later than the Early York.

Large York is larger and two weeks later than the Early York. It endures the heat well, and on that account is much esteemed at the South.

Early Sugarloaf has conical heads, with spoon-shaped leaves; color, bluish-green. The heads are not so close and firm as the Large York, nor will it stand the heat so well. It does very well at the North, but loses its flavor and tenderness late in the season.

Early Drumhead or Battersea.—This is a round, flat-headed variety, of excellent quality. It is one of the latest among the early sorts.

Pomeranian.—A singular variety, with heads uniformly conical, and very solid, even to the extremities of the leaves, which often unite at the top in a twisted form; color, yellowish-green.

Large Late Drumhead.—This is a large fall and winter variety, with broad, flat or round heads; very compact, and of a lightish green.

Premium Flat Dutch.—A superb, large, low-growing cabbage, with heads broad and flat at top, very close and hard, with but few outside leaves; color, bluish-green, turning to a purplish tint after being touched with frost. It is a fall and winter variety, tender, and one of the very best to keep. With good cultivation, on moist, rich ground, ninety-five in a hundred will head up hard and fine.

Large Flat Dutch or Late Battersea is an English variety, cultivated

for an autumn crop. It so nearly resembles the English Drumhead in growth and quality, that the two kinds are easily confounded.

Large Bergen or Great American is one of the largest and latest sorts, of a lightish green color, with a short stem. The heads are large, firm, and rather sound; very tender, and most excellent-flavored. It is a good kind for market and family use. Plants that have not closed, when the crop is gathered in the fall, will frequently head during winter, if they are set out in a cellar. It is an American variety, and keeps well.

Green Glazed is a coarse, loose-headed cabbage, cultivated at the South, as it is thought to withstand the attacks of the cabbage-worm better than any other variety; color, dark, shining green.

Green Globe or Curled Savoy does not make a firm head, but the whole of it, being very tender and pleasant-flavored, is used for cooking; leaves wrinkled and dark-green. This and the next are very hardy, and improved by frost.

Drumhead Savoy grows to a large size; heads, nearly round, or flattened like the Drumhead, and quite firm; sometimes heart-shaped; very tender, and excellent for winter. The Savoys approach nearer to the delicious richness of the cauliflower than any of the other cabbages. Sow early.

Red Dutch or Pickling.—This is an esteemed sort for pickling. It is also shredded, and eaten raw in vinegar. It grows about medium size, and forms very hard, oblong heads, round at the top, and, when pure, of a dark-red or purple color. Sow early, and set out twenty-eight inches by two feet apart.

CULTURE.—For cabbages, the ground must be highly manured, deeply dug, or ploughed, and thoroughly worked, to insure good, full-sized heads. A heavy, moist, and fresh loam is the most suitable. The early sorts are sometimes sown early in autumn, and protected in cold frames through the winter, and transplanted early in spring; but more generally at the North they are sown very early in the spring, in hot-beds, or later in the open ground. In the mild climate of the Southern States, where they will stand the winter, they are planted out in the fall. Eighteen inches by two feet apart is the common distance.

Cabbage plants, before heading, are used extensively at the South for greens, under the name of "Collards." Any of the early sorts answer well for this purpose, particularly the Early Sugarloaf. Sow from early spring to summer, and thin or transplant to a foot apart.

The late autumn and winter varieties may be sown in a seed-bed, from the middle to the end of spring, and transplanted, when about six inches high, to twenty-eight inches apart, each way. Shade and water the late sowings in dry weather, to get them up. It is important that the plants should stand thinly in the seed-bed, or they will run up weak and slender, and be likely to make long stumps. If they come up too thick, prick them out into beds four to six inches apart, which will cause them to grow low and stocky. Treated in this manner, the plants will form lateral roots; and they can be removed, with the earth attached, in a moist day, without checking their growth. When the weather is hot and dry,

the roots of the plants may be dipped in a puddle of loam and water, and transplanted just at evening, giving each plant a gill of water at the root.

Cabbages should be hoed every week, and the ground stirred deeper, as they advance in growth, drawing up a little earth to the plants each time, until they begin to head, when they should be fairly dug between, and hilled up. After they are partly headed, it is the practice of some gardeners to lay them over on one side. It is thought by some that they do not head much better for it, though they certainly have done quite as well. Loosening the roots will sometimes retard the bursting of full-grown heads.

"Clump-root" is a disease of the cabbage tribe, affecting the roots, which become distorted, knobby, and monstrously swollen. It is caused by the larva of a little weevil, and prevails mostly in old gardens. It is attributed to the too-frequent repetition of cabbages on the same ground, to the character of the manure, and dry weather. Old dry manure, particularly hog-dung, full of insects, is most likely to produce the disorder. It sometimes does not show itself till the plants are half grown, when there is no remedy. It is indicated by the leaves wilting and flagging in sunny weather. The disorder is not constitutional, but affects broccoli, cauliflower, and all kinds of cabbage, in the same ground. It is avoided by a rotation of crops, change of manure, and deep tillage, turning up to the surface a good portion of the sub-soil.

To avoid the black fly, sow in boxes of earth, raised two feet above the ground, which must be kept watered. The plants will be perfectly secure from attack.

To preserve cabbages during winter, pull them in a dry day, and turn them over on the heads a few hours, to drain. Set them out in a cool cellar, or bury them, with the heads downwards, in long trenches, in a dry situation. In the Middle States, bury the stump and part of the head in the open ground, and place over them a light covering of straw and boards, in severe weather. On the coast, in the Eastern States, cabbages are effectually protected by a covering of sea-weed.

CABBAGE, PORTUGAL.

Brassica oleracea acephala . . . . . Of Botanists.
Chou à grosse côte vert . . . . French.
Couve tronchouda . . . . . Portuguese.

This is a variety of cabbage from Portugal, which does not head, but produces very large and tender leaf-stalks. When cooked like sea-kale, it is esteemed by many as a delicious vegetable. Its chief value consists in being fed to milch cows or other stock.

Cultivation.—The same as that of the common cabbage.

CARAWAY.

Carum carvi . . . . . Of Botanists.
Carvi, Cumin sauvage . . . . French.
Feld-kümmel . . . . . German.
Carvi, Alcarahueya . . . . . Spanish.

Caraway is a biennial plant, with spreading branches, growing to a height of a foot and a half. It is chiefly cultivated for the seed, which

is used in confectionery and in medicine. When young and tender, the under-leaves are sometimes used in soups.

CULTURE.—This plant is raised from seed, of which a quarter of an ounce is sufficient for a seed-bed containing twenty square feet. The best time for sowing is in autumn, soon after the seed is ripe, but it may be done at the period of the flowering of the almond or peach. The seedlings, which will rise quickly, may be thinned out to a foot apart each way.

CARDOON.

Cynara cardunculus	Of BOTANISTS.
Cardon	FRENCH.
Carde	GERMAN.
Cardo	SPANISH.

The cardoon is a perennial, resembling the artichoke, but grows to a greater height. The stalks of the inner leaves, when rendered tender by blanching, are used in stews, salads, and soups.

CULTURE.—The seed may be sown at the period of the flowering of the apple. For a late crop, it may be performed a month later. The best practice is to sow in patches, in rows four feet apart, and three, four, or six inches along the rows; or they may be sown broadcast in a seed-bed, to be transplanted in about eight or ten weeks. The seed may be covered about half an inch deep. When the plants are a month old, they may be thinned out to four inches apart, and those removed may be pricked out to a similar distance. When of an age sufficient for removal, they may be carefully taken up, and the long, straggling leaves pinched off. The bed for the reception must be well dug, and laid out in trenches as for celery, or in a hollow, sunk for each plant. At the time of planting, and subsequently, water must be abundantly applied until the plants are established; and also through the summer, if dry weather occurs, regularly every other night, as this is found to prevent their running to seed. When advanced to about eighteen inches in height, the leaves must be tied together in a dry day by a hay or straw band, and then earthed up like celery. As the plants grow, use more hay-bands and more earthing, until blanched. In the Middle States, they may remain in the ground during winter, provided they are covered with litter or straw.

CARROT.

Daucus carota	Of BOTANISTS.
Carotte	FRENCH.
Möhre	GERMAN.
Zanahoria	SPANISH.

The carrot is an important vegetable, the best varieties of which are as follows:

Early Horn.—This is the earliest variety. It is shorter than most of the other sorts, and the tap-root terminates abruptly, giving it a blunt appearance; color, deep-orange; fine-grained, and agreeably flavored; top, small. It is the best for the table, and will grow very well on thin soil. Sow six inches apart, in fourteen-inch drills.

Long Orange.—The standard sort; roots long, smooth, and deep-orange color; suitable for the table, and for the main field crop. It requires a good, deep soil, and to stand eight inches apart, in eighteen-inch drills, to grow to large size.

Altringham.—Differs from the Long Orange only in growing a little out of ground, with a green top.

Large White Belgian.—Grows one-third out of the ground; roots pure white, green above ground, with small tops. It is much grown by the French for soups and seasonings. It will grow to a large size on light, rich soils, and is very easily gathered. Though it has been recommended for farm cultivation, it is not so nutritious as the deeper-colored carrots, and does not keep so well.

Large Lemon.—This variety grows to a larger size at the top than any of the others, but not over two-thirds the length of the Long Orange. Color, light lemon; very productive, and easily gathered; suitable for feeding only.

Blood Red or Purple.—Roots, medium size; color, dark-purple; fine-grained, and sweet. It is much esteemed for table use among the French people, at the South and in the West Indies.

CULTURE.—The carrot succeeds best on a light, sandy loam, made rich by manuring the previous year. In freshly-manured land, the roots often grow pronged and ill-shaped. If the seed is to be sown late in the spring, let it be soaked a day or two in tepid water, mixing it immediately after in dry plaster or ashes. It will then come up in newly-prepared ground, before foul plants, and the first weeding may be done at much less expense.

To preserve carrots during winter, they should be dug in a dry time, when the roots will come out of the ground clean. Let them lie a day in the sun, to wilt a little, and dry; then deposit them in small heaps, in a cool cellar, secure from frost. They should be examined often, and overhauled, if they begin to sweat. Carrots are very apt to heat when packed away in a large body. They have been kept perfectly well, packed in dryish sand, in long, narrow trenches, below frost. In the same way, again, they have nearly all been lost. The main object is to keep them from the wet.

CAULIFLOWER.

Brassica oleracea botrytis	Of BOTANISTS.
Choufleur	FRENCH.
Blumen-Kohl	GERMAN.
Coliflor	SPANISH.

This is a delicate vegetable of the cabbage tribe, with long, pale-green leaves, and a close, curdy head, formed of the flower-buds before they shoot up to seed.

The following are among the best varieties:

Early Paris Small Salmon-colored.—This is one of the earliest and tenderest sorts, particularly when sown in the spring. Its season in market is July to September.

Early London.—The earliest and best suited for sowing in the fall.

Large Late Asiatic.—Large and taller than the above, and a finer sort for spring sowing.

Walcheren.—An excellent variety, producing close, compact heads, and may be sown both in spring and fall. It is sometimes called "Walcheren Broccoli."

CULTURE.—For the spring or summer crop, sow the early kind, at the North, about the middle of September, and when two inches high, transplant to three inches apart, into a frame covered with glazed shutters, where they must be protected through the winter; in the spring, transplant to two and a half feet apart. For the late autumn crop, sow the late kind middle of the spring, and transplant like winter cabbages. In dry weather, water freely, and, as they advance in growth, hoe deep, and draw earth to the stems. After they begin to head, they should be watered every other day. On the approach of frost, those plants which have not headed may be set out in a cellar, where they can be aired in mild weather. In two or three weeks, the strongest will begin to form flower-heads, which will be very delicious and tender. In the Middle and Southern States, sow in a hot-bed in March; transplant to twenty inches apart each way, into open ground, in April, or as soon as the young seedlings are sufficiently large and strong; hoe and water as above, until near the time the flower-buds are formed, when the plants should be earthed up to about two-thirds of their height, elevating the leaves so as to screen the tender heads from the rays of the sun.

CELERIAC, OR TURNIP-ROOTED CELERY.

Apium graveolens rapaceum . . .	Of BOTANISTS.
Céleri-rave	FRENCH.
Sellerie Knoll oder Kopf .	GERMAN.
Apio de nabo	SPANISH.

The root of this vegetable, when properly cultivated, is tender and marrow-like, having a sweeter taste and stronger odor than those of other celery. It is principally used for seasoning meats and entering into the composition of soups.

CULTURE.—The soil in which the celeriac is cultivated should be deep, rich, and well worked. The seed may be sown at the flowering of our orchard fruits, in drills six inches apart, kept regularly watered every evening, should the weather prove dry. The bed must be kept free from weeds; and when the plants are about three inches high, they may be pricked out in rows three inches apart each way, giving abundant and frequent waterings. By adopting the precautions mentioned in the cultivation of celery, the same seed-bed will afford two or three distinct prickings. When the plants are five or six inches high, they are fit for removal to level ground, where they are to remain, and in drills two feet asunder, and eight inches apart along the drills. The only after-culture required is to earth them up to a height of about three inches, watering them plentifully at least every other evening, if the weather be dry, and keep them free from weeds.

CELERY.

Apium graveolens	Of Botanists.
Céleri	French.
Sellerie	German.
Apio	Spanish.

Celery is a hardy biennial, the stalks of which, when cultivated and properly blanched, are sweet, mild, and crispy, being very palatable, either in a raw or cooked state.

There are several varieties in cultivation, the best of which are as follows:

White Solid is the variety most commonly grown; clear white, solid, and crisp.

Red Manchester or Rose-colored Solid grows to larger size than the above, and is considered more hardy; stalks delicate rose-color, when blanched.

New Silver Giant or Law's Giant.—This is esteemed one of the best in cultivation. It grows to a large size; stalks white, round, very crisp, and perfectly solid.

Seymour's Superb White.—The difference between this and the Silver Giant can scarcely be perceived. It is not more vigorous in growth, nor any more solid or better flavored.

Cole's Superb Red.—Very compact, large, and solid; of superior quality, and crisp. One of the best red varieties.

Culture.—To have celery early, it should be sown in a hot-bed quite early in the spring, and, when three inches high, planted out in a well-prepared bed, which must be covered with boards or mats in frosty weather. For the principal crop, sow early in the spring, very shallow, in a seed-bed, which should be beaten lightly with the back of a spade, to settle the earth about the seeds. When the plants are of the above-named size, thin or prick them out to four inches apart; and when about six inches high, transplant them six inches apart into trenches for blanching. Dig the trenches four feet apart, a foot wide, and ten inches deep. Fill in five or six inches of well-rotted manure, and mix it thoroughly half a spade deep with the earth at the bottom. The tops and roots of the plants should be shortened, and the suckers pinched off before they are set. Earth up to blanch two or three times during their growth, holding the leaves close with the hand while the earth is drawn up, taking care that none of it falls into the centre of the plants. A slight sprinkling of salt applied to the surface of the soil, just before earthing up, is decidedly beneficial to this crop. Celery, like asparagus, is greatly improved by superior culture.

CHAMOMILE.

Anthemis nobilis	Of Botanists.
Camomille	French.
Kamille	German.
Manzanilla	Spanish.

This annual is cultivated on account of its flowers, which are much used in medicine, and is administered under the name of "chamomile tea."

A double-flowered variety, though more beautiful than the single-flowered, is less useful. The double sort, however, is most cultivated.

CULTURE.—This herb delights in a poor sandy soil. Either kind may be propagated by partings of the roots, or by slips of the rooted offsets, or of the runners. Let them be detached with roots, in little tufty sets, at the periods of the flowering of our orchard fruits, and plant them from eight to twelve inches apart, giving them water as may be necessary. The flowers should be gathered in their prime, just when full blown. Let them be spread to dry in a shady place; then put them into paper bags, and house them for use.

CHERVIL.

Scandix cerefolium . . . . . Of BOTANISTS.
Cerfeuil . . . . . FRENCH.
Körbel gewöhnlicher . . . GERMAN.
Perifollo . . . . . SPANISH.

This is a warm, aromatic annual. It is cultivated and employed like parsley, for the leaves, which are used in salads and soups. Sow at any time in the spring, in shallow drills, a foot apart, and compress the ground with the back of a spade.

CHICORY, OR SUCCORY.

Cichorium intybus . . . . . Of BOTANISTS.
Chicorée . . . . . FRENCH.
Chicorie . . . . . GERMAN.
Achicoria . . . . . SPANISH.

This plant is cultivated for use in salads. A variety, which the French call *Chicorée sauvage à café*, has long fleshy roots, like the white carrot, and is employed in mixing coffee.

CULTURE.—Like endive, for the main crop, it requires a rich, light soil; and for the earlier sowings, a moister one, having, in every instance, an open situation. Although a perennial, it must be sown annually, as, after being cut two or three times, the leaves become bitter and worthless. The periods of sowing may correspond with those of the flowering of our orchard fruits. Sow moderately thick, in the same manner as endive. When the plants begin to cover the ground, thin to nine inches apart; and those removed, plant out at similar distances. If the leaves grow very luxuriant, and shade the roots much, they must be cut off within an inch of the ground. In about four months after the sowing, let the leaves of the plant be trimmed away, so as not to injure their hearts, and then cover over thick with long litter, ashes, or sand. By this treatment, those fresh leaves which are produced become blanched and crisp, and lose their bitterness. Water must be given moderately in dry weather, during the season. If the roots are vigorous, they will bear cutting two or three times, after which they are unproductive.

In the Middle and Southern States, the roots may remain in the ground during winter, without injury from frost.

CHIVES, OR CIVES.

Allium schœnoprasum . . . . . Of BOTANISTS.
Ciboulette . . . . . FRENCH.
Kleine Zwiebel . . . . . GERMAN.
Cebollino . . . . . SPANISH.

This is a hardy perennial, the awl-shaped leaves of which rise from numerous small bulbous roots connected in bunches. They are used as a superior substitute for young onions in spring salads. A single row, a few yards long, will supply a family.

CULTURE.—This plant flourishes best in a light rich soil. It may be propagated by planting eight or ten offsets of the bulb in spring, in rows ten inches apart, or in irregular patches containing as many offsets. By autumn, they multiply into large-sized bunches, and, if required, may be taken up as soon as the leaves decay, and stored, as a substitute for the onion. The leaves, which are fit for use as long as they remain green, may be cut down close to the ground as they are wanted, when they will speedily be succeeded by others.

CHUFA, OR EARTH ALMOND.

Cyperus esculentus . . . . . Of BOTANISTS.
Souchet comestible . . . . . FRENCH.
Cypergrass-wurzel essbare . . GERMAN.
Chufa . . . . . SPANISH.

This perennial is indigenous to the southern parts of Europe, growing in the form of grass to a height of about three feet, producing small tubers about the size of an ordinary bean, and are known by the Valencians by the name of "chufas." The tubers resemble in taste a delicious chestnut or coco-nut, and, like them, may be eaten raw or cooked. After soaking in water twelve hours, they are eaten as a sauce. They are chiefly employed in Spain for making an orgeat, (orchata de chufas,) a delightful, refreshing drink, much used as a medicine in Madrid, Valencia, Cuba, and other hot climates where it is known.

CULTURE.—In the Middle States, this product may be planted in June or July, in bunches, two feet apart each way, ten or twelve tubers in each, about six inches asunder. As soon as the first shoots begin to appear, the ground should be watered, and repeated every ten days, should there be no rain. No cultivation is necessary, except carefully to eradicate the weeds. It will continue to grow until October, when the tubers may be dug out of the ground and stored away. In drying, they lose about one-third of their weight.

CORIANDER.

Coriandrum sativum . . . . . Of BOTANISTS.
Coriandre . . . . . FRENCH.
Coriander . . . . . GERMAN.
Coriandro . . . . . SPANISH.

This annual has long been cultivated for its seeds, which have a pleasant flavor, and, when encrusted with sugar, are sold by the confec-

tioners under the name of "coriander comfits." They are also used in bitter infusions and preparations of senna, the disagreeable taste of which they completely overcome.

CULTURE.—This plant succeeds the best in a sandy loam. The seeds may be sown at the period of the flowering of the peach, in drills, nine inches apart.

CORN SALAD, OR LAMB'S LETTUCE.

Valeriana locusta	Of BOTANISTS.
Mache, Salade de blé	FRENCH.
Ackersalat, Lammersalat . .	GERMAN.
Valeriana	SPANISH.

This esculent, also called "Fetticus," is an annual, usually cultivated as a winter and spring salad.

CULTURE.—The seeds are thickly sown in September, in shallow drills, one-fourth of an inch deep. If the weather be dry, the ground should be compressed with the feet or the back of a spade. It requires no other culture, except to keep the ground clear of weeds. In a high northern climate, it requires protection during winter, with a slight covering of straw. If the soil is good and rich, the flavor of the plant will be greatly improved.

CRESS, OR PEPPERGRASS.

Lepidium sativum	Of BOTANISTS.
Cresson alénois	FRENCH.
Kresse gewöhnliche grüne . .	GERMAN.
Mastuerzo	SPANISH.

The two principal varieties of cress in cultivation are the *Curled* and the *Broad-leaved*. "Winter Cress"—sometimes, but erroneously, called Water-cress—is entirely different, being a much larger plant, hardy, and more pungent.

CULTURE.—Sow thickly, in shallow drills, every two weeks during the season. In dry weather, occasionally water.

WATER-CRESS.

Sisymbrium nasturtium	Of BOTANISTS.
Cresson de fontaine	FRENCH.
Brunnenkresse	GERMAN.
Berro	SPANISH.

The true Water-cress is an aquatic plant, with small oval leaves, and prostrate habit. The leaves are universally used and eaten, as an early and wholesome salad in spring.

CULTURE.—The plant is cultivated by sowing the seeds by the side of running water, near springs which are not severely frozen in winter. Transplanting, however, is always surer than sowing, and is therefore preferred. This, ordinarily, may be done from March till August. The distance between the plants should not generally be less than ten or fifteen inches. Stirring the earth about the roots, from time to time, is useful; but, having once taken root, no further care is necessary. A cress plantation is in full bearing the second year, and lasts a long time.

When it begins to fail, it may be renewed by taking a foot of the surface soil off the old bed, and replacing it with good, fresh earth. In winter, the beds may be covered more deeply with water, which will protect the plants against the frost.

CUCUMBER.

Cucumis sativus	Of Botanists.
Concombre	French.
Gurke	German.
Pepino	Spanish.

Cucumbers are cultivated in all vegetable gardens, the uses of which are too well known to need description.

The following are among the best sorts:

Early Russian.—This variety, although not long introduced, proves to be a valuable acquisition, on account of its earliness and prolific growth, bearing at least ten days before the Early Cluster, which it somewhat resembles, but is smaller and shorter, being only about three inches long, when fit for use. It sets in pairs, and the first blossoms usually produce fruit. Flavor, pleasant and agreeable. It makes very small pickles.

Early Cluster.—A short, prickly, seedy variety, bearing in clusters near the root. It is a great bearer, and comes to maturity the earliest in the list, excepting the Early Russian.

Early Frame.—The standard sort for the table and for pickling; of medium size, straight and handsome. It makes a beautiful pickle that keeps well.

Short Green is similar, and in some catalogues it is the same as the Early Frame.

Early White Spined.—The best sort for the table. It is a little larger than the Early Frame, and grows uniformly straight and smooth, dark-green, with white prickles; tender and excellent flavored. The fruit, in turning white at maturity, retains its fresh appearance much longer than any of the yellow varieties; on this account, it is a favorite with market-men. A good kind for forcing, and a great bearer. "New York Market" is another name for it.

London Long Green.—A very excellent variety, a good bearer, about a foot in length, rather pointed at both ends, dark-green, firm and crisp. It is a fine kind for the table, and makes a beautiful pickle for those who like them hard and brittle.

Extra Long Green Turkey.—One of the longest varieties, growing to a foot and a half or more in length; dark-green, and very solid, producing but few seeds. A very fine and productive cucumber.

Culture.—Cucumbers for early use may be planted in the open ground as soon as the weather becomes settled and warm, in hills four feet apart, enriched with a shovelful of warm manure or well-rotted compost in each hill. Tread the manure and cover it with an inch or two of earth, and scatter eight or ten seeds to a hill; cover half an inch deep with fine earth, and beat it down with a hoe. Hoe frequently to keep them growing, and when out of danger from insects, thin the plants to four in a hill.

Hog-dung and ashes mixed in the hill is the very best manure for cucumbers, for the principal or late planting.

To obtain early cucumbers with the aid of a hot-bed, take blocks of turf six inches square, and place them grass-side down in the bed, early in the spring; plant the seeds on them, and when of suitable size, and the weather mild, they may be removed to the open ground, where they must be protected with a hand-glass, or muslin-covered box, over each hill, whenever the air is cold and raw.

Market gardeners who desire to obtain the earliest crop to be had in the open ground, after manuring the hills, mark them across at right angles, and plant each quarter every week, so that if one planting fails, another immediately follows. By this management, they are sure to be among the first in market with the out-door crop.

Cucumber, as well as melon and squash seeds, are considered best when two or three years old; they run less to vines, and bear earlier and more abundantly.

DILL.

Anethum graveolens	Of Botanists.
Dille	French.
Dill	German.
Eneldo	Spanish.

This perennial grows wild in the wheat fields of Portugal and Spain, and may be cultivated in our Middle and Southern States where the soil is rather dry. Its leaves and umbels are used in pickling, and the former in sauces and soups. The seeds are also sometimes put into pickles, particularly cucumbers, to heighten the flavor.

Culture.—The seeds should be sown as soon as they are ripe; for, if kept until spring, they are often incapable of germinating. They may be sown in drills a foot apart, the plants to remain where sown. When of three or four weeks' growth, thin them out to about ten inches apart. The leaves are fit for gathering as wanted.

EGG-PLANT.

Solanum melongena	Of Botanists.
Aubergine	French.
Cierpflanze	German.
Berengena	Spanish.

The egg-plant is a very tender vegetable, requiring a hot-bed to bring it to perfection in the Northern States. At the South, it is sometimes called "Guinea Squash."

Early Long Purple.—The earliest and most productive. Fruit long, and of superior quality.

Large Oval Purple.—This variety is more generally cultivated. It grows to a large size, oval shape, and dark-purple color. There is a prickly and a smooth-stemmed sort. The "Prickly" grows the largest, and the "Smooth-stemmed" is the earliest.

Culture.—Sow in hot-beds early in the spring, and transplant to two and a half feet apart each way, in a very rich, warm soil. Draw earth to

the plants as they advance. For the want of a hot-bed, the seeds may be sown in window-pots early in the spring; or later, on a warm, light bed, made in a sheltered part of the garden.

ENDIVE.

Cichorium endivia	Of Botanists.
Chicorée-endive	French.
Endivien	German.
Endibia	Spanish.

This is a hardy annual, cultivated principally for a winter salad. It is also used in stews and as a garnish for the table.

The following are among the varieties:

Green Curled is the hardiest sort, with beautifully curled, dark-green leaves, tender, and very crisp. It is the most cultivated in this country for salads, and is considered wholesome.

White Curled resembles the Green, except in color and hardiness; not much cultivated.

Broad-leaved Batavian.—This is the *Chicorée scarolle* of the French, and is chiefly used in stews and soups. Leaves broad, light-green, and nearly plain.

Culture.—Sow from late in the spring to the middle of summer, in shallow drills, fourteen inches apart; thin the plants to a foot in the drills, and when fully grown, tie over the outer leaves of a few of them, in dry weather, every week or two, to blanch, which will ordinarily take from one to three weeks. It grows best in a rich, mellow soil, in an open situation, only requiring a little earth to be drawn around the base of each plant.

FENNEL, SWEET.

Fœniculum dulce	Of Botanists.
Fenouil sucré	French.
Fenchel süsser Bologneser .	German.
Hinojo dulce	Spanish.

Fennel is a perennial plant, the tender stalks of which are employed in salads. The leaves, when boiled, enter into the component parts of fish-sauce, and are used as garnishes for several dishes, in a raw state. The blanched stalks are eaten with oil, pepper, and vinegar, as a cold salad, and are sometimes used in flavoring soups.

Culture.—This plant, in a dry soil, is the longest-lived. It may be propagated by offsets, partings of the roots, and by seeds, any time in the spring previous to the period of the flowering of the apple or pear. The best season, however, for sowing is in autumn, soon after the ripening of the seeds, when it may also be transplanted from six to twelve inches asunder. If the weather be dry, water must be freely given at the time of the removal until the plants are well established. The stalks not required to produce seed may be cut down in summer as often as they run up. If this is strictly attended to, the roots will last for many years.

GARLIC.

Allium sativum	Of Botanists.
Ail ordinaire	French.
Knoblauch	German.
Ajo vulgar	Spanish.

This perennial, so much used in seasoning meats and soups, from its peculiar flavor, is too well known to need description here. In France, there is an early variety (Ail rose hâtif) which comes into use fifteen days before the ordinary kind.

Culture.—This plant grows best in a light, rich soil. It is generally propagated by parting the roots, but may be raised from the bulbs produced on the stems. It may be planted in the spring at any time previous to the flowering of the cherry or the peach, provided the ground is sufficiently open and dry. A single "clove" is planted one inch deep in each hole, made in drills six inches apart, and also six inches asunder along the drills, care being taken to set the root-end downwards. To do this, it is the best practice to thrust the finger and thumb, holding a clove between them, to the requisite depth, without any previous hole being made. Keep the plants frequently hoed until June or July, when the leaves are to be tied in knots to prevent the plants from running to seed. The roots intended for future use, should not be lifted before the leaves wither at the close of July, or in the course of August. It is usual to leave a part of the stalks attached, by which they are tied into bunches, being previously well dried, for keeping, during winter and spring.

HOREHOUND.

Marrubium vulgare	Of Botanists.
Marrube	French.
Andorn	German.
Marrubio	Spanish.

This plant may readily be cultivated from seeds sown in spring, in almost any hot, dry, dusty site. Its uses in domestic medicine and for tanning are too well known to be described.

HORSE-RADISH.

Cochlearia amoracia	Of Botanists.
Raifort sauvage	French.
Meerrettig	German.
Rábano picante	Spanish.

Horse-radish, so well known in medicine, as well as a condiment in the form of salads or sauces, delights in a deep, rich soil, and may be grown in any part of the United States. Should the ground require manure, it should be dug in at the depth to which the roots are intended to run—say, from two to three feet. It is propagated by sets, provided by cutting the main root and offsets into lengths of two inches. The tops or crowns of the roots form the best; those taken from the centre never becoming so soon fit for use, nor of so fine a growth. Each set should have at least two eyes; for without one eye, they refuse to vegetate. For a supply of

the crowns, any inferior piece of ground, planted with sets, six inches apart, and six inches deep, will furnish from one to five tops each, and may be collected for several successive years with little more trouble than keeping them clear of weeds. The time for planting is from October till May. The sets may be inserted in rows eighteen inches apart each way, and covered to the depth of an inch. The shoots, after they make their appearance, require no other culture than keeping the ground well stirred and free from weeds. As the leaves decay, in autumn, they should be removed, and the ground hoed and raked over, which may be repeated the following spring. In the autumn of the second year, they merely require to be hoed again as before, and the roots taken up as wanted for use. By having three beds devoted to this plant, one will always be lying fallow and improving.

In taking up the roots, a trench is dug along the outside row quite down to their bottoms, which, when the bed is continued in one place, may be cut off level to the original stool, and the earth from the next row then turned over them to the requisite depth; and so on in rotation to the end of the bed. By this mode, a bed will continue in perfection for five or six years; after which, a fresh plantation is usually necessary. But, perhaps, the best practice is to take the crop up entirely, and to form a plantation annually; for it not only causes the roots to be finer, but also affords the opportunity of changing the site. If this mode be adopted, care must be taken to raise every lateral root; for almost the smallest fibre will vegetate if left in the ground.

HOP.

Humulus lupulus	Of Botanists.
Houblon	French.
Hopfen	German.
Lúpulo	Spanish.

The hop is a perennial, of easy cultivation, and will grow in any part of the Union. Its domestic uses are so obvious that no farm or garden should be without one or more roots.

Culture.—This plant requires a rich, deep, mellow soil, with a dry, porous, or rocky sub-soil. The exposure in a northern climate should be towards the south, as on the slope of a hill, or in any well-sheltered valley. It may be propagated from seeds, or by divisions of the roots; but it is more usual to plant the young shoots which rise from the bottoms of the stems of old plants. These are laid down in the earth till they strike, when they are cut off and planted in a nursery-bed. Care must be taken to have only one sort of hops in the same plot or field, in order that they may all ripen at the same time. "Cooper's White" and the "Goldings" are regarded as the best.

The ground having been prepared for planting, it is divided by parallel lines, six feet apart, and short sticks are inserted into the ground, along the lines, at seven feet distance from each other, and so as to alternate in the rows, as is frequently done with fruit trees and other plants, in what is called the "quincunx form." By this method, every plant will be

just seven feet from each of its neighbors, although the rows will be only six feet apart; and consequently about one-eighth of ground will actually be saved, as indicated in the diagram below:

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At each stick, a hole may be dug, two feet square and two feet deep, and lightly filled with the earth dug out, mixed with a compost prepared with well-rotted dung, lime, and muck. Fresh dung should never be applied to hops. Three plants are next placed in the middle of this hole, six inches asunder, forming an equilateral triangle. A watering with liquid manure will greatly assist their taking root, and they soon will begin to show "bines." A stick three or four feet long is then stuck in the middle of the three plants, and the bines are tied to these with twine or bast, till they lay hold and twine round them. During their growth, the ground should be well hoed, and forked up around the roots, and some of the fine mould thrown around the stems. In favorable seasons, a few hops may be picked from these young plants in autumn; but in general, there is nothing the first year. Late in autumn, the ground may be carefully dug with a spade, and the earth turned towards the plants, to remain during winter. Early in spring, of the second year, the hillocks around the plants should be opened, and the roots examined. The last year's shoots are then cut off within an inch of the main stem, and all the suckers quite close to it. The latter form an agreeable vegetable for the table, when dressed like asparagus. The earth is next pressed round the roots, and the cut parts covered so as to exclude the air. A pole about twelve feet long is then firmly stuck into the ground, near the plants; to this the bines are led, and tied as they shoot, till they have taken hold of it. If, by accident, a bine leaves the pole, it should be carefully brought back to it, and tied until it takes new hold.

HYSSOP.

Hyssopus officinalis	Of Botanists.
Hysope	French.
Isopp	German.
Hisopo	Spanish.

A hardy perennial evergreen—the whole plant possessing a strong aromatic scent, and the leaves and flowers a warm, pungent taste. The latter are sometimes reduced to powder, and used in cold salads. Its uses in domestic medicine are well known. The flower-spikes and young leafy shoots are the parts of the plant usually saved, which may be cut as they are wanted for use.

Culture.—This plant is easily propagated by sowing the seeds in a light dry soil in the spring, or by planting divisions of the roots from November to May.

The flower-stems may be gathered in summer, dried in the shade, and hung up in an airy place for future use.

INDIAN CORN.

Zea mays	Of Botanists.
Maïs	French.
Turkische Korn	German.
Maiz	Spanish.

This product, so extensively grown in the United States for boiling in a green state, when planted at intervals, may be had for table use from early summer until the occurrence of hard frosts.

The following are the varieties most esteemed for the purposes named above:

Smith's Early White.—This is a dwarfy variety, the earliest in the list; cob, white; kernels, eight-rowed, and nearly as white as the Tuscarora. Plant the hills two feet and a half apart.

Early Red-cobbed Sweet.—This is another early variety. The ears are short, ten or twelve-rowed, and filled to the end of the cob. It is fit for boiling a week or ten days before the Large Eight-rowed Sweet.

Large Sweet.—Eight-rowed; cob, white; kernels, regular, and straight in the rows; ears, long and well filled. The best sort for the main crop.

Mammoth Sweet.—A very large and late variety of sweet corn. Eight-rowed; cob, red, and a foot or more in length, filled completely over the end. It is very productive in rich ground, and requires a large space. Make the hills three and a half feet apart.

Early Tuscarora.—A large variety, with broad flour-white kernels, a little indented; eight-rowed; cob, red; remains a long time fit for boiling. It requires wide planting and a rich soil.

Early White Flint.—Has eight or more rows, with medium-sized ears. The kernels have a transparent, flinty appearance, and are very hard when dry.

New Mexican White Flint.—A new variety, recently brought into general cultivation throughout the Atlantic States south of New Hampshire. The ears are large, having eight or more rows, with large, broad kernels, of a flinty appearance on the exterior, but starchy within. Its quality is excellent for table use, when green; also for hommony, meal, or for stock. May be cultivated like the Early Tuscarora.

Late Green, sometimes called "Evergreen," a late, strong-growing variety, with rather short, thick ears, twelve to eighteen-rowed; kernels, rather long, and thickly set on a white cob. This and the Mammoth keep soft longer than any other sort.

KOHL-RABI.

Brassica caulo-rapa	Of Botanists.
Chou-rave	French.
Kohlrabi	German.
Col de nabo	Spanish.

Kohl-rabi, or "Turnip-stemmed Cabbage," called also "Cape Cabbage," rises in a thick stem about eight inches out of the ground, terminating at the top into a globular form, somewhat like a large Swedish turnip, crowned with leaves slightly scolloped on their edges, undulated,

and of a milk-green color. There are several varieties of it, but the "Green-stemmed" and the "Purple-stemmed," especially the latter, are to be preferred.

This vegetable is sweeter, more nutritious, and more solid, than either the cabbage or white turnip; produces a greater weight per acre than the latter, and prefers a heavier soil than that root; it also is hardier, and keeps better than any other bulb, and imparts, when fed to cows, but little of that flavor known as "turnipy," either to butter or milk.

CULTURE.—The seeds of this plant may be sown at the same period as the Swedish or Ruta-baga Turnip, and may be cultivated in the same way, remembering to leave the chief part of the stems uncovered by the earth. The bulbs may be kept sound and nutritious until late in the spring—even later than those of the Swedes.

LAVENDER.

Lavandula spica	Of BOTANISTS.
Lavande	FRENCH.
Lavendelkraut	GERMAN.
Espliego, Alhucema . .	SPANISH.

Lavender is much prized for the very grateful odor of its essential oil obtained from its flowers and leaves.

CULTURE.—This plant may be propagated from seeds, or by slips or cuttings of the roots, which, in a mild climate, are perennial. It thrives best in a dry soil, and may be set either in distinct plants, two feet asunder, or form a sort of hedge-row or border, in one or more lines, especially where large supplies of flowers are required for distilling. The plants will advance in a close branchy growth, and when established, will produce an abundance of flowers, which should be gathered while in perfection, cutting the spikes off close to the stem. In a dry, gravelly, or poor soil, the flowers have a more powerful odor; while in a rich garden, notwithstanding it may grow strongly, they have less perfume.

LEEK.

Allium porrum	Of BOTANISTS.
Poireau	FRENCH.
Lauch	GERMAN.
Puerro	SPANISH.

The leek is a hardy biennial. Although attaining perfection in size and being fit for culinary use the first year, it does not seed before the second. The whole plant is eaten, employed in soups, &c., and boiled with meat.

The two principal varieties cultivated in this country are as follows:

Broad Scotch or Flag.—A large and strong plant, with broad leaves growing only on two sides, like the flag. This has the preference.

Large London.—This differs from the other kind in the leaves growing around on all sides of the plant.

CULTURE.—The seeds are sown as early in the spring as the season will admit, either in a seed-bed, to be transplanted, or in the sites where they

are intended to perfect their growth. As soon as the plants are three or four inches in height, they may be hoed and thinned out to two or three inches apart. If the weather be dry, watering will strengthen and forward them. When they are six or eight inches high, they may be removed. They should be taken away regularly from the seed-bed, the ground being well watered previously, if not soft and easily yielding. When thinned out, they may be left to remain in the seed-bed six inches asunder, as they do not grow so large as the transplanted ones, which must be set by the dibble in rows ten inches apart each way, nearly down to the leaves, that the neck, by being covered with the earth, may be blanched. Give them an abundance of water at the time of planting, and shorten the long, weak leaves, but do not injure the root more than is possible. By this treatment, and by cutting off the tops of the leaves about once a month, as new ones are produced, the neck swells to a much larger size.

LETTUCE.

Lactuca sativa	Of Botanists.
Laitue	French.
Lattich	German.
Lechuga	Spanish.

Lettuces may be divided into two classes—the "Headed" or cabbage kinds, with round heads, and broad, spreading leaves, and the "Cos," with long heads, and upright, oblong leaves.

The following are the principal sorts in cultivation:

Early Curled Silesia.—A superior early variety, of very strong growth; leaves, large, light yellow, wrinkled. It makes a large loose head, of excellent flavor. For forcing and the first spring sowing, it is highly esteemed; seeds, white.

Early White Cabbage.—An open-spreading lettuce, grown mostly for an early spring salad; color, light yellow; seeds, white.

Large Green-headed or Hardy Green is a hardy, dark-green, low-growing sort, with round leaves, and round hard heads; tender and excellent; the best of the green lettuces; seeds, black. There is a variety which resembles this in the color and form of the leaf, called "Ice Head," but improperly so, for it runs up to seed without heading.

Fine Imperial Cabbage or Berlin is one of the best lettuces for general use; color, light yellow; seeds, black. It heads finely, and answers well for summer growth.

Royal Cabbage.—This is the *Blond d'été* of the French. Color, light yellow; leaves uniform, nearly all turned into the head, which is well formed, good-sized, close, and a little flattened. It stands the heat well; seeds, white.

Versailles.—Leaves large, thin, crimped, and very light colored; heads large and thick, but not very hard. It is prompt to head, but slow to run up; seeds, white.

Superb Brown-headed.—A dark-brown curled variety, rather small and late, with close round heads, which cut open finely blanched and very crisp. It remains a long time in head; seeds, black—produced very sparingly.

Large India.—This is one of the largest varieties, in general appear-

ance resembling the Silesia, but is less curled, and the leaves are whiter, being sometimes edged with pink. It forms large round heads, which cut white, brittle, and almost transparent. No lettuce withstands the summer heat better, nor is more popular for market; seeds, white—produced in small quantity.

Brown Dutch will endure the winter with less protection than most of the other sorts, and is generally sown in autumn. It grows in the cabbage form, but does not make a close head; seeds, white. There is a kind with yellow seeds, which is preferred by some.

Ice Cos.—This is a very brittle lettuce, with large, light-green, crimped leaves, which have an icy appearance. Heads oblong, rather loose, and very crisp; seeds, white. It is the "Drumhead" or "Malta" lettuce of the English catalogues.

Paris Green Cos is one of the best of the Cos varieties. It grows upright, with long, narrow, and dark-green leaves. It should be tied up to blanch a week or ten days before cutting; seeds, white.

CULTURE.—For the first cutting, sow as early in the spring as the ground can be worked, on a sheltered bed, made light and dry; and at intervals throughout the season, for a succession. Thin or transplant to one foot apart for heading. The hardy kinds may be sown in the fall, and protected through the winter by a light covering of straw, or of cedar or hemlock boughs, when they can be obtained, which are less liable to smother the plants. The covering should be removed gradually in the spring. The best soil for lettuce is a rich sandy loam. It is useless to undertake to grow good heads on poor ground.

MARJORAM.

Origanum majoranöides	Of BOTANISTS.
Marjolaine	FRENCH.
Majoran	GERMAN.
Majorana	SPANISH.

The Sweet or "Knotted" Marjoram is a hardy perennial, well known in gardens, much employed as a relishing herb in soups, broths, stuffings, &c. The young tender tops and leaves are employed together, in summer, in a green state, but in winter they are used dry.

CULTURE.—The plant thrives well, if the situation be open, in a light, dry, and moderately-fertile soil. It is propagated solely by seed in open weather, at the period of the flowering of our orchard fruits. It may be sown in drills six inches apart, at the depth of a quarter of an inch. No other cultivation is necessary than to hoe the plants occasionally, and to keep them free from weeds. When in flower, they are cut and dried after the manner of other aromatic herbs, and preserved for winter use.

MELOCHIA.

Corchorus olitorius	Of BOTANISTS.
Corette, Mauve des Juifs . . .	FRENCH.
Gemüse-Corchorus	GERMAN.
Corcorus, Malva judia	SPANISH.

This esculent has recently been introduced into the United States from Egypt, where it has long been cultivated, as well as throughout the East,

as a pot-herb. Its young leaves and tops are highly mucilaginous, rich, agreeably flavored, and may be substituted for okra in soups.

CULTURE.—In the Middle and Northern States, sow annually in hot-beds, in March or April, transplant to open culture in May, and treat, in the after-culture, as sweet herbs.

MELON, OR CANTELEUP.

Cucumis melo	Of BOTANISTS.
Melon	FRENCH.
Melone	GERMAN.
Melon	SPANISH.

The agreeable and delicious flavor and perfume of this fruit has caused it to be sought after and cultivated in all parts of the world where the climate will admit of its growth.

The varieties are numerous, but the following are most esteemed:

Green Citron.—A handsome, roundish fruit, flattened at the ends, and roughly netted all over; flesh, thick, green, melting, very sweet, and high flavored.

Pine Apple.—A dark-green, oval melon, of medium size; rough netted; flesh, thick, firm, juicy, and sweet.

Nutmeg.—Is of larger growth, and globular shaped; flesh, green, and highly scented.

Skillman's Fine Netted is a small, rough-netted variety, flattened at the ends; flesh, green, very thick, firm, sugary, and of the most delicious flavor. The earliest of the green-fleshed melons.

Large Yellow Canteleup.—A good-sized, nearly round fruit, netted, and slightly ribbed; flesh, salmon-colored, thick, and musk-flavored; earlier than the green sorts.

Large Musk.—This is the largest variety; long oval shape, deeply ribbed; flesh, thick, light salmon-colored, and of peculiar musky flavor; early and productive. This kind is used in its green state for "mangoes."

Christiana.—A yellow-fleshed variety, which originated in Massachusetts. It is ten days earlier than the Nutmeg, but not quite equal to it in flavor, though an excellent sort. Its chief merit is its earliness, which renders it particularly valuable for a northern climate. The seeds, like those of yellow melons generally, are larger than those of the green, flatter, and a little crooked.

Cassabar.—A melon which has long been celebrated in Asia Minor and other parts of the East for its sweet, delicious flavor, as well as for its salutary effects.

Hunter or Hooseinee Canteleup.—A popular variety, brought originally from the valley of the Cashmere, and much cultivated in the District of Columbia, Maryland, and Virginia.

CULTURE.—Plant late in spring, in hills five or six feet apart each way, well manured with old rotten compost; scatter a dozen seeds to a hill, and after they are out of danger from bugs, thin to three or four plants. When they have four or five rough leaves, pinch off the end of

the main shoot, which will cause the lateral branches to put forth sooner. It will strengthen the growth of the vines, and the fruit will come earlier to maturity. A light, dry, sandy soil, and a dry atmosphere are most suitable. Melons should not be planted near other varieties, if it is desired to preserve them pure. They have arrived at perfection when the stem will cleave from the fruit. A very rough-netted skin is the most sure indication of a high-flavored fruit.

WATERMELON.

Cucurbita citrullus	Of Botanists.
Melon d'eau	French.
Wassermelone	German.
Sandia	Spanish.

The watermelon is held in high estimation in all warm countries, for its refreshing coolness and delicious sweetness.

The following are among the best varieties:

Mountain Sprout or Long Carolina.—A large, long, striped variety, with bright-scarlet flesh, and drab-colored seeds; one of the best in almost every respect.

Black Spanish.—Round, very dark green, with scarlet flesh, and black seeds. It is smaller than some of the other sorts, but has a very thin rind, and rich, sugary flavor.

Long Island.—This is the variety commonly grown for New York market, and is either round or long, or both together; flesh, red; seeds, grey. It is earlier than any of the above.

Citron, for preserving, grows uniformly round and smooth, striped and marbled with light green; flesh, white and solid; seeds, red.

Orange.—Peculiar for the division of its flesh from the rind, which may be taken off like the rind of an orange by a little separation with a knife. The shape is oval; color, light green; flesh, red, of medium quality; seeds, thick and short.

Culture.—Plant in raised hills seven or eight feet apart, in a sandy soil, well manured, as early as it can be done with safety from frost, in order that the fruit may come to maturity in the warm season, when it is the most desired.

MINT—PEPPERMINT.

Mentha piperita	Of Botanists.
Menthe poivrée	French.
Pfeffer-Münze	German.
Menta piperita	Spanish.

This is a well-known, hardy perennial, celebrated for its peculiar uses in medicine and confectionery. It is extensively cultivated in low, rich, soft, marshy lands, especially such as can readily be flooded or irrigated, and is employed chiefly for flavoring drinks and for distillation. It is also grown in gardens for its green tops and leaves, which are substituted for spearmint.

There are two varieties of this plant, the "Narrow-leaved," and the "Broad-leaved," besides several variegated kinds which are considered ornamental, particularly a reddish sort, called "Orange Mint."

CULTURE.—This, like all species of mint, is propagated by the same methods, namely, by parting the roots, by offset young plants, and by cuttings of the stalks. When increased by the roots, the operation is performed in the autumn or spring. Having some full roots from any established beds, divide them as expedient, and opening drills with a hoe, about two inches deep and six inches asunder, place them in the drills, moderately close, and earth them over to an equal depth. If propagated by offsets, procure them in the spring from established plants, and dibble them in rows six inches asunder. If multiplied by cuttings of the young stalks, in May, June, or advanced summer, take advantage of showery weather, divide them into lengths of five or six inches, and plant them by dibble, six inches apart, inserted half way in the ground. Propagated by any of these methods, the plants set in spring or summer will come into use the same year. New plants require to be watered until they take root. Keep them clear of weeds. At the end of autumn, cut away any remaining stems, at which season, or in the spring, spread a little loose earth thinly over the beds.

In taking up the crop for salads or culinary use, gather the young green tops when they are from an inch to six inches in length, and in their advanced growth throughout the summer. When nearly full grown, in June, July, or August, or at the period they are beginning to flower, gather a store for winter; spread the heads thinly in some dry, airy place, shaded from the sun—to be well dried, and then tie up in bunches, for the house on store. When desired for distillation, let the plants attain full growth, coming into flower, and then cut and use the heads immediately. Peppermint being principally employed for distillation, should stand on the ground until the plants begin to flavor, as they are then in their highest perfection. Cut in dry weather, tie into bundles, and carry under cover, ready for immediate use. Full-grown stalks may be cut close to the ground as soon as the dew is off; for in the afternoon, and especially during bright sunshine, the odor of the plant is found to be much diminished.

MINT—SPEARMINT.

Mentha sativa	Of BOTANISTS.
Menthe, Baume à salade	FRENCH.
Münzkraut	GERMAN.
Yerbabuena puntiaguda	SPANISH.

This is a pleasantly-aromatic herb, which has been so generally introduced into the older settlements of this country, that it may now be regarded as naturalized. It is deservedly popular as a domestic medicine, in relieving nausea, &c., and is the species employed in preparing that most seductive beverage known as "mint julep." The young leaves and tops are also used in spring salads, and form an ingredient in soups. They are likewise employed to flavor certain dishes, as peas, beans, &c., being boiled for a time, and then withdrawn, after the manner of garlic.

CULTURE.—The same as peppermint. In order to have young leaves during summer, cut down some of the advanced stalks every month,

which will be succeeded by new shoots; and to have dried "balm" for winter, cause other stalks to blossom and complete their growth. Dry the crop, when gathered, in the shade, and afterwards store it away in bundles in a cool, dry place, until required for use.

MUSTARD, WHITE.

Sinapis alba . . . . . Of Botanists.
Moutarde blanche . . . . . French.
Weisse Möstrich . . . . . German.
Mostaza blanca . . . . . Spanish.

Mustard is a hardy annual, cultivated as a small salad, for greens, and for the seeds, which are extensively employed for medicinal purposes, and for seasoning pickles. The common table mustard is prepared from the flour of the seed.

Culture.—The culture for seed appertains more to the farm than to the garden. Sow early in the spring, in two-foot drills, and thin to six inches. The crop must be gathered before it is fully ripe, in a cloudy day, or early in the morning, to prevent the seed from shelling out. For salad, it is sown thickly, and used like common cress.

MUSTARD, BLACK.

Sinapis nigra . . . . . Of Botanists.
Moutarde noire . . . . . French.
Schwarz-Möstrich . . . . German.
Mostaza negra . . . . . Spanish.

The "Black" or "Brown" mustard is a larger plant than the last-named, with much darker-colored leaves. Seeds, brown, and more pungent. Culture, the same.

NASTURTIUM, OR INDIAN CRESS.

Tropæolum majus . . . . . Of Botanists.
Capucine grande . . . French.
Kresse Indianische . . German.
Capuchina . . . . . Spanish.

This annual is a native of Peru, cultivated both for use and ornament. Its beautiful orange-colored flowers serve as a garnish for dishes, and the young leaves are excellent in salads. The flower-buds scarcely formed, and the green seed-pods, preserved in vinegar, make a pickle esteemed by many superior to capers.

Culture.—Sow early in the spring, in drills one inch deep—the "Tall" variety by the side of a fence, trellis-work, or some other support, to climb upon; and the "Dwarf" to form borders for the alleys. They will thrive in good ground, in almost any situation, but are most productive in a light soil.

OKRA, OR GOMBO.

Hibiscus esculentus . . . . . Of Botanists.
Gombo . . . . . French.
Essbarer Hibiscus . . . German.
Quimbombó . . . . . Spanish.

This is an annual from the West Indies, cultivated for its green seed-pods, which are used in soups, or stewed and served like asparagus.

There are two varieties—the "Long White," with large white-ribbed pods, and the "Short Green," with smaller, green, and smooth round pods.

CULTURE.—Plant late in the spring, after the ground has become warm, in hills about two and a half feet apart, and thin to three plants in a hill. Hoe often, and earth up a little to support the stems. The pods should be gathered while quite young and tender. Okra is easily preserved for winter use by slicing the pods into narrow rings, and drying them upon strings, hung up and exposed to the air.

ONION.

Allium cepa	Of BOTANISTS.
Ognon	FRENCH.
Zwiebel	GERMAN.
Cebolla	SPANISH.

The onion is one of the most important of the culinary vegetables cultivated. The numerous varieties are easily modified under the influence of soil and climate.

The following distinct sorts are most esteemed:

Early Red.—This very early variety originated in Wethersfield, Connecticut, by selecting the earliest for seed for a series of years. It is rather smaller, usually lighter-colored, and more flat-shaped than the Large Red; close-grained and heavy. Fit to be gathered the last of July; productive, and keeps well.

Wethersfield Large Red is the kind mostly grown at Wethersfield. It grows to large size, deep-red, thick, approaching to round shape, fine-grained, pleasant-flavored, and productive. It ripens in September, and keeps well.

Danvers Yellow.—This fine variety originated in Danvers, Massachusetts. It is a thick, heavy, straw-colored onion, mild-flavored, and yields most abundantly; ripens early, and keeps equal to the best. It is taking the place of the Common Yellow wherever it becomes known.

Yellow Dutch.—The common yellow variety is rather flat-shaped, and excellent flavored. This is the "Strasburg" of the English catalogues, and the "Silver Skin" of the Eastern States. Good to keep.

White Portugal.—A mild, pleasant onion, which grows to fair size and handsome shape, but is very hard to keep, being liable to gather moisture unless spread very thin. It is called "Silver Skin" in the Middle States, where it requires two seasons to grow to full size.

CULTURE.—The White Portugal and the Yellow are sown early in the spring, very thickly, in beds or drills; and about the middle of July, or whenever the tops die down, the little bulbs, called "Button" onions or "Sets," are gathered, and kept spread thinly in a dry, airy loft. These little bulbs, the next spring, are set along thinly in shallow fourteen-inch drills, and left to grow without any covering, whatever. White sets are extremely difficult to keep in a body, and often arrive in very bad condition when shipped to a warm climate. Yellow sets keep much better, and on this account should be chosen for transportation.

Onion seed is sown in Connecticut from the first of April to the middle of May; the earlier the better, provided the ground is dry enough to work light and fine. After preparing the land by manuring heavily, and harrowing and raking fine, draw drills fourteen inches apart, with a marking rake, and sow at the rate of eight pounds to the acre, if wanted for bunching. For large onions, six pounds will be sufficient. The sowing is mostly done with machines, which can be graduated to sow any desired quantity to the acre. If convenient, it is better to go over the ground with a light roller immediately after sowing. It is customary to weed them three times. At the first two, the earth is drawn up a little to the plants; and at the third or last weeding, it should be brushed clean away with the fingers, to give them an opportunity to bottom entirely above ground. Onions are an exception to the theory of rotation of crops. They succeed equally well any number of years on the same ground, if kept highly enriched with hog-dung or fine yard manure, spread on every spring, and turned in with a light furrow. A top-dressing of wood ashes, applied after the second weeding, is very beneficial to this crop, as will soon be observed by the dark and healthy change of color given to the plants.

The above mode of culture will produce a fair crop of good-sized onions in the Middle and Western States, particularly of the Large Red and Yellow varieties, if sown very early in the spring, and thinned out two or three inches apart in the drills.

To keep onions in quantity through the winter, deposit them, when perfectly dry, eighteen inches thick, evenly, on a tight floor in an outbuilding, leaving a space of two feet next the walls of the room on all sides; spread a sheet over them, and tuck it close round the edges of the heap; fill the space with fine hay, and tread it hard; then cover the whole two feet thick with the same, and the onions will keep in perfect order. They should never be disturbed while frozen, but, as soon as the frost is completely out in the spring, remove the covering, and spread them all over the room, and open the doors and windows to give them air, in pleasant weather.

ORACH.

Atriplex hortensis	Of Botanists.
Arroche	French.
Garten melde	German.
Armuelle	Spanish.

The leaves of the orach are cooked and eaten in the same manner as spinach, to which it is preferred by many persons.

Culture.—This plant flourishes best in a rich, moist soil, in open ground. The seed may be sown about the end of September, and again in the spring for succession, in drills six inches apart. When the seedlings are about an inch high, thin them to six inches asunder; and those removed may be planted out at the same distance in a similar situation, and watered occasionally, if needed, until established. The leaves must be gathered for use while young; otherwise, they will be worthless and stringy.

PARSLEY.

Apium petroselinum	Of Botanists.
Persil	French.
Petersilie	German.
Perejil	Spanish.

This well-known and agreeable savory herb is used as a garnish and for seasoning soups, meats, &c.

The following are the two best varieties:

Plain Parsley.—This is the hardiest and strongest-growing sort in cultivation. Leaves, dark-green, plain, longer than the Curled, and better flavored for seasoning. A covering of straw or evergreen boughs will ordinarily protect it through the winter.

Curled or Double is more dwarfy and tender; leaves, yellowish green, and very beautifully crimped and curled. It is used principally as a garnish for the table.

Culture.—Soak the seeds a few hours in tepid water, and sow early in the spring, in one-foot drills. If sown late in the season, in dry weather, it will fail to germinate.

To have parsley green during winter, remove some plants into a light cellar, and treat them as in open culture, in autumn.

PARSNIP.

Pastinaca sativa	Of Botanists.
Panais	French.
Pastinake	German.
Pastinaca	Spanish.

This is a hardy biennial, common in most gardens, where it should be accommodated with the deepest and richest soil.

There are several varieties, among which the following deserve notice:

Long Smooth.—Roots very long, white, smooth, free from side-roots, tender, sugary, and most excellent flavored. The tops are small, and tinged with red at the crown, which rises from the centre, surrounded by a slight depression. It keeps through the winter perfectly well, where grown without any protection. It originated from the "Hollow-crowned" variety from England.

Culture.—The parsnip should be sown early in the spring, in fifteen-inch drills, thinned out at weeding to eight inches apart.

PEA.

Pisum sativum	Of Botanists.
Pois	French.
Erbse	German.
Guisante	Spanish.

Practical men usually classify peas according to the modes of cultivation to which they are naturally adapted. For instance, we have one class adapted for field culture, a second suited either for the garden or field, and a third is confined almost exclusively to the garden. These three classes contain a number of varieties, distinguishable from each

other by differences of growth, such as length of straw, shape of pod and seeds, time of flowering and ripening, hardiness, and also by their edible properties—each having a taste peculiar in some measure to itself. A further division is made according to the color of seeds, which may be either grey, brown, speckled, white, or green. The three former colors are characteristic of the field varieties; while the latter are chiefly confined to the garden sorts.

The "Grey Pea," or "Field Pea" (Bisaille of the French) is less subject "to sport" than the "Garden Pea," and, in fact, seems to be the wild plant, which has not lost its original habit; but all the others, both garden and field, early and late, tall and dwarf, large and small, white and blue, have so great a tendency "to run away," as to render the preservation of the races impracticable. The early kinds, in particular, soon cease to be early, unless they are constantly cultivated on warm, dry land, or special pains taken to select for seed the pods soonest ripe.

FIELD PEAS.

The varieties of Field Peas have never been very numerous, nor are they much increasing.

The following are the principal sorts cultivated on the British Isles:

Common Grey Field Pea.—This variety is extensively cultivated in Scotland, where it is late in coming to maturity, unless grown on a dry, warm, somewhat meagre soil. The pods are semi-cylindrical, long and well filled, often containing from six to eight peas. In summer and autumn, little difference is observable in the straw; but when threshed, three distinctly marked seeds appear—one spotted with a bluish-green ground, another light-blue, and a third bluish-green without spots.

Early Grey Warwick.—This is the earliest common field sort in cultivation, coming fully three weeks sooner than the "Grey Hastings," which it resembles in the shape and color of the pods and seeds; but it is much shorter-strawed and less prolific. The pods are cylindrical and straight, containing seeds of a greyish color with purple speckles. From its earliness, it may be sown much later than any of the other sorts.

Grey Hastings.—This is a late variety, but earlier than the Common Grey Field Pea. The pods are cylindrical and well filled, with the seeds much compressed. The straw is long and slender, but not so rank in its growth as the Common Gray.

Partridge Pea.—This sort is also known under the names of "Grey Maple" or "Marlborough Pea." The pods are broad, and contain from five to seven medium-sized seeds, which are colored and speckled like the neck of the English partridge. The straw is about four feet long, thick and succulent, with large, broad leaves. It is earlier than the last-named, but later than the Early Grey Warwick.

Purple-podded or Australian Pea.—This variety is prolific, of superior quality, and earlier than the Partridge Pea. The straw is about five feet long, usually bearing flattened, dark-purple pods, though sometimes green, invariably distinguishable from others by the thickness and fleshiness of the skins. The seeds are of medium size, slightly compressed,

and of a dunnish color. From its earliness, it appears to be well adapted for late sowing.

Winter Field Pea.—This sort, as its name indicates, stands the severest cold of Germany and France, without injury from the frost, where it is sown in October, and ripens its seeds the following summer before the spring varieties, but later when sown in the spring. The straw is about four feet long, producing small, straight, cylindrical pods, growing in pairs, containing small, dark-colored seeds.

CULTURE.—Field Peas, in general, may be sown broadcast or in drills, after the manner directed for Field Beans, page 21.

GARDEN PEAS.

The peas in general culture in gardens are comprised in the two following classes, namely:

Those having a tough lining to the pod, and the peas only eaten after shelling; and those without this lining, and both peas and pods eaten, sometimes called "String Peas." These, again, are subdivided, according to their habit—whether tall, requiring sticks, or dwarfy in their growth, and not requiring supports.

PEAS FOR SHELLING, TALL, REQUIRING STICKS.

Pisum saccharatum	Of BOTANISTS.
Pois à écosser à rames	FRENCH.
Schal-Erbsen	GERMAN.
Guisantes para desvainar vástagos . .	SPANISH.

Of this class, the following are the principal varieties in cultivation, and the names they usually bear:

Early Charlton.—This is supposed to be the original stock whence most of our garden varieties of peas have sprung. At all events, it is the oldest and best sort known. It is about five feet high, being distinguished from the Early Frame by its larger pods, which, instead of being round, are broad, containing six or seven seeds. It is a week or ten days later in coming into bloom.

This pea is also known among gardeners and seedsmen by the following names: Golden Charlton, Early Sugar Frame, Late Dwarf, Twesly Dwarf, Hotspur, Wrench's Hotspur, Double Dwarf Hotspur, Early Hotspur, Nimble Taylor, Paddington, Essex Reading, Russell's Early-blossomed Pea, Michaux, Michaux ordinaire, Michaux précoce, Michaux de Ruelle, Petit Pois de Paris, Dominé, and Pois de la Sainte-Catherine.

Early Frame.—This variety grows to a height of about four feet, rather slender; pods small, round, usually containing five or six peas. In England, it is one of the earliest sorts. It is known also as the Early Single-blossomed Pea, Early Double-blossomed Frame, Best Early, Early Dwarf Frame, Single Frame, Perkins's Early Frame, Early One-eyed, Superfine Early, Young's very Early, Batt's Early Dwarf Nimble, Russell's Fine Early, Early Wilson, Early Nicholas, Early Nana, Early French, Mason's Double-blossomed, Dwarf Albany, Early Warwick, Early Race-Horse, Early May, Early Washington, Daniel O'Rourke,

Sangster's No. 1, Pois le plus hâtif, Vert à rames de Mont Julienne, Michaux de Hollande, Pois Baron, Pois Laurent, Pois à la Reine, and Pois Bergére.

Prince Albert.—This appears to be a variation from the Early Frame, about three feet in height, and ripening ten days earlier. The Early Kent is similar, as is likewise Warner's Early Emperor, and Pois Empereur hâtif.

Early Auvergne, a variety about five feet high, with quite long pods, nearly round, curved at the ends, very full, and sometimes containing eleven peas. It is productive, of good quality, and about ten days later than the Early Charlton. Known in France by the names Pois d'Auvergne, Pois serpette, and Pois Cosaque.

Early Hero, a variety growing to a height of about five feet, with slightly-curved pods, a little flattened, and containing six or seven medium-sized seeds. It is a prolific bearer, and ripens about the same time as the Early Auvergne.

Tall White Marrow, a superior pea, about seven feet in height, with very large, broad pods, containing eight or nine seeds, of excellent quality, prolific, but rather late. This variety also bears the names of Imperial Marrow, Tall Carolina, Large Carolina, New Tall Temple, Clive, Wooten, White Rouncival, Princess de Marly, Pois de Marly, and Suisse. The Egg, Large Egg or Bean Pea, the Patagonian, and the Pearl, or Nonsuch, are nearly allied to this sort.

Dancer's Monastery, a good bearer, growing to a height of six or seven feet, with large pods, containing seven or eight large peas of good quality. It is somewhat earlier than the preceding.

Bellamy's Early Green Marrow, growing to a height of four or five feet, with long, straight, cylindrical pods, containing six or seven peas. A good bearer, rather early, and on the whole an excellent pea. Sutton's "Superb Green Marrow" ranks near this variety, but the peas are not so sweet.

Fairbeard's Surprise, known also by the name of Fairbeard's "Early Surprise," grows to the height of five feet, having thick, roundish, and slightly-curved pods, containing seven or eight large peas, of good quality. Early and an excellent bearer.

Adamson's Matchless Marrow, five feet high, with large, flat, curved pods, containing six or seven peas; an excellent bearer, as early as the Charlton.

Tall Imperial, growing to a height of about seven feet, having broad, obtuse pods, containing only six peas. It is nearly related to the preceding, and is also known by the names of Tall Blue Imperial, Tall Green Imperial, New Tall Imperial, Blue Union, Tall Prussian or Blue Union, Spanish Patriots, Green Nonpareil, Carré vert, Carré vert gros, and Gros Pois vert Normand.

Tall Green Marrow, a variety growing to the height of seven feet, with large, broad, rather flat pods, containing eight or nine peas, of excellent quality. A good bearer, but late. It is also known by the names of New Large Green or Imperial Green.

Victoria Marrow, (Pois à la moëlle de Victoria, of the French,) growing to a height of six or seven feet, with pods nearly four inches in length, generally in pairs, straight, roundish, and containing seven or eight very large peas of good quality. It is an abundant bearer, remarkable for the great length of its pods, in which respect it exceeds all other sorts in this class.

Knight's Tall Marrow, six or seven feet high, having large, broad pods, containing from seven to nine peas, wrinkled when dry, sweeter than those of any other known. It is very productive, bears long in succession, and is well adapted for a principal or late summer crop. It is also called Knight's Late, Knight's Tall White Marrow, Knight's Tall Green Marrow, Knight's Tall Blue Marrow, Pois ridé de Knight à rames, and Pois du Brésil. A sort called the "Waterloo" resembles this variety, but is inferior.

British Queen, about five feet in height, with large, straight, nearly round pods, generally containing seven very large peas, wrinkled when dry, sometimes measuring a third of an inch in diameter. They are thicker-skinned and less sugary than Knight's Tall Marrow.

Fairbeard's Champion of England.—This variety grows to about five feet in height, producing long, somewhat curved, and slightly-flattened pods, containing seven or eight large peas, indented, and of a bluish color when dry, of a very sugary quality. It is prolific, and highly deserving of cultivation.

Tall Green Mammoth, (Pois grand vert mammoth, of the French,) resembles the last-named, and possesses the additional advantage of being more productive.

PEAS FOR SHELLING, DWARF, NOT REQUIRING STICKS.

Pisum humile	Of BOTANISTS.
Pois à écosser nains	FRENCH.
Zwerg Schal Erbsen	GERMAN.
Guisantes para desvainar enanos .	SPANISH.

Early Dwarf.—This variety attains a height of eighteen to twenty-four inches, having small and rather broad pods, mostly containing five peas. It is prolific, of good quality, and proper to grow under glass, in which case, the tops should be pinched off. It blossoms as low as the second or third joint. It also bears the names Nain hâtif, and Nain de Lévêque.

Bishop's New Long-pod, growing about two feet high, with nearly straight and cylindrical pods, containing six or seven peas. It is very early, prolific, and of good quality. It is known in France by the name of "Pois de Bishop à longue cosse," and supersedes the Nain hâtif or Pois tous les noeuds. In England, it takes the place of the Common Spanish Dwarf, Bishop's Dwarf, (old,) Fan, Dwarf Bog, and Knox's Dwarf.

Dwarf Brittany.—This is the lowest dwarf known, growing only to a height of five to eight inches. The pods are small, nearly round, and contain five or six peas. It may sometimes be useful for late sowing,

otherwise a mere curiosity, as the "Tom Thumb," of the United States. It is also known under the names of Nain de Bretagne, Très nain de Bretagne, and Très nain de Brest.

Knight's Dwarf White, (Pois ridé nain, of the French,) grows to a height of eighteen or twenty inches, with pods containing from six to eight wrinkled peas.

Dwarf White Prussian, a variety growing to a height of about four feet, with long, broad and rather flat pods, containing seven or eight peas. An excellent prolific summer variety, but will not remain so long in bearing as the Blue Prussian. It is also known under the names of "Prolific" or "Poor Man's Profit," Royal Prolific, Royal Dwarf, Stowe, and Dwarf Twesley Pea.

Knight's Dwarf Green, (Pois ridé nain vert, of the French,) growing to a height of about twenty inches, with pods containing six or seven seeds. It is of a delicate flavor, and serves well for a late pea.

Groom's Superb Dwarf Blue, a good summer pea, growing to a height of eighteen inches, with large, broad, and rather flat pods, containing eight or nine seeds. Productive, and of excellent quality.

Bedman's Imperial, another summer pea deserving of culture, growing to a height of thirty inches to three feet, with roundish, somewhat curved pods, containing six or seven large blue seeds.

Blue Prussian, an old variety, ranked the best among dwarf peas for summer use. It grows to a height of about three and a half feet, with long roundish pods, containing seven or eight peas. It is a good bearer, though rather late. It also goes by the names, Dwarf Blue Prussian, Royal Prussian Blue, Prussian Prolific, Green Prussian, Fine Long-podded Dwarf, and Early Dutch Green.

Dwarf Imperial, a large variety adapted for summer use, growing to a height of four feet, having large, rather flat and much-pointed pods, containing eight or ten peas. It is also known under the names of Blue Imperial, Dwarf Green Imperial, New Improved Imperial, New Improved Dwarf Imperial, New Dwarf Imperial, New Long-podded Imperial, Green Nonpareil, Sumatra Dwarf Blue Prolific, Blue Scymetar, Sabre, Blue Sabre, New Sabre, Dwarf Sabre, Nain vert impérial, Nain vert gros, and Pois à la reine.

Dwarf Green Marrow, resembling the above, but inferior to Knight's Dwarf Marrow. It is also known by the names of New Green, Early Dwarf Green, Early Green, New Early Green, Royal Dwarf Marrow, Extra Green Marrow, Holloway Marrowfat, Green Rouncival, Wellington, New Green Nonpariel, and Vert hâtif à la moëlle.

Flack's New Large Victoria, a good prolific variety, a few days earlier than the Prussian Blue, growing to a height of thirty inches or three feet, with flattish, nearly straight, medium-sized well-filled pods, containing about six peas, blue, and compressed when dry.

Woodford's Green Marrow, another good bearer, ripening a fortnight later than the preceding, growing to a height of about three feet, with large, flattened pods, containing six peas, which long keep green.

Knight's Dwarf Marrow, growing to a height of about three and a half

feet, having rather flat, broad pods, containing about six peas, similar to Knight's Tall Marrow, in point of sugary quality, being an abundant bearer and about a week later. It is also known by the names of Knight's New Dwarf and Pois ridé nain.

STRING OR SUGAR PEAS, TALL.

Pisum macrocarpum	Of BOTANISTS.
Pois sans parchemin à rames	FRENCH.
Zucker Erbsen	GERMAN.
Guisantes sin pelicula vástagos . . .	SPANISH.

The pods of all the peas of this class, both Tall and Dwarf, known by the French as *Pois sans parchemin*, *Mange-tout*, and *Goulus*, are gathered when quite young, like those of string beans, and cooked after the same manner.

The following are the principal Tall varieties:

Large Crooked Sugar Pea, one of the best of the class, growing to a height of six feet, having very large, broad, crooked, fleshy pods, productive and rather late. It is also known by the names, Broad-sword Sugar Pea, Six-inch-pod Sugar Pea, Pois sans parchemin grand à fleur blanche, Pois sans parchemin blanc à grandes cosses, Corne de bélier, and Pois crochu à large cosse.

Giant Sugar, (Pois sans parchemin géant, of the French,) growing to a height of about five feet, and remarkable for the size of its pods, which are employed in France in making the soup called *Julienne*.

Late Wyker Sugar, growing to a height of six or seven feet, having small, roundish, and much-curved pods. A good bearer, and very late.

Red-flowered Sugar Pea, (Pois sans parchemin à fleur rouge, Pois à bouquet, Pois chocolat, of the French,) growing to a height of five feet, having long, broad, flattish pods, containing six or eight seeds. Productive.

Crown, (Turc ou couronné, of the French,) of which there are two varieties, one with red and another with white flowers. Pods numerous, tender and sweet.

Medium Sugar Pea, (Pois sans parchemin à demi-rame, of the French,) with straighter and fuller pods than the Large Crooked Sugar, and is remarkable for its earliness and yield.

White-podded Sugar, (Pois sans parchemin à cosse blanche, of the French,) growing to a height of five or six feet, containing six or seven seeds. Curious, on account of the white color of the pods, which they retain from their first development to their maturity. The flowers are red.

Yellow-podded Sugar, (Pois sans parchemin à cosse jaune,) growing to a height of about five feet, and analogous to the preceding, except that its pods are of a yellowish green.

STRING OR SUGAR PEAS, DWARF.

Pisum (?)	Of BOTANISTS.
Pois sans parchemin ou mange-tout nains . .	FRENCH.
Zwerg Zucker Erbsen	GERMAN.
Guisantes sin pelicula enanos	SPANISH.

Early May Sugar Pea, growing to a height of about four feet, having small, round, and straight pods, very early, but tender. It is also called

Early Dutch, Early Sugar, Dwarf Dutch, and Pois nain à la moëlle d'Espagne.

Dwarf Dutch, growing to a height of about three feet, with small, short, crooked pods, a moderate bearer, and a week later than the preceding. Known also by the names, Dwarf Crooked Sugar, Dwarf Sugar de Grace, Early Dwarf de Grace, Pois nain hâtif de Hollande, and Nain de Hollande.

Dwarf Sugar, about three feet high, having long, nearly round, and slightly-curved pods, a moderate bearer, and late. It is known also under the names, Ledman's Dwarf, Pois nain sucré, and Gros nain sucré.

Tamarind, about four feet in height, with large, broad, much-curved pods, from four to six inches in length, an abundant bearer, but rather late for this class. Called also Late Dwarf Sugar Pea.

Fan, (En Eventail, of the French,) the most dwarfy of all the sugar peas, being only about a foot in height, branching from the ground somewhat fan-shaped. It is moderately productive, and late.

CULTURE.—The planting for an early crop of garden peas should be made in the spring, as soon as the ground can be worked, in a warm, dry situation, and covered about three inches. At the South, where they will endure the winter, the planting for the first crop is made in October and November. The ground must be manured the year previous, or the peas will be apt to grow too much to straw. Use thoroughly-decomposed manure, if any, just before planting. The height to which all peas grow depends, in a great measure, upon the richness of the soil and the wetness of the season. In a rich soil and wet season, they will sometimes outstrip all expectation, and the vender is likely to be faulted for selling spurious seed. They are usually planted in double rows, from three to four feet apart, and those requiring it, bushed when about six inches high. The large and later sorts do better at a greater distance apart, leaving a broad space for planting low-growing vegetables between. They should be kept clean, and earthed up twice in their growth. A new mode of growing the common early and marrowfat peas, which succeeds very well in small gardens, and which is practised to some extent for marketing, is to scatter about a dozen peas in every hill, with early-planted potatoes, of the Mercer or some other small-topped variety; hoe them in the hill, along with the potatoes, and they will grow up and fall together between the rows, and produce a fair crop. As soon as the peas are gathered, the straw must be pulled and removed. The potatoes are not much affected, and a supply of peas is obtained with very little cost.

PEPPERS.

Capsicum (?)	Of BOTANISTS.
Piment	FRENCH.
Spanischer Pfeffer . . .	GERMAN.
Pimiento	SPANISH.

Capsicum, or pepper, is a tender annual, used as a hot, pungent seasoning for soups and meats, as well as for pickling, and is universally esteemed. Some of the varieties are mild and sweet.

The following are the sorts in general culture:

Long Cayenne.—This is a long, red, tapering variety, of dwarfy growth, very hot and pungent; used for pepper-sauce and for seasoning.

Cherry.—A small, smooth, round, red variety, of uniform shape, very hot; a great bearer.

Large Squash.—Large and thick; flat, tomato-shaped; rather mild, and the very best for pickling alone; very productive.

Large Bell or Bull-nosed.—A very large sort, of a more square form, mild, thick, and hard; suitable for filling with cabbage, &c., for a stuffed pickle.

Sweet Mountain or Mammoth.—A new variety, of nearly the same form, but much larger than the last described. It is used mostly for pickling.

Sweet Spanish.—There are two sorts—one large and long, and the other of a more square shape—neither of which has the least pungent flavor; used for a salad and for pickling; very late, and rather difficult to keep when pickled.

CULTURE.—Sow early, in a hot-bed, in the Northern and Middle States, or in the open ground, in a seed-bed, about the middle of spring, in a light, warm soil. Transplant when three inches high, one foot apart, in eighteen-inch drills, and earth up a little at one or two hoeings. Guano, hen-dung, or any other bird-manure, applied upon the surface, and hoed in when the plants are about six inches high, will be found to increase the product.

POTATO, COMMON.

Solanum tuberosum	Of BOTANISTS.
Pomme de terre	FRENCH.
Kartoffel	GERMAN.
Papa	SPANISH.

This important esculent is too well known throughout the civilized globe to require description. To enter into a general detail of the merits of the numerous varieties in cultivation would lead to erroneous opinions, as one sort which might be approved in one section of the country would be condemned in another. The "Mercer," or "Meshanock," is a universal favorite throughout the Middle and Western States, as well as in some parts of New England and New York. In Massachusetts, the "Carter" and "Pink-eyes" have long been celebrated. In Pennsylvania, the "Foxite" and "Fox's Seedling" stand in high repute; and, in like manner, others might be enumerated in various States.

CULTURE.—Potatoes are usually propagated by tubers, but it is easy to multiply them several other ways. Cuttings from the top branches, set in the ground, will produce a considerable crop. These will strike root, even if planted bottom upwards. The sprouts broken from potatoes, if the tuber is in a healthy state, will also produce roots. So will the seeds of the apples, or balls, as also the bare eyes, or buds, or even a piece cut out of the heart of a potato. In the preparation of the ground, it should be ploughed or spaded deep, because roots will commonly grow as low as the soil is stirred, and no deeper, perhaps green-sward land excepted; and the more the ground is pulverized before planting, the better

will be the crop. Those tubers are accounted best for eating which are raised without dung. New land, or that which is burnt over, produces excellent crops without any other manure. If necessary to add dung, unfermented horse manure, perhaps, is the best of any applied in the hill over the planted sets. An excellent crop has been produced by adding a bundle of old weather-beaten salt hay, at the time of planting, in each hill. The period of the flowering of the apple and pear, perhaps, is the right season for planting in a warm, dry soil; though planted a month or two later, in the Middle and Western States, they will arrive at maturity and produce well.

The common method of planting potatoes, in hills about three feet apart, may be as good as any in rough ground, or that which is not well subdued; but in a light, rich, mellow soil, well pulverized, the drill method is to be preferred. The sets may be planted either in single rows, two and a half feet apart, and from seven to nine inches asunder along the rows, or in double ones, a foot apart. It is no more labor to cultivate in drills than in hills. If the soil be dry, the seed should be planted deep, and under the manure when used; but if it be moist, it should be placed on the top of the manure, or not covered deep. As soon as the plants are grown to a height of four or five inches above the surface—or earlier, if the ground be weedy—they may be hoed, drawing towards them a little fine earth. This operation should be repeated three times in the course of the season, taking care not to earth up the plants too much, as the ridges or hills should be rather broad than steep, and flat on the top, in order that the water which falls in rain may not be too much diverted from the roots. The last hoeing should be finished before the plants are in blossom, and before the tops begin to trail upon the ground; otherwise, a new set of roots will be formed too late to get their full growth, which will rob the former sets of their nourishment.

As soon as the tops are dead, either by ripeness or frost, the tubers may be taken up. If they lie in the ground until they are soaked by the heavy autumnal rains, they will be injured, and the labor of digging increased.

POTATO, SWEET.

Ipomœa batatas	Of Botanists.
Patate douce	French.
Batate	German.
Batata dulce, Batata de Malaga .	Spanish.
Boniato, Buniato, Moniato . . .	Cuban.
Camote	Mexican.

In warm climates, this vegetable is cultivated in a similar manner as the common potato is at the North, but requires much more room; for the trailing roots extend four or five feet each way, often sending out forty or fifty large tubers to a plant.

Culture.—In the Middle States, as soon as the frost is out of the ground, which is generally from the first to the last of April, the tubers, or sets, are planted in a hot-bed, made by taking some rough boards, setting them on edge, in any convenient place, where the bed will have the

benefit of the rays of the sun. The box or bed thus commenced may be four feet wide, sufficiently extended in length for the quantity of sets intended to be put down, and fifteen inches deep. The box is then filled with fresh horse-manure, directly from the stable, not too coarse nor too fine, which must be trodden down until twelve inches deep. Next, a few buckets of water may be thrown upon the bed, so as to make it damp, but not wet. Now put on a layer of sandy loam one and a half inch deep; place the sets promiscuously, about an inch apart, and three inches from the boards which form the box; and then cover the sets with the same kind of loam to the depth of two inches. Do not wet the loam any more than is natural to it. Cover the bed all over with hay or fine straw to the depth of six inches, when pressed down, which may be done by putting on some loose boards in a manner to effectually shed off heavy rains.

Let the bed now be examined daily, by uncovering a small place near the centre, and thrust in the hand and ascertain whether or not the temperature is too high. If too warm, uncover for a day or so, and be sure to cover up the sets at night, and continue to keep them covered until some of the sprouts make their appearance above the surface, which they will generally do in ten or fifteen days; then take off the covering, and put it on no more unless the weather should become cool, with a prospect of frost. The tubers, or sets, should not be taken out of the bin or hole where they have been kept during the winter before the hot-bed is ready to receive them; for they will injure by wilting or drying. As soon as the young plants begin to grow, after being uncovered, let them be watered as often as required. Should the weather prove dry, the hot-bed will afford three or four crops of plants.

In selecting ground for transplanting, take the poorest and the most sandy you have; give it a good coat of well-rotted manure, plough it under tolerably deep, and let it lie a week or ten days; then run over a harrow to pulverize the soil and keep it clean. As soon as the plants are nearly large enough to remove, throw up the land into ridges, about three feet apart, and rake off their tops even and flat. Let it remain until the appearance of rain; or if the weather prove dry, plant out just before night, and water well. The plants are old enough to remove when the leaves attain their natural size. In taking them up, place the left hand about their roots, "grabbing" up a quantity of earth, and draw them from the bed with the right, in order that a small ball of earth may adhere to each. Then plant them along the centre of the tops of the ridges, twelve inches apart. Some prefer to plant in hills, three feet asunder, which can easily be done with a hoe, after the ridges are made, as directed above. As the crop progresses, dress the plants with a hoe as soon as any grass or weeds appear; then cover the vines with earth as they extend over the ground. When the plants require no more tilling, pull the vines loose from the ground, to prevent them from taking root.

To keep sweet potatoes through the winter, brick up a bin or hole under the cook-house floor, directly in front of the hearth, or under the stove. Then put in the tubers dry, and keep them so, as they are used.

The tubers may also be kept in boxes or barrels, mixed with dry sand, in a moderately cool, dry place.

PUMPKIN.

Cucurbita pepo	Of Botanists.
Potiron	French.
Kürbis	German.
Calabaza	Spanish.

The pumpkin more properly belongs to the farm than the garden. Plant about middle of spring, in manured hills, eight feet apart, and leave but two or three plants in a place. It is customary among New England farmers to plant two seeds in every fourth hill in every fourth row in their corn-fields. The "Connecticut Field Pumpkin" is a large, soft-rinded variety, excellent for pies and for feeding stock. The "Cheese Pumpkin" is flat-shaped and salmon-colored. It more resembles winter squashes, and ought to be classed with them.

RADISH.

Raphanus sativus	Of Botanists.
Radis, Rave, Petite Rave . .	French.
Rettig, Radies	German.
Rabano	Spanish.

An esculent, originally from China, very extensively cultivated in gardens for its roots, which should always be eaten before they become pithy and tough. The young seed-leaves are also employed as a small salad, and a pickle is made of the seed-pods, when they are green.

The following are among the best varieties:

Early Short-topped Long Scarlet.—This is the standard sort grown in private gardens, and for market; when true and pure, it has a bright scarlet root, and a very small top. In suitable soil, it grows quick, half out of ground, and is very brittle.

Long Salmon.—Longer and lighter colored than the above, with a larger top; a few days later.

Demi-long Rose.—A very early and handsome variety, from France, nearly allied to the Scarlet Turnip; of a lively rose color and oblong shape; top, very small; of very good quality, but rather apt to grow hollow. It is extensively grown by the market gardeners of Paris. It is also in great repute in the United States.

Scarlet Turnip.—A small, round, red, turnip-shaped radish, with a small top, and of very quick growth; mild and crisp, when young, but soon gets pithy.

White Turnip.—Like the Scarlet in shape, but in color, pure white. It is later, and will bear the heat longer without becoming spongy.

Yellow Turnip.—This is an oblong, turnip-shaped, and russet-colored sort, growing to a large size, with a pretty large top. It is the very best to stand the heat and drought of summer.

Black Fall or Spanish.—An oblong, black radish, of very large size and firm texture, with dark-green leaves. It is sown rather earlier than

the fall turnips, and must be stored in sand in the cellar for winter use. It will keep good till spring.

Rose-colored China Winter.—Form, rather conical, and very smooth; of a lively rose color; flesh, firm, like the last-named, but more pungent. Cultivation, the same as for that variety.

CULTURE.—For the first crop, sow as early in the spring as the ground can be worked, and every two weeks after during the season for a succession. A warm, sandy loam, made rich and light by some good manure, will be most likely to cause them to be crispy or brittle, and free from worms. Sow in twelve-inch drills, and thin to three inches apart; for, let it be remembered, that radishes must have plenty of room in order to be grown quick. Otherwise, they will be liable to be wormy or tough. In the heats of the summer, the plants should be freely watered.

RHUBARB, HYBRID.

Rheum hybridum	Of BOTANISTS.
Rhubarbe hybride	FRENCH.
Rhabarber bastard	GERMAN.
Ruibarbo bastardo	SPANISH.

A hardy perennial, extensively cultivated in gardens for its leaf-stalks, which are used for pies and tarts. Varieties of enormous size have been produced by the emulation of gardeners, which are often sold at high prices, as they can only be cultivated to advantage from the slips of the roots.

The following are ranked as the best:

Mitchell's Early Albert.—The earliest sort cultivated; of good size, fine flavor, and tender throughout the season; the lower part of the stalk is red.

Tobolsk.—This early variety is small, when compared with the large sorts, but inferior to none of them in excellence of flavor; color, rose-red. In use, from early spring till fall.

Myatt's Victoria.—A very large, red, rich-flavored variety, of the highest estimation. Plant out this and the following variety five feet apart.

Cahoon's Mammoth Seedling.—This is the largest variety grown, a leaf and stalk of which having weighed eight and a half pounds. A stalk was twenty-five inches long, five and a half inches wide, and three inches thick; the leaf measured twenty-two feet in circumference. The stalks are green, specked with red; leaves, unglazed.

Early Scarlet, new and highly esteemed.

CULTURE.—Plant the roots or slips in autumn, three feet apart each way, in hills enriched with a half bushel of well-rotted manure. The seeds cannot be relied upon for the production of the same variety; hence this mode of propagation would be of but little use for general culture.

In gathering, the stalks should not be plucked till the third year, and the plants never allowed to exhaust themselves by running to seed.

ROCKET.

Brassica eruca	Of Botanists.
Roquette cultivée	French.
Rauke	German.
Roqueta	Spanish.

The young leaves of this plant are used in salads. The seed is sown very thin at the beginning of spring, and subsequently in succession, if it is desired to have fresh leaves during the summer. In cultivating, it is only necessary to keep the ground clear of weeds, and water the plants frequently, should there not be rain. By these precautions, the acrid flavor of the plant is diminished, which is less perceptible in the young leaves when used as a salad. The flowers, when recently open, have an agreeable odor, like those of the orange.

ROSEMARY.

Rosmarinus officinalis	Of Botanists.
Romarin	French.
Rosmarin	German.
Romero	Spanish.

Rosemary has a fragrant, aromatic smell, and a warm, pungent taste, the leaves and tender tops being the strongest; the flowers, by themselves, are much weaker, but more agreeable. The uses of this herb in domestic medicine are well known.

There are three varieties of this plant—the "Green," "Golden-striped," and "Silver-striped." The first is the one generally cultivated. It thrives best in a poor, light soil, mixed with old mortar or other calcareous matter. In such, or when the plants are self-raised on an old wall, they will bear a considerable degree of cold; but in a rich soil, they lose much of their aromatic nature, and perish in frost.

Culture.—This plant is propagated by cuttings and rooted slips, during any of the spring months, or by layers in the summer. But the finest plants are raised by seed. By layers, is the best mode of propagating the Gold and Silver-striped varieties. The seeds may be sown at the period of the flowering of our orchard fruits, in drills half an inch deep and six inches apart. The rooted slips and the cuttings of the young shoots should be from five to seven inches long, and planted in a shady border, in rows eight or ten inches asunder, previously removing the leaves from the lower two-thirds of their length. Layers may be formed by cutting young branches half through on their under sides, and pegging them down an inch or two below the surface; by autumn, they become established plants. Water must be applied abundantly at the time of planting, and occasionally afterwards, should the season prove dry.

RUE.

Ruta graveolens	Of Botanists.
Rue	French.
Raute	German.
Ruda	Spanish.

Common rue is a hardy, evergreen undershrub, having a strong, ungrateful odor, and a bitter, hot, penetrating taste. The leaves, if much

handled, are so acrid as to irritate and inflame the skin. It was much used by the ancients, who ascribed to it many excellent virtues. At present, it is used in domestic medicine.

CULTURE.—This plant thrives best in a poor, clayey loam, mixed with calcareous rubbish, in an open situation. It is propagated by slips and cuttings, as well as from seeds, the first two modes being usually practised, as being most easy. It may be planted or sown at any time during spring—the seed in drills six inches apart and a quarter of an inch deep. The rooted slips or cuttings may be planted on a poor, shaded border; and watering occasionally is necessary, until taking root. The plants may be removed in autumn. During their after-growth, they should be kept pruned into a shrubby form, and not be allowed to produce seed.

SAGE, COMMON.

Salvia officinalis	Of BOTANISTS.
Sauge officinale	FRENCH.
Salbei	GERMAN.
Salvia	SPANISH.

The leaves of this useful plant are much employed in stuffings and sauces for many kinds of luscious and strong meats, as well as to improve the flavor of various other articles of cookery. The decoction called "sage tea" is well known in domestic medicine.

The principal varieties are the "Common Green," "Wormwood," "Green" with variegated leaves, "Red" with variegated leaves, "Painted" or "Parti-colored," "Spanish" or "Lavender-leaved," and "Red."

CULTURE.—A dry, moderately-fertile soil is best suited to the growth of this plant. It may be propagated by cuttings, either of the preceding or of the same year's growth; if of the first, plant at the period of the flowering of the apple or pear; but if of the latter, not until a month or six weeks later. The shoots of the same year are usually employed, as they more readily send out roots, and assume a free growth. The outward and most robust shoots should be chosen, and cut from five to seven inches in length. After removing all the leaves, except the top ones, insert by the dibble, almost down to these leaves, in rows six inches apart each way, in a shady border, in moist weather; otherwise, water must be given immediately, and occasionally repeated until they have taken root. If grown from seed, it may be sown at the period of the flowering of our orchard fruits, in drills a quarter of an inch deep and six inches apart. When two or three inches high, thin the plants to half a foot apart, and those removed, prick out to a similar distance. In the autumn or succeeding spring, as the plants are strong or weak, remove them to their final sites. In the after-culture, the decayed flower-stalks, stunted branches, &c., may be removed in early winter and spring, and the soil of the beds slightly turned over. When the plants have continued two or three years, a little dry, well-rotted dung may be turned under in early spring. Attention to the mode of gathering has also an influence in keeping the plants healthy and vigorous. The tops ought never to be cropped too close, so as to render the branches naked or stumpy.

SALSIFY, OR VEGETABLE OYSTER.

Tragopogon porrifolium	Of Botanists.
Salsifis	French.
Haferwurzel	German.
Salsifi, Ostra vegetal .	Spanish.

Salsify is a hardy biennial, with a grassy top, and a long, white, tapering root, nearly resembling a small parsnip. It closely assimilates to the taste and flavor of the oyster, when properly cooked, and by many persons is esteemed as a very delicious vegetable. The roots may be taken up late in the fall, and preserved in moist sand, or allowed to stand out all winter. In the spring, the young tops are sometimes used for greens. It is known also by the name of "Vegetable Oyster."

Culture.—Sow in the spring, in fourteen-inch drills, and thin to six inches. Cultivation, the same as for carrots and parsnips.

SAVORY, SUMMER.

Satureja hortensis	Of Botanists.
Sarriette annuelle	French.
Bohnenkraut	German.
Ajedrea	Spanish.

"Summer" or "Annual Savory" is a hardy herb, much cultivated for culinary and medicinal uses, its warm, aromatic leaves being much esteemed in salads and broths.

Culture.—This species may be propagated from seeds sown in open ground, at the period of the flowering of the peach, in a light, rich soil. If moderately thinned, the young seedlings may either remain where sown, or be transplanted into rows.

SAVORY, WINTER.

Satureja montana	Of Botanists.
Sarriette vivace	French.
Saturei	German.
Satureya	Spanish.

The leaves of this species are used like the preceding, and the plant may be propagated from seeds. When the seedlings are about two inches high, they are suitable for planting out. The strongest should be selected when the weather is moist, and set in nursery rows six inches asunder, to remain until autumn, or the following spring, when they are to be transplanted, with balls of earth attached to their roots, in rows a foot apart, where they are finally to remain. When designed to have the savory of either species remain where sown, the seeds may be put into shallow drills, either in beds, or along the edge of any bed or border, by way of an edging.

The Winter Savory may also be propagated by slips or cuttings, when planted in the spring or early summer. The slips may be cut five or six inches long, and planted with a dibble in a shady border, in rows six inches asunder, giving them occasional waterings, until they will have taken root. By September or October following, they will be ready to transplant.

SCORZONERA.

Scorsonera hispanica . . . . . Of BOTANISTS.
Scorsonère, Ecorce noire . . . FRENCH.
Scorzoner, Schwarzwurzel . . GERMAN.
Escorzonera . . . . . SPANISH.

A native of Spain, resembling the salsify plant in flavor and character, and is cultivated more for variety than for absolute utility.

CULTURE.—The seeds are sown annually in an open, light spot of ground, at the period of the flowering of the apple and pear. The soil may be trenched, turning under a little dung with the bottom spit. Sow in drills half an inch deep, and twelve inches asunder. Thin the plants after they are up to ten inches apart, and the roots will continue to increase until fall. They may remain in the ground, to be drawn as they are wanted, or entirely taken up in autumn, when their leaves decay, and preserved during winter in dry sand.

SCURVY-GRASS.

Cochlearia officinalis . . . . . Of BOTANISTS.
Cochléaria, Herbe aux cuilliers . . . FRENCH.
Löffelkraut . . . . . GERMAN.
Coclearia . . . . . SPANISH.

A biennial, having a warm, acrid, bitter taste, and a pungent, rather unpleasant smell, when bruised. It is sometimes eaten as a salad, with the water-cress.

CULTURE.—This plant flourishes best in a moist, sandy soil. The seeds are sown as soon as they are ripe, in summer, in drills eight inches apart, and half an inch deep. Thin the plants to eight inches asunder, and those removed may be transplanted to a bed at similar distances, giving water at the time, and frequently afterwards, until fully established. The leaves will be fit for gathering the following spring.

SEA-KALE.

Crambe maritima . . . . . Of BOTANISTS.
Crambé maritime . . . . . FRENCH.
Selkohl, Meerkohl . . . . . GERMAN.
Breton de mar . . . . . SPANISH.

This hardy perennial is cultivated for its blanched shoots, which are cooked as asparagus, and is esteemed as a delicate and wholesome esculent.

CULTURE.—Sow the seeds early in the spring, an inch deep, in fourteen-inch drills. When the plants are one year old, transplant them eighteen inches apart, in straight rows, five feet asunder. The ground must have been thoroughly trenched and manured. Late in the fall, when the leaves have separated themselves from the crown, heap over each plant a shovelful of clean sand or ashes, and earth up a ridge a foot and a half high over the rows, from a trench dug along the space between them, and beat it smooth with the back of the spade. In the spring, after the cutting is over, the earth should be levelled into the trenches, so as to expose the crowns of the plants, and a good coat of strong manure

dug in around them. It is adapted to the coldest climates, and deserves to be more extensively cultivated.

SHALLOT.

Allium ascalonicum	Of Botanists.
Échalotte	French.
Schalotte	German.
Escalona	Spanish.

This vegetable is esteemed for its bulbs, which have a strong but not unpleasant odor, and is preferred to onions, by some, for various purposes of seasoning in cookery; the taste, however, is somewhat stronger than that of onions. They are particularly relished by epicures in preparing a beef-steak.

The two principal varieties are the "Common" and the "Long-keeping." The former puts forth long, slender, dark-green leaves, but the latter is more dwarfy in its habits, with larger bulbs, which keep good for nearly or quite two years.

Culture.—This plant is propagated by offsets, each of which will increase in a similar manner as its parent, and may be planted out either late in autumn or early in spring. Autumn, however, is the best season, if the soil is sufficiently dry. If planted in beds, let them be three and a half feet wide, elevated three or four inches higher than the alleys, and the surface of the bed a little crowned. Set out the rows nine inches apart from centre to centre, planting the offsets singly, with the hand upon the surface of the bed, six inches apart in the row, just pressing each bulb firmly down into the soil. See, occasionally, that they are not cast out of their places, by vermin or other causes; or each bulb may be covered, either with old tan-bark or coal-ashes, in little ridges along the rows, an inch and a half or two inches deep. When the bulbs are well established and growing, this covering should be removed with the hand. No other culture is required, except earth-stirring.

The bulbs may be taken up for storing, when full grown—say about midsummer, or as soon as the leaves begin to decay. Let them be spread out to dry on boards, in some airy situation.

SKIRRET.

Sisum sisarum	Of Botanists.
Chervis	French.
Zuckerwurzel	German.
Chirivia	Spanish.

This perennial, tap-rooted plant is a native of China, the tubers of which have an agreeable aromatic flavor, and abound in saccharine particles. They are boiled and served up with butter in a similar manner as the parsnip.

Culture.—The seeds may be sown at the period of the flowering of the peach, in drills a quarter of an inch deep and twelve inches apart. The culture in other respects is like that of the parsnip. It may also be cultivated by offsets thrown off by the old roots in the spring.

SPINACH, COMMON.

Spinacia oleracea	Of Botanists.
Épinard	French.
Spinat	German.
Espinaca	Spanish.

Spinach is a hardy annual, with thick, succulent leaves, cultivated to a considerable extent for greens.

The following are the chief varieties:

Round-leaved Savoy.—Has a smooth seed, and round or blunt, thick, fleshy leaves, a little crimped; generally preferred for spring sowing. There is also a round-seeded variety, with longer, arrow-shaped leaves, which is by some considered the best.

Prickly or Fall.—This is the hardiest variety; prickly-seeded, with triangular, oblong, or arrow-shaped leaves. It is mostly employed for the fall sowing.

Flanders.—A productive variety, with large, broad leaves; seed, round; quite hardy.

Lettuce-leaved.—A new sort of very superior quality; leaves, large, thick, and deep green; seed, round; best suited for spring sowing.

Culture.—For an early spring crop, sow thinly in the Middle States in autumn, in fourteen-inch drills; and at the approach of winter, cover with a layer of straw or cedar boughs. For the succeeding crop, in spring or summer, sow as early as the season will admit. To grow this plant in perfection, the ground must be made rich with strong manure.

SPINACH, NEW ZEALAND.

Tetragonia expansa	Of Botanists.
Tetragone	French.
Spinat Neuseelandischer .	German.
Tetragona	Spanish.

This plant grows very large and luxuriant in warm, rich soil. It will endure severe drought, which is its greatest advantage, and produces a large quantity of leaves during summer. The plants should stand two or three feet apart.

SQUASH.

Cucurbita melo-pepo	Of Botanists.
Courge	French.
Kürbiss	German.
Calabaza tontanera . . .	Spanish.

Squashes are cultivated for their fruit, which is much esteemed as a vegetable, when cooked, or made into pies. There are numerous varieties, mostly yellow, pale-green, mottled, or striped. They are also smooth, warty, soft, and hard, and are classified into "Summer," "Winter," "Bush," and "Running." The following are the principal varieties in use:

Early Yellow Bush Scolloped.—An early, flat, scollop-shaped sort, of a deep orange-yellow, and smooth rind; used when young and tender for boiling, and at maturity for making pies.

Early White Bush Scolloped.—Similar in shape to the Yellow, light cream-colored. It grows to larger size, of a coarser quality, and is a little later; more grown at the South than any of the others. Both varieties are called "Patty-pan" in the Middle States, where all the summer sorts have the local name of "Cymlings."

Early Bush Summer Crooked-necked.—The richest and best sort for summer; very early and productive. It is small, crooked-necked; covered with warty excrescences, (the more warty the better;) color, bright-yellow; shell, very hard, when ripe. It is used only when young and tender, which may be known by the pressure of the thumb-nail through the rind. These three sorts should be planted three feet apart. There are Yellow, White, and Green running varieties, of nearly the same shape, but they take up too much room to be allowed a place in a common garden.

Green Striped Bergen.—This is cultivated to considerable extent for the New York market. It is small, bell-shaped, and striped with dark-green and white; a bushy variety of strong growth, requiring to be planted four feet apart. Used both green and ripe. It does not produce great crops, but is quite sure to ripen in the coldest seasons.

Vegetable Marrow.—This is intermediate between the pumpkin and squash; used mostly when young and tender, like the summer squashes, but is inferior to any of them. Fruit, long-oval, very fleshy and succulent; color, light-yellow. There are different colored varieties. Plant six feet apart, on account of its running habit.

Fall or Winter Crooked-necked.—The kind most generally cultivated in New England, for fall and winter; neck, long and solid; color, pale-yellow—the deeper the color the better. There is a striped variety of the same shape and quality, with which this is usually mixed. It yields well, and is excellent for pies; valuable also as a farm crop for feeding cattle and hogs. It is called "Cuckaw" in the Middle and Southern States.

Canada Crooked-necked.—Is a small, early variety of the above, that bears well, and is by many esteemed preferable. From their running habit, the last two require to be planted six feet apart.

Autumnal Marrow.—This is the most popular kind in the Boston market. Form, ovate, pointed; rind extremely thin, bright orange or salmon-colored; flesh, deep orange, finely grained, and excellent flavored; seeds, large, white. Average weight, six or eight pounds. It keeps well in winter, and will boil as dry as a potato. Plant eight feet apart.

Lima Coco-nut.—A large, long, blue squash, very fine grained, and sweet; seeds, white. Very late, but if well ripened will keep till spring; esteemed for boiling dry. Plant eight feet apart, and leave but two plants in a hill.

Hubbard, an excellent winter variety, keeping the year round, and very popular at the North.

General Culture.—Being a very tender vine, the squash is so sensitive of cold, that it cannot be planted with safety in the Middle and Northern States before the middle of May. The hills should be highly

manured, and prepared in a similar manner as those for cucumbers, all sorts thinned to not more than three plants to a hill.

TANSEY.

Tanacetum vulgare	Of Botanists.
Tanaisie	French.
Rainfarn	German.
Tanaceto	Spanish.

This perennial, although originally introduced as a garden plant, and has now become indigenous in the older-settled parts of the country, is still worthy of cultivation in the new States. It is a prominent article in popular materia medica, and has its use in domestic economy.

Culture.—The plant is easily propagated by seeds; also by partings of the roots. By the former, it should be sown in the spring, in any light soil. When increased by its roots, it may be planted any time in the fall or spring, and even in summer if freely watered.

TANYAH.

Caladium esculentum	Of Botanists.
Caladium comestible . . .	French.
Caladium	German.
Caladio comestible	Spanish.

A tender perennial, producing large tuberous roots, replete with starch, and is important in affording nutriment to many nations, as a substitute for the potato or for bread.

Culture.—This plant succeeds best in a rich, lumpy soil, and requires an abundance of water. It may be propagated by cuttings and divisions of the roots, planted in rows from two to two and a half feet apart, and a foot asunder along the rows. It requires but little care in cultivation other than earth-stirring, and watering frequently should there be no rain. It will keep longer and as sweet as the potato.

TARRAGON.

Artemisia dracunculus	Of Botanists.
Estragon	French.
Dragun	German.
Estragon.	Spanish.

A well-known perennial, used in salads to correct the coldness of the other plants contained therein.

Culture.—Tarragon requires a poor, dry soil to produce it in perfection and hardiness. It may be propagated by partings of the roots. To have it green during winter and spring, strong-rooted plants must be made use of, small portions at a time, during the fall or early winter, as long as the ground is sufficiently open. For the main crop, it may be planted in the spring. The plants should be set ten inches apart, and, if dry weather ensue, water must be given regularly every evening until they are rooted. They soon establish themselves, and may be used the same year. As they run up, the stems should be cut down, which will

cause them to shoot afresh. At the end of autumn, in the Middle States, if some established plants are set beneath a south fence, they will often afford leaves throughout the winter, or, at all events, come early in the spring. Some of the leaves should be gathered in summer, and dried for winter use.

THYME.

Thymus vulgaris	Of Botanists.
Thym	French.
Thymian	German.
Tomillo	Spanish.

The young leaves and tops of this plant are used in soups, stuffings, and sauces. The two principal varieties are the "Broad-leaved" and the "Narrow-leaved," but the former is generally preferred.

Culture.—This plant is best raised from seed, and may be sown, as early in the spring as the season will admit, in a bed or border of light, fine earth, either thinly broadcast, or in small, shallow drills, six inches apart, slightly covered. The after-culture is similar to that of other sweet herbs.

TOMATO.

Solanum lycopersicum	Of Botanists.
Tomate	French.
Liebesapfel	German.
Tomate	Spanish.

The tomato, so extensively grown near all large markets in this country, where its high price early in the season is a great inducement to gardeners to produce a crop, is exceedingly wholesome, and is considered almost indispensable in every family.

The following are the leading varieties in general culture:

Large Red.—The earliest grown of a large size. Color, bright-red; shape, uneven and deeply furrowed. Productive.

Large Smooth or Round Red.—Rather later than the last-named, smooth and fair, nearly round or flattened; color, bright-red. It is preferable only for its beauty and cooking facility.

Pear-shaped is preferred for pickling, being more fleshy and firm; color, reddish-pink.

Large Yellow.—About the size and shape, but a little more flat, than the Smooth Red; color, bright-yellow; flesh, firm; fit only for preserving.

Small Yellow.—Shape, uniformly oval, and perfectly smooth; color, lemon-yellow; used only for preserves.

Cherry.—A small, round, red tomato, of the shape and size of a cherry; cultivated mostly for pickling. It is the earliest of all.

Culture.—Sow early in the spring, in window-pots, for the want of a hot-bed, and in the open ground, as soon as it can be worked, in a warm border, on the south side of a tight fence, and thin the plants to three or four inches, to keep them low and stocky. When severe frosts are no longer to be feared, transplant to two by three feet apart. Hoe often, and earth up a little till the plants are a foot high; they may then be supplied with supports, or allowed to spread upon the ground.

To hasten the maturity of the first fruit which sets, pinch off the extremities of the tops, and all the secondary shoots which afterwards appear above the flowers. When the desired number are about half grown, commence stripping off the leaves, cutting off the new shoots, so that, at length, the plants may be completely bared of their leaves, and the fruit left fully exposed to the sun.

TURNIP, COMMON.

Brassica rapa	Of Botanists.
Navet	French.
Rübe	German.
Nabo comun	Spanish.

This wholesome and agreeable esculent has long been cultivated as a field crop, as well as in gardens, and in Britain is one of the staple productions of the farm, as food for stock; but in this country, it is mainly grown in market gardens, small field patches, or in yards, folded by cattle or sheep.

The following are the principal sorts:

Yellow Aberdeen Bullock Turnip.—The bulbs of this variety are of a medium size, roundish form, and tapering at the root, with comparatively short, spreading, dark-green leaves. It is an old and favorite sort, considered as approaching very nearly to the Swedes (ruta-bagas) in hardness and firmness of flesh. It is distinguished from Dale's Hybrid by its more globular form. It is not a bulky-growing turnip, however, although it requires good land, in high condition, to produce a remunerative crop. Being suited for winter use, it should not be sown too early. The quality of this turnip is of the highest order; so also is its ability to stand frost, snow, thaw, or rain.

The other varieties, or sub-varieties, which have either been improved from the above or are akin to it, are the Aberdeen Green-topped Yellow, Hood's New Large Yellow, Gordon's Green-topped Yellow, and Pollexfen's Green-topped Yellow.

Old Scotch Yellow.—This, in some respects, is similar to the Old Aberdeen Yellow, but differs from it in being rather less bulky. It grows deeper in the ground, has a flatter top, and is of a lighter green; and from being more buried in the earth, it stands the winter remarkably well, and retains its sweetness and juiciness till a late period in the spring. It is profitable only when cultivated in soils in good condition.

Dale's Hybrid Green-topped Yellow.—This highly-esteemed variety is a hybrid or cross between the Green-topped Swede and White Globe. Its shape is generally oblong, slightly flattened below, tapering a little towards the neck, and is usually of a larger size than the common green-topped turnips. Its seeds are small, but come quickly; and the young plants are particularly vigorous, and are soon ready for the hoe. It is well adapted to succeed the White Globe as early winter food for stock. It grows mostly above ground, and is thus liable to injury from hard frost; but otherwise, it is a hardy plant. It is an excellent turnip for folding sheep upon, as most part of the bulb may be consumed before the "picker" is required. It is also an excellent store turnip, and if put

into a pit or heap dry, and covered with straw, it will keep fresh and sound for several months. It grows freely on all kinds of soil, and is particularly well adapted to clayey lands, as it is easily pulled, and comes up without much earth adhering to the roots.

Laurencekirk Yellow Tankard.—An early turnip, growing rapidly, giving a great bulk, and is of good quality, but will not stand hard frost.

Common Purple-topped Yellow.—This variety occupies the same relation to the other "purple-tops" as the Aberdeen Yellow Bullock does to the "green-tops." The color of the bulb is of a deep-yellow below, and of a reddish-purple above; shape, globular but variable, being sometimes flattened a little on the top, or slightly tapering from the middle, either to the neck or tap-root, and occasionally flattened both above and below. The "shaws," or leaves, are of a dark-green color, streaked with red veins, but are not bulky. Its defects are inability to resist long-continued frosts. It is an excellent feeding turnip, and is especially adapted for the purposes of sheep-folding.

Berwickshire or Border Imperial.—This is represented to be an improved sub-variety of the last-described, and is considered by many to surpass the older stock.

Common White Globe.—This turnip has long been known as an excellent sort for early autumn use. In shape, it varies from flatness at both ends to almost a perfect sphere, with a small tap-root and neck. Its color is pure white, with a smooth, uniform skin. It is liable to rot when ripe, especially when the bulbs are flat on top. On soft, rich soils, highly manured, the tendency to rot and corkiness is greatly increased. To counteract this, it is found necessary and beneficial to leave the young plants rather closely together when thinning them out. If left more than ten or twelve inches apart, the bulbs grow large, and are inferior in quality.

Pomeranian White Globe.—This sort is considered to be superior to that last named. It is more symmetrical in shape, being nearly globular or slightly elongated. The skin is white, smooth, and more translucent than the common sorts, and the leaves are of a darker green. It is also less liable to rot, and does not degenerate in its seed.

White Norfolk or White Round Turnip.—A large, coarse, soft variety, of a flatter and more depressed shape at the top than the White Globe, and, in point of quality, must be considered inferior to the Pomeranian. Its liability to rot is occasioned by the rain water lodging in the hollow crowns, which soon penetrates the skin, and destroys the bulbs.

White Stone Globe.—This is the hardiest of all the white sorts. The bulbs are not large, grow deep in the ground, which renders them better able to resist frost. In shape, it is more uniformly round than the Common White Globe; but the skin is rougher, and sometimes is marked with little scars.

Autumn Stubble or Six-Weeks Turnip.—This variety is only remarkable for its rapid growth and early maturity. It resembles the White Globe, but is not so uniform in shape, is softer and more liable to be injured from frost.

White Tankard.—This is an inferior turnip in almost every respect,

and has little to recommend it except early maturity. It is very crooked and unsymmetrical in shape, and, from its growing chiefly above ground, it will stand but a moderate amount of frost.

Green Globe or Green-topped White Turnip.—This is a large-sized, free-growing sort, of good texture and shape. It is somewhat globular, with a small tap-root and neck, and grows to a large size. It possesses the bulky-growing habit of the white varieties, and better resists the frosts. It is excellent for young store cattle in early winter, as well as for milch cows.

Green Tankard.—A rather long, tankard-shaped variety, of better quality than the White Tankard, but does not produce so heavy a crop as the Green-topped White.

Red Globe Turnip.—This is an old but rather coarse sort. In shape, it is somewhat cylindrical; nearly all of a dull-red color, and whitish towards the tap-root. It is adapted for exposed situations and poor land, although it produces large crops where the soil is rich, but is not equal in quality to the Green Globe.

Woolon Hybrid Red-top.—This variety presents the appearance of a large, clean-skinned, handsome turnip, of a light-red color, slightly streaked with white, with a small neck and tap-root. In shape, it is a medium between Dale's Hybrid and the Red Globe. It is of a hardy growth, and keeps better than the other Red-topped Whites.

Red Tankard.—This sort bears the same relation to the red turnips as the White Tankard does to the whites. It is of a much better shape, and of a hardier habit of growth. It cannot be considered as a valuable turnip, however, except for inferior soils.

Early Flat Dutch or Spring Turnip.—Size, medium; white, of quick growth, juicy, and of excellent quality when young. May be used either in spring or fall. When overgrown, it is spongy and inferior.

Strap-leaved White-topped Turnip.—This is another early variety, which is taking the place of the Old Early Dutch. Form, roundish or flat, of medium size, small tops, and but few leaves, which are entire, upright, and resembling those of the horse-radish in shape. The tap-root is small. Considered as one of the best sorts for market and fall use.

Strap-leaved Red-top.—This variety has the form and character of the White-topped, except in color, which is red or purple above ground. These two kinds are the best for spring sowing, and for all garden culture, where they may be grown fair and free from worms, if not sown too early in the fall. Flesh, fine-grained and exceedingly rich and buttery-flavored.

Early Garden Stone.—This is an English garden variety, of a round shape, firm texture, with larger leaves than the Early Dutch, but not so well adapted for spring sowing. It is of quick growth when sown in the fall.

Early Red-topped Flat.—A handsome flat-shaped bulb, purple above ground, with a small top and tap-root. An excellent variety, differing but little in shape from the Strap-leaved, except in the form of the leaf, though not of so fine quality.

Long White or Cow's-horn.—This excellent variety has never become extensively known. It grows very quickly to good size, nearly carrot-shaped, and stands half out of ground; flesh, white, fine-grained, and

sweet; tops, small and spreading. It keeps well, and is esteemed by some the best of all for culinary purposes; but it should be gathered before very severe frosts, or it may be injured for keeping. It ought to be in general cultivation.

Early Yellow Dutch.—A very handsome variety, of a smooth, round form, and small top; flesh, yellow, firm, sweet, and excellent flavored. It keeps well, and is altogether the best yellow turnip for the garden.

Yellow Stone, a very hard, round, yellow turnip, green above ground; top, small; excellent to keep.

Long Yellow.—Long, carrot-shaped, deep-yellow, growing entirely in the ground; flesh, close-grained and hard; best kept till spring.

Robertson's Golden Ball or Orange Jelly.—This sort, lately introduced, is of quick growth. It forms a beautiful bulb, with a bright-yellow rind and cream-colored flesh, rich, pulpy, and excellent for culinary use.

CULTURE.—For the spring crop, sow the Early White Dutch or the "Strap-leaved" sorts, as early as the seed can be got into the ground, in fourteen-inch drills, and thin to five or six inches. Keep them perfectly clear from weeds, and, when the bottoms begin to enlarge, brush away the earth from about the roots to the depth of half an inch or more, and give them a light dressing of wood-ashes. This is the surest mode of obtaining fair and smooth spring turnips in old gardens, where they are almost certain to grow wormy, if the earth is allowed to remain in contact with the roots. It is important to get them started very early, so that they may have time to grow of a sufficient size before very hot weather, when they will soon become tough and strong. They may be sown in a seed-bed or on a warm border, and transplanted in a wet time to the drills, when they have made five or six leaves, taking care to shade and thoroughly water the plants. On fresh, new land, a fine spring crop may occasionally be obtained by the ordinary mode of culture.

For the fall and main crop, sow, at the North, from the first of July to the last of August, in drills, as directed for the spring sowing. In the field, turnips are more generally sown broadcast, though much the largest crops are obtained by drill culture.

Land newly cleared and burnt over, and old pasture-ground, ploughed two or three times during the summer, and well manured and ashed at the time of sowing, will produce the clearest and sweetest turnips. The sowing should always be done just before a rain, if possible, for the escape from the fly; and the success of the crop in great measure depends upon quick germination, and a rapid and free growth at first. They will be safe from the fly after putting out the rough leaf. A light sandy to gravelly loam, freshly manured, is the most suitable.

TURNIP, RUTA-BAGA.

Brassica campestris nabo-brassica	Of BOTANISTS.
Chou rutabaga	FRENCH.
Kohlrab in der Erdegelber	GERMAN.
Nabo rutabaga	SPANISH.

The Ruta-baga, Swedish, or Russian Turnip, known to many under the name of "French Turnip," and in New York market as the "South-

hold Turnip," forms a distinct class, which more properly, perhaps, belongs to the cabbage tribe. The bulbs are close-grained, very hard, and will endure a considerable degree of cold without injury. They keep well, stored in a cellar, without any trouble, but are not in perfection for the table till towards spring. Extensively grown for a farm crop.

Purple-topped.—This is the variety mostly grown; shape, oblong; dull-reddish color above ground, and yellowish underneath. It is harder than any of the common turnips, and will keep solid till spring. The "Green-topped" is like it, except in color.

Skirving's Liverpool, an improved purple-topped variety, of very strong growth and large size. By its quick vegetation, it generally escapes the ravages of the fly; best suited to field culture and cattle-feeding.

Laing's Improved.—The handsomest variety known, and of excellent quality; purple above, and yellow under ground; almost perfect globe-shaped when well grown, with a small top and tap-root. The leaves have a peculiar horizontal growth.

Early Stubble Swede, a very quick-growing variety, suitable for late sowing. It makes a handsome round root, with a green top, nearly as early as the white turnips.

White French.—This grows very similar to the Ruta-baga, but generally is less smooth. Flesh, white, and of excellent quality, both in winter and spring.

Fettercairn Swedish Globe.—This is a handsome purple-topped variety, more globular in form than its congeners, and has little or no neck; but it is not equal to Skirving's Improved, nor even to the Common Purple-topped Swede.

Green-topped Swede.—One of the oldest varieties of the Swedes. The color of the upper end of the bulb is of a dull green, with the under part yellow. In selecting roots for growing seed with care, it may be considered equal in quality to the purple-tops.

There is another variety, called the *Fettercairn Green-topped Swede,* of a more globular form, with flatter crown, which, from its symmetry, is worthy the attention of growers.

CULTURE.—The Swedes, at the North, should be sown from the 20th of June to the 1st of July, in twenty-five-inch drills, and thinned out, at the first working, to ten inches apart. It is necessary that the ground should be dry, and made very rich.

WORMWOOD.

Artemisia absinthium	Of BOTANISTS.
Absinthe	FRENCH.
Wermuth	GERMAN.
Ajenjo	SPANISH.

A hardy perennial, used as a tonic, bitter, and aromatic medicine, in general use.

CULTURE.—This herb may be propagated by cuttings or divisions of the roots, as well as from seeds sown soon after they are ripe. The former may be planted from spring till autumn, in a sandy loam, well drained.

YAM, CHINESE.

Dioscorea batatas . . . . . Of BOTANISTS.
Igname de la Chine . . . . . FRENCH.
Dioscorea . . . . . GERMAN.
Ñame de China . . . . . SPANISH.

This yam, a recent introduction from China, seems to be particularly worthy of a place in gardens, on account of its starchy flavor, and the absence of any after-taste of sweetness, spiciness, or acidity. When fully matured and cooked, it is dry and farinaceous, much resembling the taste and appearance of the common potato, and is more agreeable to the palate than the common yam. Considering its property of persisting in the ground for several years, without deterioration, being in readiness for the kitchen at all times and at all seasons, after the first year's growth, it cannot fail to prove an admirable substitute both for the Sweet and Common Potato, in all localities where it will thrive. This root, although of great size, can be cooked in every respect like the potato, and even may be eaten in the crude state.

CULTURE.—When cultivated in a deep, rich, loose soil, the small bulbs which grow on the vines, (pseudo-tubers,) after the first year, will penetrate the earth perpendicularly, to a depth of two or more feet, and will continue to increase in size from year to year, without becoming woody, as the root of the parsnip after the first year's growth. They may be planted in the spring, in the open air, as soon as the season is sufficiently advanced to be free from danger by frost, and may be cultivated somewhat after the manner of the Sweet Potato or Common Yam, except that they should remain undisturbed in the ground from one year to another, until ready for market or use. In removing them from the ground, it will be necessary to dig a hole or trench quite to the lower ends of the roots, which must be thrust out sidewise with a crow-bar, pick-axe, or spade; otherwise, from their tenderness, they will break.

YAM, COMMON.

Dioscorea sativa . . . . . Of BOTANISTS.
Igname cultivée . . . . FRENCH.
Yammwurzel . . . . . GERMAN.
Ñame comun . . . . . SPANISH.

A climbing annual, cultivated in the tropics, also in the Southern States of the Union, for its large, flattened, and sometimes palmated roots, which are boiled, roasted, and eaten like the potato. They are both wholesome and nutritious as well as palatable. Their flour, or farina, also, is used for puddings and bread.

CULTURE.—The cultivation is the same as that of the sweet potato, except that a stake or pole is driven into the ground near the plant, to allow the vine to climb.

THE CULTURE OF ANNUAL FLOWER SEEDS.

The soil for these should not be over rich, and should be dug deep; the surface should be rendered smooth and fine before sowing the seed; *small seeds sown on rough ground fall between the clods and into the crevices and get buried.* Attention to this simple hint will save growers much disappointment, and seedsmen a great amount of blame: for, in cases of failure, the quality of the seeds is almost invariably impeached. Hardy Annuals may be sown from the middle to the end of September for spring flowering; the plants ought to be thinned out before winter, to prevent their damping off, and transplanted early in the Spring, to the flower border, or, when more convenient, may be sown where they are to bloom. Many of the Hardy Annuals, especially the Californian, flower more profusely, produce finer blooms, and remain longer in perfection during the spring months than at any other season of the year. For summer and autumn flowering, sow from the middle of March to the middle of June. A common error in the cultivation of Annuals is in allowing them to grow too close together; and many, of what would otherwise be an attractive bed of Annual Flowers, are ruined for want of thinning. We therefore say, thin early, and sufficiently to afford ample space for the perfect development of the plants left. It is also very important to afford support to such kinds as require it, before they get broken or injured by wind or heavy rain; perhaps the simplest method of doing this is to place amongst and around the plants small neat branches, like pea stakes; the lateral shoots will extend amongst and hide the stakes, and the support afforded by this simple and inexpensive means will in most instances be found all that is required. But perhaps the common practice of *covering the seed too heavily*, causes more disappointment than all other errors. Small seeds should be covered very lightly, and with soil not liable to cake by exposure to sun and air. *Common garden loam and leaf soil, or old dung*, passed through a fine sieve and well intermixed, will be excellent for covering with. Half-Hardy Annuals should not be sown in the open border before May, and the ground will require the same preparation, &c., as recommended for Hardy Annuals. But the best method of raising these is, to sow in pans, or boxes, in April, or on a bed, about three inches thick, of light soil, placed on a gentle hot-bed formed of stable manure or vegetable refuse, and protected with a frame or hand-glass. Water sparingly, and give plenty of air, when the plants appear, and thin out, or prick off in small pots, and be careful to get the plants well inured to the weather previous to planting in the open border, and also to give water as may be necessary, after planting, till established.

GERMAN FLOWER SEEDS.

It is advisable to raise these in pans or boxes, under the protection of glass, as recommended for Half-Hardy Annuals; but where this cannot be conveniently done, they may be sown on a well-prepared border in May. German seed-growers bestow great attention upon Stocks; and, with good management, a great proportion of the plants will produce double flowers.

The theory of producing double flowers is, when the plants have four or six growing leaves, to starve them for a week or fortnight, and then to plant them in very rich soil, and keep them well supplied with water.

AN EFFECTUAL MODE FOR DESTROYING THE GOOSEBERRY CATERPILLAR.

In the autumn, after the leaves of the Gooseberries have fallen, procure a quantity of tan from a tanyard, and spread it over the surface of the ground where the Gooseberries are growing, to the depth of two or three inches, and see that it reaches close up to the stem of the bushes. Allow it to remain undisturbed during the whole of the winter, and late in spring, dig it into the soil as you would manure. The effect of the tan will be found to be destructive to the larvæ of the Gooseberry Sawfly, and to have no injurious influence on the plants.

GARDENERS OF OLDEN TIME.

In Hartlib's "Legacie; or, An Enlarged Discourse of Husbandry," 1652, he speaks of Sainfoin as a Grass just introduced, and tried experimentally at Cobham Park; of Trefoil, as being in cultivation to a limited extent. He also alludes to Lucerne, saying—"There is at Paris likewise another kind of fodder which they call la Lucerne, which is not inferior, but rather preferred before this Saint Foine." He also mentioned a Grass "which groweth nine miles from Salisbury, wherewith they fat hogs, and which is 24 foot long, a thing almost incredible, yet commonly known to all that shire." In this work Hartlib again enforces the advantages of spade husbandry and drilling, and here he makes direct allusion to Gabriel Plattes as having been the first proposer of the plan. We gather, also, from Mr. Hartlib some

particulars of the first gardening experiments, which are exceedingly interesting, showing, as they do, how such matters were managed by our forefathers, and indicating our progress since that time :—"About 50 years ago, about which time Ingenuities first began to flourish in England, this Art of Gardening began to creep into England, into Sandwich and Surrey, Fulham, and other places. Some old men in Surrey, where it flourisheth very much at present. report that they knew the first Gardeners that came into those parts to plant Cabages, Colleflowers, and to sowe Turneps, Carrets, and Parsnips, to sowe Raith (or early Rape), Rape, Pease, all which at that time were great rarities, we having few or none in England, but what come from Holland and Flaunders. These Gardeners with much ado procured a plot of good ground, and gave no lesse than 8 pound per acre ; yet the Gentleman was not content, fearing they would spoil his ground, because they used to dig it. So ignorant were we of Gardening in those dayes. Many parts of England are as yet ignorant. Within these 20 years, a famous Town within lesse than 20 miles of London had not so much as a messe of Pease but what came from London, where at present Gardening flourisheth much. I could instance divers others places both in the North and West of England, where the name of Gardening and Howing is scarcely known, in which places a few Gardeners might have saved the lives of many poor people, who have starved these deare years. We have as yet divers things from beyond the Seas, which Gardeners may easily raise at home, though nothing nigh so much as formerly, for in Queen Elizabeth's time, we had not onely our Gardeners ware from Holland, but also Cherries from Flaunders ; Apples from France ; Saffron, Licorish from Spain ; Hopps from the Low Countreys. And the Frenchman who writes in the "Treasure Politick" saith, that it's one of the great deficiencies of England that Hopps will not grow, whereas now it is known that Licorish, Saffron, Cherries, Apples, Peares, Hopps, Cabbages of England are the best in the world. Notwithstanding we as yet want many things. as for example we want Onnions, very many coming to England from Flaunders, Spain ; Madder for dying cometh from Zurick-Sea by Zealand ; we have Red Roses from France ; Annice seeds, Fennel seeds, Cumine, Caraway, Rice, from Italy, which without question would grow very well in divers moist lands in England ; yea, Sweet Majorame and Gromwell seed, and Virga Aurea, though they grow in our hedges in England." —*Philp's Progress of Agriculture.*

ARBOREAL CORRESPONDENCE,

A letter addressed to the LIME TREE, by *White Maple, Oregon Sycamore, Tulip Tree,* and *Black Walnut :*

Poor old thing! is that all you have to say for yourself? Can you find no better defence of your quality than to say that you are modest, handsome, old, and a favourite? Why, a deal of that was given to you in our Editor's speech when he proposed to shelve you, and to take under his patronage some other creatures of the genus tree. None but a spoiled, petted, conceited old lady would have compared such flattery to dirty water, or been spiteful enough to sneer at her neighbours. We too are trees. We come from the land of freedom, where, if everybody is at liberty to abuse everything, everybody has also the privilege of praising himself; it is the inalienable right of an independent citizen of the greatest country in the universal world, and I shan't permit any old white-wooded stranger to us to speak small of our merits without a reply. What do you mean by calling us American Maples "such a common piece of goods?" I would have you to know that we are so much your superiors that we should be ashamed of your company anywhere except among the Britishers; for them you may be good enough; if they like you let them have you, and joy to them for their choice. But don't turn up your nose at us. Where have you the noble majestic air of the great Oregon Sycamore, which beats out of the whole field all but the Plane tree that Turks smoke under? And what are you in the autumn with your dirty yellow leaves at a time when another of us, the most graceful creature in the forest, is one glow of rosy light? You don't seem to know of what you are talking, my good Madam. Then you presume to say that a Black Walnut tree and a Tulip tree might give variety, but you don't know what they would be worth a hundred years hence. Don't know! why then talk about them? But we'll tell you. When you, soft-hearted Lime tree, are smothered in soot, and eaten up by grubs, these two friends of ours will be in the beginning of their majestic treehood. Were you ever in Kentucky, or Virginia, or Tennessee, Mrs. Lime? I should think not. Your weak nerves would be shaken to pieces at the sight of us glorious Tulip trees, sometimes a couple of yards through the bole and 100 feet high, and at us splendid Black Walnuts not much smaller. Well! if you never were there you had better set out on your travels down West, and then perhaps you'll learn to treat your superiors with proper respect.—*Gard. Chron.*

NEW PLANTS OF 1859.

The annexed list is composed of new plants which have come particularly into notice during the year. Special attention is directed to the merits of the following among them :—

Hardy Herbaceous : Dianthus sinensis *v.* Heddewiggii ; Dianthus Verschaffeltii ; Spraguea umbellata ; Lychnis Haagena.

Hardy Shrubs : Aucuba Himalaica ; Amygdalus persica *v.* rosæflora ; Ceanothus Veitchianus ; Chamæbatia foliosa ; Dendromecon rigidum ; Fremontia Californica ; Rhododendron Fortuni ; Syringa oblata.

Greenhouse : Cordyline indivisa ; Datura chlorantha ; Gazania splendens ; Imantophyllum cyrtantha-florum ; Meyenia erecta alba ; Myosotidium nobile ; Richardia oculata.

Stove : (*flowering*).—Stephanophysum Baikiei ; Howardia caracasensis ; Lindenia rivalis ; (*foliage*)—Caladium argyrites ; Caladium Chantini ; Caladium Veitchii ; Gonatanthus cupreus ; Pothos argyræa ; *Begonias*—argentea ; amabilis ; blanda Lowii ; Gem ; Leopoldii ; Marshallii ; Victoria.

Orchids : (*flowering*) — Cattleya Schilleriana *v.* concolor ; Cattleya Regnellii ; Lælia præstans ; Lælia xanthina ; Vanilla lutescens ; (*foliage*)—Macodes Petola ; Pogonia discolor.

Acacia Onoidea, Greenhouse species, native of *South Australia*, a pretty flowering species, resembling *A. verticillata* in foliage, producing its ovate heads of yellow blossom in great abundance, and on plants when only an inch or two high. Nat. Ord. *Mimoseæ*.

Acer polymorphum palmatum atro-purpureum. (*Flore des Serres*) Hardy tree ; leaves deeply palmate-lobed ; dark purplish red. Introduced to the Belgian gardens from *Japan* by Dr. Siebold. Nat. Ord. *Aceraceæ*.

Aerides Wightianum. (*Bot. Mag.*) Native of *East Indies and Ceylon*. Known as Vanda parviflora. Leaves distichous, lorate, with the habit of other Aerides but smaller ; flowers small, in racemes of a dozen or more, buff yellow, the lip beautifully marked with purple. Nat. Ord. *Orchidaceæ*.

ÆOLLANTHUS LIVINGSTONII. Stove plant, with the habit of Angelonia; flowers chocolate-colored, borne freely in terminal spikes. Collected in *Eastern Africa* by Dr. Livingston. Nat. Ord. *Labiatæ.*

ÆSCHYNANTHUS CORDIFOLIUS. (*Bot. Mag.*) A beautiful stove epiphyte, resembling *Æ. tricolor;* branches pendant; leaves glabrous cordate-ovate; flowers axillary, short, broad, crimson scarlet, marked on the face with streaks of black, and stained about the throat with yellow. Imported from *Java* by Messrs. Veitch & Son. Nat. Ord. *Cyrtandraceæ.*

ÆSCULUS CALIFORNICA. First found by Nuttall at *Monterey.* It is described as a low spreading tree, blossoms at an early age, and is remarkable for its dense clusters of rose-colored flowers. Nat. Ord. *Æsculaceæ.*

ÆSCULUS INDICA, (*Bot. Mag.*) An ornamental hardy tree of the *Pavia* group; leaflets broad, lanceolate, serrated; flowers in large terminal thyrsoid panicles, white, the two latteral petals pink-stained at the base; the two upper ones marked with yellow and crimson. From the mountains of *Northern India.*

ADENANDRA UMBELLATA. Native of the *Cape of Good Hope.* A beautiful and highly interesting plant. Shrubby, compact. Flowers terminal, nearly sessile; petals 5, broadly elliptical, minutely ciliated, pink on the outside, white inside, with a narrow line of delicate crimson running from the base half way up the centre. Nat. Ord. *Rutaceæ.*

AGAPETES. See THIBAUDIA.

AGAVE JACQUINIANA. (*Bot. Mag.*) A shrubby succulent stove plant, resembling the American Aloe; leaves narrow-lanceolate, acuminate, spiny-edged; flower stem tall, bearing a close panicle of erect green flowers. Flowered in the Kew Palm House, in 1858. From *Honduras.* Nat. Ord. *Amaryllidaceæ.*

AGAVE MACULOSA. (*Bot. Mag.*) A stemless greenhouse succulent; leaves rosulate, lanceolate-subulate, and delicately spotted; a few green-red-tinged flowers appear along a short central flower-scape. Habit dwarfish. Native of *Texas.*

ALLAMANDA VIOLACEA. A beautiful climbing stove shrub, found by Dr. Gardner, who describes the blossoms as of a violet-purple color, and compares them to those of Gloxinea speciosa. Native of *Brazil.* Nat. Ord. *Apocynaceæ.*

ALSTRŒMERIA ARGENTO-VITTATA. (*L.' Illust. Hort.*) A fine greenhouse or frame perennial; leaves oblong-lanceolate, marked with a broad white central band; flowers scarlet, the interior with dark red lines, on yellow. Native of *Brazil.* Nat. Ord. *Amaryllidacea.*

AMYGDALUS PERSICA *v.* ROSÆFLORA. One of the finest varieties of the double-flowered Peaches. A beautiful addition to early-blooming hardy shrubs, the leafless branches, in the Spring, presenting a rich display of large, showy, loosely-double flowers, of a deep rich rose color. Native of *China*. Introduced into England by Mr. Fortune. Nat. Ord. *Drupaceæ*.

ANGRÆCUM SESQUIPEDALE. (*Bot. Mag.*) An enormous sized flower, compared with which, *A. Eburneum* sinks into insignificance. Flower yellowish white, seven inches in diameter, and as fragrant as a whity Lily. Brought from *Madagascar* by the Rev. Mr. Ellis. Nat. Ord. *Orchidaceæ*.

ANTIRRHINUM MAJUS *v.* (PELORIA) WONDER. (*Gard. Chron.*) A curious sport; flowers dull rose color, nearly an inch long, with a cylindrical tube, a quarter of an inch in diameter, the limb regular, divided into six short round dark purple lobes, with the same number of bright yellow projections; pronounced analagous to the common PELORIA of *Linaria vulgaris*. Nat. Ord. *Schrophulariaceæ*.

ARALIA LEPTOPHYLLA. (*London Florist.*) An elegant greenhouse shrub, lately introduced from *New Caledonia* by Mr. Milne. Habit slender; stem upright, round and smooth; leaves palmate, consisting of eight or nine narrow leaflets, about 2 feet long, attached by slender petioles. Its chief beauty is in its foliage, which is not surpassed by any other plant of its kind, combining beauty of form with pleasing colors. Nat. Ord. *Araliaceæ*.

ARACHNOTHRIX ROSEA. (*Hort. Lind.*) Stove shrub, in the way of RONDELETIA (*Wendlandia*); leaves broad, oblong, acute; cymes terminal; bearing smallish, long-tubed, pink, tetramerous flowers. Native of *New Granada*. Nat. Ord. *Cinchonaceæ*.

ARECA SAPIDA. (*Bot. Mag.*) A stove Palm. Native of the northern and middle islands of *New Zealand*. Flowers in England in the winter. Nat. Ord. *Palmaceæ*,

ARISTOLOCHIA SINARUM. (*Gard. Chron.*) A curious hardy scrambling perennial; leaves cordate-triangular, deep green, glaucous beneath; flowers dull green. Useful for vases and decoration. Native of *China*. Nat. Ord. *Aristolochiaceæ*.

AUCUBA HIMALAICA. (*Flore des Serres.*) A fine, distinct, hardy evergreen shrub, likely to prove ornamental; leaves lance-shaped, shining deep green, with a few distant white-tipped teeth; flowers purplish green, succeeded by oblong orange-colored berries. Native of *Himalaya*. Nat. Ord. *Cornaceæ*.

BEGONIA AMABILIS. (*Hort. Lind.*) Smaller than *B. Rex;* leaves shining dark olive green, marked with a silvery belt within the margin, stained with red beneath, on the parts opposite those which are green above. Native of *Assam.* Nat. Ord. *Begoniaceæ.*

This and the following Begonias are all variegated stove plants of much beauty, but somewhat similar in character, the leaves being oblique cordate-ovate.

BEGONIA ARGENTEA. (*Hort. Lind.*) About the size of *B. Rex;* leaves of a uniform silvery pale yellowish green, studded with small green points; the veins upon the upper surface pale yellowish green, those on the back of the leaf being red. Native of *Assam.*

BEGONIA BLANDA. (*Parker & Co.*) A garden variety; leaves of moderate size, the base of the veins bordered with olive green; the margin also olive green, with silvery blotches; the rest of the surface silvery; colors well disposed, and rich looking.

BEGONIA CHARLES WAGNER. (*L.' Illust. Hort.*) A very handsome small-growing variety; leaves with smallish central star, and a narrow irregular border of rich olive green, reddish when young, the rest of the surface silvered in a vandyked pattern, the border dotted and blotched with silver. A *Belgian* hybrid.

BEGONIA GEM. (*Low & Co.*) A beautiful gem, one of the smallest varieties produced, the leaves being about three inches long, shortly ovate; color nearly as in *B. Lowii*, but the green border and star more distinct, being less blotched and speckled.

BEGONIA GRIFFITHII. (*Hort.*) A most beautiful species from *Bhotan*; the leaves upon *young plants*, are obliquely cordate; the ground color is a deep rich green, very handsomely variegated; the centre and margin a deep red with a pale green band between them.

BEGONIA LACINIATA. A biennial *East Indian* species, with very large showy flowers and particularly beautiful foliage.

BEGONIA LEOPOLDII. (*L.' Illust. Hort.*) Handsome; leaves large, darkshaded green, with red margin and centre, and covered throughout with crimson hairs; flowers large, pink. *Belgian* hybrid.

BEGONIA LOWII. (*Low & Co.*) Handsome small-growing kind, resembling *B. Charles Wagner;* leaves pure silvery grey, a slight border at the margin, dark olive green, with silvery markings, and the centre forming a green star.

BEGONIA MARSHALLII. (*Cole.*) A garden variety, from *Rex.* One of the handsomest larger forms; the silvery band, which occupies the space between the bases of the ribs and margin, is broad, showing the dark veins, which radiate from the centre, very distinctly, and the dark green border is sprinkled with silvery dots and blotches.

BEGONIA PICTURATA. (*Henderson.*) Leaves silvery grey in the spaces between the principal veins, these latter lying within narrow stripes of dark green; the whole of the leaf suffused with red, and sanguineous beneath. Of *Garden* origin.

BEGONIA REGINÆ. (*Henderson.*) A curious dwarf sort, with fawn-colored leaves, having a broad silvery irregular band half way between the mid-rib and margin, similar to *B. Rex.*

BEGONIA REX. (*Bot. Mag.*) The finest of its tribe; flowers pink, but the leaves are its most striking feature; they are ten, or more, inches long, and six, or more, broad, deep green, with a metallic lustre, and, towards the margin, tinged with purple. Upon the dark green surface is a broad band, of a silvery white, nearer the edge than the midrib, and passes round the leaf.

BEGONIA VICTORIA. (*Hort. Lind.*) Leaves of moderate size, dark reddish-tinted green along the sides of the principal veins; the centre of the space greenish grey, spangled with silver. Native of *Assam.*

BEGONIA XANTHINA. *var.* LAZULI. (*Bot. Mag.*) Leaves of the same form as in *B. Rex*, and the allied kinds, but having a purplish-blue metallic shade on the upper surface. Of very great beauty, both in flower and foliage. Introduced by Mr. Linden, from *Assam, E. I.*

BEGONIA XANTHINA. *var.* PICTIFOLIA. (*Bot. Mag.*) Leaves reddish-tinted dark green, blotched or barred with a silvery-sulphur green between the principal veins; flower yellow. From *Assam.*

BELOPERONE VIOLACEA. (*Hort. Lind.*) A sub-shrubby stove plant; leaves oblong-acuminate; flowers rather large, two-lipped, violet purple. Native of *New Granada.* Nat. Ord. *Acanthaceæ.*

BERBERIS HOOKERII, (*L' Illust. Hort.*) A handsome dwarf hardy shrub; branches slender; leaves oblong-lanceolate, spiny-toothed; flowers large, axillary, pale yellow umbellate, on nodding peduncles. Nat. Ord. *Berberidaceæ.*

BERBERIS JAMESONII. (*L' Illust. Hort.*) A fine hardy or half-hardy shrub; branches elongate; leaves oval, or oval oblong, undulate, spiny, holly like, in fascicles; flowers numerous, large, yellow in terminal, pendulous, fasciculate panicles.

BILLBERGIA LIBONIANA. (*Hort.*) A very handsome stove plant, producing a spike of highly colored bracts, with flowers of a scarlet and purple color, which are very ornamental.

BILLBERGIA MACROCALYX. (*Bot. Mag.*) Stove perennial; leaves broad, lingulate, remotely spiny, obscurely spotted; flowers in spikes, the petals pale yellowish green, edged with livid blue. The large concave rosy-scarlet bracts, add greatly to the beauty of the plant. It is unsurpassed by any of the species before introduced. Native of *Brazil*. Nat. Ord. *Bromeliaceæ*.

BLABEROPUS VENEATUS. (*Gard. Mon.*) Described as a branching stove evergreen, native of *East Indies*, growing to the height of about six feet. Tube of the corolla an inch or more long, narrow, and swelling slightly towards the limb, which is composed of five, deeply cut, twisted lanceolate, reflexed lobes, pure white; throat narrow, somewhat hairy. Nat. Ord. *Apocynaceæ*.

BÖHMERIA ARGENTEA. (*M. Linden.*) A free growing cool stove shrub; leaves large, elliptic obovate, acuminate, lively green in the centre, and along the course of the principal veins, marked between with blotches of silvery grey. From *Chiapas*.

BORONIA DRUMMONDII. (*Cottage Gardener.*) A beautiful greenhouse evergreen shrub, the habit of which is naturally so good, that it requires but little trouble to give it a handsome form. Flowers axillary and solitary; petals four, ovate, beautiful rosy purple. Native of *West Australia*. Nat. Ord. *Rutaceæ*.

BORONIA POLYGALÆFOLIA. (*Cottage Gardener*). Glaucous, erect, rather lax. Inflorescence cymose, terminal and axillary. Petals four, bluntly ovate, pale, rosy-purple. Very distinct from the above, but equally desirable. Flowers a little later than *B. Drummondii*. Native of *West Australia*.

BOSSIÆA PAUCIFOLIA. (*Henderson.*) A neat greenhouse evergreen shrub; leaves small; flowers profuse, bright orange and crimson. From *Australia*. Nat. Ord. *Fabaceæ*.

BRACHYCHITON (STERCULIA) BIDWILLI. (*Bot. Mag.*) A very remarkable greenhouse shrub, rising from a large tuberous root; leaves cordate deeply three-lobed; flowers axillary, in dense sessile heads, the showy part consisting of the palish red, bell-shaped, downy calyx, which is more than an inch long. From *N. E. Australia*. Nat. Ord. *Sterculiaceæ*.

BRASSAVOLA FRAGRANS. (*Gard. Mon.*) An orchid resembling *B. Perrinii*; but flowers larger, varied in color, and fragrant. Native of *St. Catharines*. Nat. Ord. *Orchidaceæ*.

BRYOPHYLLUM PROLIFERUM. (*Bot. Mag.*) A stove succulent; leaves large, pinnate, with oblong-lanceolate, serrate leaflets; cymes proliferous; flowers tubular, yellowish green, tipped with red, and having an inflated green calyx. Native of *Madagascar*. Nat. Ord. *Crassulaceæ*.

CALADIUM ARGYRITES. A beautiful little gem among variegated leaved stove plants, and the smallest of the spotted leaved *Calladiums*; leaves small, ovately arrow-shaped, two to four inches in length, and two broad, bright green, thickly, and elegantly marked with large blotches, and smaller flecks of pure white. From *Amazon River, Para*. Nat. Ord. *Araceæ*.

CALADIUM ARGYROSPILUM. Leaves medium size, ovately arrow-shaped, the basal lobes rounded; color dark green, with white flecks. *Amazon River*.

CALADIUM BROUGNIARTII. (*Henderson.*) Habit of *C. bicolor*; the central and main side veins are red, extending nearly to the edge, and between them, towards the base; the surface is indistinctly mottled with red and grey, the margin being green.

CALADIUM CHANTINI. Ornamental; leaves moderate sized, ovately arrow shaped, the centre, and the main ribs red, the surface between them being thickly flecked with white on a green ground. One of the best of the newly introduced kinds. *Amazon River*.

CALADIUM CUPREUM. See *Gonatanthus cupreus*.

CALADIUM HOULLETII. Leaves medium-sized, ovately arrow shaped the centre rib and base of the principal veins pale red while young, this color fading with age; the intermediate green, spaces white blotched. *Amazon River*.

CALADIUM NEUMANNII. Leaves ovately arrow-shaped, dark green, with numerous angular red spots. *Amazon River*.

CALADIUM VEITCHII. (*Gard. Chron.*) An entirely novel and beautiful-leaved stove perrennial; stemless; leaves large, about a foot long, arrow-head shaped, with two divergent basal lobes, the attachment of the long, green, curiously-scratched, or purple-pencilled stalks being central or peltate; upper surface polished dark green; the lower, dark lurid purple, from which a bronzy-metallic tinge is transmitted to the upper surface in certain lights. The stout central rib and its main branches, as well as the margin, ivory white; flower-spathes dwarf, greenish white. Native of *Borneo*.

CALADIUM VERSCHAFFELTII. (*Henderson.*) Habit of *C. Bicolor*; leaves medium-sized, green with a few angular red spots.

CALICARPA PURPUREA. (*L.'Illust.Hort.*) A pretty greenhouse shrub; leaves elliptic-lanceolate; cymes axillary; the numerous small pinkish flowers, succeeded by reddish purple berries, which give the plant a very ornamental appearance in the winter months. Native of *China*. Nat. Ord. *Verbenaceæ*.

CALLIRHOE DIGITATA. (*Carter.*) A fine border biennial, much branched, and flowering early, as well as through the summer; flowers rich rosy purple, with a white eye. Native of *Texas*. Nat. Ord. *Malvaceæ*.

CAMPANUMÆA JAVANICA. (*Flore des Serres*). Found on the *Himalayas* growing at an altitude of from five to seven thousand feet, in the high passes of Sikkim. It flowers during the rainy season. Possesses more interest to the Botanist than to the Florist. Nat. Ord. *Campanulaceæ*.

CAMPYLOBOTHRYS ARGYRONEURA. (*M. Linden.*) A charming dwarf stove perennial; leaves crumpled between the smooth parallel, oblique, whitish rib, becoming transversely-oblique furrowed, large, elliptic, rich brown-tinted green, having a metallic lustre, and reddish at the margin. Native of *Chiapas*. Nat. Ord. *Rubiaceæ*.

CANNA WARSZEWICZII. A beautiful scarlet flowering, stove herbaceous perennial, of about 3 1-4 feet in height. Native of *Costa Rica*. Nat. Ord. *Marantaceæ*.

CATTLEYA GRANULOSA HARRISONIÆ. This, and the following *Cattleyas* are extremely interesting, as being the first well-marked, showy, new orchids produced by hybridising. The flowers are blush, slightly suffused with the olive green and spotting of *C. Granulosa* in the sepals and petals, and having its richly veined purple lip. Nat. Ord. *Orchidaceæ*.

CATTLEYA REGNELLII. (*Veitch*). A very handsome dwarf species, resembling *C. Aclandiæ*; sepals spotted with dark purplish brown, almost obliterating the greenish ground color; lip flatter than in *C. Aclandiæ* veined with rich rose purple. Native of *Brazil*.

CATTLEYA SCHILLERIANA. *var.* CONCOLOR. (*Bot. Mag.*) A beautiful variety having the dwarf habit and general character of *C. Aclandiæ*; stems clavate; leaves roundish-oblong; flowers large; sepals and petals olive green, deeply spotted, and blotched with reddish brown; the lip transversely oblong, with a retuse notch, rich rose purple, frilled and toothed at the margin, and furnished there also with a narrow border of white. The species itself has a white lip with purple veins. Native of *Brazil*.

CEANOTHUS VEITCHIANUS. (*Bot. Mag.*) A decided acquisition to hardy evergreen shrubs; leaves obovate-cuneate, smooth, deep green, with glandular serratures; flowers in roundish-oblong heads, forming dense clusters at the extremities of the branches, deep rich mazarine blue. Nat. Ord. *Rhamnaceæ.*

CENTRADENIA GRANDIFOLIA. (*Hort. Lind.*) A pretty sub-shrubby stove plant; stems angular-winged; leaves opposite, oblong-lanceolate, acuminate, laterally curved, purple beneath, one in each pair being six inches or more in length, the other minute; flowers lively rose color, in terminal corymbs. Native of *Mexico.* Nat. Ord. *Melastomaceæ,*

CHAMÆBATIA FOLIOSA. (*Gard. Chron.*) A pretty hardy evergreen shrub, growing two to three feet high, with foliage like a *Mimosa*; branched, compact and erect; leaves broadly ovate in outline, fern like tripinnately dissected; leaflets numerous, small, oval, hispidulous; flowers white, Rubus-like. The foliage is exceedingly elegant, and, when rubbed, has a strong resinous, Cistus-like odor. Native of *California.* Nat. Ord. *Rosaceæ.*

CHRYSANTHEMUM CARINATUM. *var.* PICTUM. (*Bot. Mag.*) A beautiful hardy annual, an improved variety of the well known *C. tricolor*; ray-florets white, with a yellow ring around the disk, and next its zone of crimson. A garden variety. Raised by Mr. K. Burridge, Colchester, Eng. Nat. Ord. *Compositæ.*

CIRRHOPETALUM CUMMINGII. (*Gard. Mon.*) A small growing epiphytal orchid from the *Phillipine Islands.* Its heads of pink and white flowers are borne on reddish stems some six inches long. Nat. Ord. *Orchidaceæ.*

CLARKIA PULCHELLA. *var.* INTEGRIPETALA. (*Carter.*) A handsome purple-flowered annual, differing from the old *Clarkia pulchella* in having the petals broad and entire, instead of being cut into narrow segments, and is consequently more showy. A garden variety. Nat. Ord. *Onagraceæ.*

CLEMATIS VITICELLA. *var.* VENOSA. (*Henderson.*) A beautiful hardy climbing flowering shrub; flowers of a rich purple color, nearly four inches in diameter; petals veined with crimson, having a red crimson tipped ray running from the base to the apex. The white styles are tipped with purple. Blooms continuously during summer, and until late in autumn. Nat. Ord. *Ranunculaceæ.*

CLERODENDRON CALAMITOSUM. (*Veitch.*) A free flowering, dwarf, branching stove-shrub, useful for decoration; leaves coarsely crenate, serrate, oval, moderate-sized; cymes axillary, three flowered; flowers long-tubed, white, scented, forming a leafy panicle. Native of *Java.* Nat. Ord. *Verbenaceæ.*

COCHLIOSTEMA TRADESCANTIA ODORATISSIMUM. (*L.' Illust. Hort.*) A handsome stove perennial, leaves long strap-shaped, narrowed below, green purple beneath ; flowers panicled, large, sweet-scented, with dull pink sepals, and large blue shaggy petals. Nat. Ord. *Commelinaceæ.*

CŒLOGYNE SCHILLERIANA. (*Gard. Mon.*) An orchid from Moulmein. Flowers two inches wide, tawny yellow blotched with red.

COSTUS VERSCHAFFELTIANUS. (*Gard. Mon.*) A stove herbaceous perennial ; grows to about a yard high, with handsome white and yellow blossoms. Native of *Brazil.* Nat. Ord. *Scitamineæ.*

CORDYLINE INDIVISA. (*Gard. Chron*). A fine greenhouse evergreen shrub, with stout, erect, undivided stem, supporting a head of long leaves, of a golden bronzy green color ; inflorescence a dense oblong-panicled spike, the branches curving gracefully upwards ; flowers small, white, bell-shaped. Native of *New Zealand.* Nat. Ord. *Liliaceæ.*

CYNOGLOSSUM NOBILE. See *Myosotidium nobile.*

CYPRIPEDIUM FAIREANUM. (*Gard. Mon.*) An East Indian species allied to *C. insigne*, but with large greenish flowers striated with purple. Nat. Ord. *Orchidaceæ.*

DASYLIRION HARTWEGIANUM. (*Bot. Mag.*) A singular greenhouse plant, producing, from a gigantic, globose, tuberculated, tuber-like caudex, tufts of long, rigid, awl-shaped leaves, and short erect flower-panicles, bearing small purple tinted white flowers. Native of *Mexico.* Nat. Ord. *Liliaceæ.*

DATURA CHLORANTHA. (*Bot. Mag.*) A very handsome double, flowered species, with the habit of *D. arborea* ; leaves ovate, sub triangular, sinuately toothed ; flowers showy, double-tubular, yellow, sweet-scented. Probably a native of *India.* Nat. Ord. *Solanaceæ,*

DATURA EXIMEA. See *Dyssochroma albido-flavum.*

DATURA METELOIDES. (*Flore des Serres.*) A handsome perennial, requiring treatment similar to the Dahlia ; leaves dark green, ovate-oblong, nearly entire ; flowers large, French white, sweet-scented. Native of *Mexico* and *California.*

DAVIESIA UMBELLATA. (*Henderson.*) A compact showy, greenhouse evergreen shrub ; leaves small, lance-shaped ; flowers yellow, growing in dense umbellate heads. Native of *Australia.* Nat. Ord. *Leguminosæ.*

DENDROBIUM ALBO-SANGUINEUM. (*Veitch*). A beautiful white and crimson stove epiphyte. Native of *Moulmien.* Nat. Ord. *Orchidaceæ.*

DENDROBIUM CREPIDATUM. (*Gard. Mon.*) Something in the way of *D. Pierardii*, but the flowers have a yellowish tinge. Probably from *Eastern Bengal.*

DENDROMECON RIGIDUM. (*Bot. Mag.*) A handsome flowering hardy annual, with woody stem and branches; leaves lance-shaped, glaucous; flowers solitary, terminal, two inches across, bright yellow. Native of *California.* Nat. Ord. *Papaveraceæ.*

DIANTHUS SINENSIS *var.* HEDDEWIGII. (*Flore des Serres.*) A charming variety of Indian pink. Leaves broad, linear, bluish green; flowers profuse, from forty to sixty being borne by a single plant, large, two and a half to three inches in diameter. Native of *Japan.* Nat. Ord. *Caryophyllaceæ.*

DIANTHUS SINENSIS *var.* LACINIATUS. (*Flore des Serres.*) Evidently related to the foregoing; flowers equally large; petals narrower, and split at the ends into long narrow segments, making the flowers more fringed. It varies much in color, and also in producing single and double flowers—white, blush lilac, rose, carmine, purple, violet, and maroon, selfs striped or spotted.

DIANTHUS VERSCHAFFELTII. (*L' Illust. Hort.*) A beautiful dwarf hardy perennial, of hybrid origin; leaves narrow; flowers single, white, with a crimson blotch at the base of the petals, eight or ten of them forming a close globular head. Raised at *Cologne* by *M. Herschbach.*

DILLENIA SPECIOSA. (*Gard. Mon.*) A very large Indian tree, adapted only to large conservatories. The flowers are large and white, somewhat resembling *Magnolia Conspicua.* Nat. Ord. *Dilleniaceæ.*

DILLWYNIA PEDUNCULARIS. (*Gard. Mon.*) A greenhouse evergreen of rather prostrate habit; branches slender, drooping. Standard spreading, with a very deeply-lobed apex, scarlet, tinged with orange. Wings very short, ligulate, scarlet; keel very short, also scarlet. Nat. Ord. *Leguminosæ.*

DIPLOLŒNA DAMPIERII. (*Gard. Mon.*) A *New Holland* plant of dwarf branching habit, with numerous small white flowers, more curious than beautiful. Nat. Ord. *Rutaceæ.*

DIPTERACANTHUS AFFINIS. (*Henderson.*) A straggling hot-house shrub; leaves glossy, oblong acuminate; flowers large, funnel-shaped, scarlet. Native of *Brazil.* Nat. Ord. *Acanthaceæ.*

DIPTERACANTHUS CALVESCENS. (*Bot. Mag.*) A straggling stove sub-shrub; leaves ovate lanceolate, opposite, nearly sessile, of a purplish color beneath; flowers pale bluish lilac, not very showy. Native of *Brazil.*

DISSOTIS IRVINGIANA. (*Bot. Mag.*) Soft wooded, branching perennial, hispid on the stems and leaves; leaves elongate, lance-shaped; flowers rose-colored, about an inch in diameter. Native of *Tropical Western Africa*. Nat. Ord. *Melastomaceæ*.

DORONICUM BOURGÆI. (*Gard. Mon.*) An ornamental greenhouse plant, resembling a purple *Cineraria*, and may prove the parent of a new tribe of florists' flowers. Native of *Canary Islands*. Nat. Ord. *Compositæ*.

DRYAS DRUMMONDII. (*Gard. Mon.*) A hardy evergreen perennial, of procumbent habit; stems and branches woody; flowers yellow. A very beautiful Alpine plant, but also rare, being seldom seen in this country beyond botanical establishments. It is well suited to shady parts of rock-work, and flowers more profusely, and longer in duration, in such a situation, than in pots, or in a more exposed position. Native of *Rocky Mountains*. Nat. Ord. *Rosaceæ*.

DYSSOCHROMA ALBIDO-FLAVUM. (*Bot. Mag.*) A stove shrub; leaves large, smooth, oval; flowers drooping, tubular, green (*yellowish, according to Lemaire*). Nearly six inches long, the limb having revolute lobes. Received from the Continent as *Brugmansia eximia*, and named *Juanulloa* by Sir W. J. Hooker, and *Datura* by M. Lemaire. Nat. Ord. *Solanaceæ*.

EICHORNIA TRICOLOR. (*Gard. Mon.*) A *Brazilian* aquatic plant, with very pretty purplish flowers. Those who cultivate stove aquatics, will find this a valuable acquisition. Nat. Ord. *Pontederaceæ*.

EPIGYNIUM ACUMINATUM. (*Gard. Mon.*) A kind of vaccinium with long evergreen leaves of the shape and size of a *Forsythia*; flowers, and flower-stalks a brilliant crimson. Native of *Bootan*. Nat. Ord. *Vaccinaceæ*.

EPIGYNIUM LEUCOBOTRYS. (*Bot. Mag.*) An evergreen hardy greenhouse shrub; leaves oblong-lanceolate, coarsely serrated; flowers racemose, white, conic, pentagonal, succeeded by white wax-like berries. It is said to have a tuberous root almost like that of the yam. From *Duppla Hills, N. E. Bengal*, where it grows on a species of Oak.

EVELYNA CARAVATA. (*Bot. Mag.*) A singular reedy-looking epiphyte; leaves distant, lanceolate, taper-pointed; flowers in terminal, close, oblong heads, the pointed prominent bracts purple, and the small fringed flowers bright yellow. Native of *South America* and *West Indies*.

EXOCHORDA GRANDIFLORA. *Gard. Chron.*) The corrected name of the handsome hardy ornamental Chinese shrub known as *Spiræa grandiflora*. Nat. Ord. *Rosaceæ*.

FORSYTHIA SUSPENSA. (*Gard. Mon.*) The common Golden Bell (*F. viridissima*) is now well known. The present species much resembles it, but has larger and darker yellow flowers, and the leaves have a great tendency to become trifoliate. Native of *Japan*. Nat. Ord. *Oleaceæ*.

FREMONTIA CALIFORNICA. (*Henderson.*) A very distinct and remarkably handsome, dwarf, bushy, deciduous shrub; leaves lobed, resembling small fig leaves; flowers abundant, on short spurs, large, showy, their beauty residing in the golden colored calyx, which has a little cinnamon-colored down, outside; there is no corolla. Native of *California*. Nat. Ord. *Sterculiaceæ*.

FUCHSIA SIMPLICICAULIS. (*Bot. Mag.*) A showy, smooth, greenhouse shrub; leaves ovate lanceolate; flowers on pendulous, elongated branches, numerous, rose scarlet, the tube long and funnel-shaped, and the limb spreading; the corolla nearly the same color as the calyx. Native of *Peru*. Nat. Ord. *Onagra eæ*.

GASTROLOBIUM SPECTABILE. (*Henderson.*) A gay greenhouse shrub; flowers orange and crimson. Native of *Australia*. Nat. Ord. *Leguminosæ*.

GAZANIA SPLENDENS. (*Henderson*). A distinct and showy bedding plant, useful on account of its orange-yellow flowers; leaves spathulate or slightly lobed, white beneath, as in *G. uniflora*, which the plant resembles in general character, only it is dwarfer and more compact; flowers large, rich orange-yellow with a dark ring around the disk. Nat. Ord. *Compositæ*.

GOLDFUSSIA THOMSONI. (*Bot. Mag.*) A pretty, dwarf, herbaceous, glabrous stove perennial; leaves ovate or elliptical; flowers abundant, violet purple, terminal, in size and form a good deal resembling those of *Torenia*. Native of the *Sikkim-Himalaya* at elevations of from 6000 to 9000 feet. Nat. Ord. *Acanthaceæ*.

GŒTHEA STRICTIFLORA. (*Hort.*) A beautiful stove evergreen; stem upright, round, numerously branched; leaves broadly ovate, acute, light green; veins prominent; margin slightly and irregularly notched; petiole short with two linear lanceolate stipules at the base; flowers small, red, with four cordate bracts, longer than either calyx or corolla, and quite enclosing both; calyx divided into five short ovate segments, red. Corolla red, deeply divided into five cuneate segments, and somewhat membranous. Native of *Brazil*. Nat. Ord. *Malvaceæ*.

GONATANTHUS CUPREUS. (*Low.*) A beautiful and novel compact-growing stove perennial; leaves oblong-ovate, about a foot long, peltate, supported on green stalks, purple behind, smooth, and deep green in front, having a strong reddish-coppery or bronzy tint in certain lights. Native of *Borneo*. Nat. Ord. *Aroideæ*.

GREVILLEA ALPESTRIS. (*Gard. Mon.*) A greenhouse evergreen shrub, with small, box-like leaves, and very showy scarlet and yellow flowers. Native of *Australia*. Nat. Ord. *Proteaceæ*.

GREVILLEA DRUMMONDII. (*Henderson*). A fine distinct, free-growing species; leaves grey or whitish-green, pinnate, composed of long linear leaflets; flower heads axillary to the upper leaves, crowded with cream-colored flowers. From *Swan River*, *Australia*.

GREVILLEA ELEGANS. (*Henderson.*) Neat greenhouse shrub, with small oval leaves, and copious palish red flowers, tipped with yellow. This, shown under the above name, during the past year, is more correctly *G. alpestris* (Bot. Mag.) Native *South Australia*.

GREVILLEA PTERISCIFOLIA. (*Henderson.*) A very curious species; leaves repeatedly trichotomously-forked, the long slender segments forming an entangled mass, from amongst which, the clusters of small white flowers are protruded. Native of *Australia*.

GUNNERA SCABRA. (*Gard. Mon.*) This is quite a valuable addition to our collection of plants, with striking leaves, for garden decoration. It was found by Mr. Darwin in *Chili*, where they eat the foot-stalks, as we do Rhubarb; leaves enormously large, measuring sometimes nearly eight feet in diameter. Nat. Ord. *Urticaceæ*.

GUSTAVIA INSIGNIS. (*Gard. Mon.*) A greenhouse shrub, of the *Myrtle* family, from *Columbia or Guiana*, about three feet high; flowers five or six inches wide, white, tinged with rose; the shining green leaves are about six inches long, Nat. Ord. *Myrtaceæ*.

GYNURA BICOLOR. (*Bot. Mag.*) An old fashioned stove plant, lost, but re-introduced. Its merit consists wholly in the rich purple tint of the under side of its leaves, and the purplish green of its upper surface. It has tall herbaceous stems, broad pinnatifid leaves and yellow flowers. Native of *Moluccas*. Nat. Ord. *Compositæ*.

HARDENBERGIA MAKOYANA. (*Gard. Mon.*) Some resemblance to *H. Comptoniana*. Promises to be a favorite greenhouse plant; flowers purple, in abundance. Nat. Ord. *Leguminosæ*.

HIBISCUS RADIATUS. *var.* FLORE-PURPUREO. (*Bot. Mag.*) A handsome free growing stove shrub, with prickly stems, digitately-divided leaves, and large, showy, rosy-purple flowers, having a deep blood colored stain at the base of the petals. Native of *Jamaica*. Nat. Ord. *Malvaceæ*.

HOWARDIA CARACASENSIS. (*Bot. Mag.*) A lovely stove shrub; leaves ovate, or obovate-elliptic; flowers cymosely panicled, tubular, pale, rosy-purple, tipped with deeper purple, an inch long, hairy. One of the calyx-lobes of the exterior flowers is enlarged into a broad, heart-shaped, stalked, rose-colored leaf, a change of structure similar to that which occurs in the well-known stove genus *Mussænda*. Native of *Venezuela*. Nat. Ord. *Cinchonaceæ*.

HOYA CUMINGIANA. (*Bot. Mag.*) Stove evergreen climber; leaves smallish, ovate cordate; flowers in axillary nodding umbels, buff yellow. Native of *Borneo*. Nat. Ord. *Asclepiadaceæ*.

ILLAIREA CANARINOIDES. (*Gard. Mon.*) A climbing annual from *Central America*, with very large and showy flowers and will no doubt be easily grown in the open air, and become popular. It belongs to the *Loasa* class, and, like that plant, is clothed with stinging hairs. Nat. Ord. *Loasaceæ*.

IMANTOPHYLLUM CYRTANTHIFLORUM. (*Van Houtte.*) A magnificent greenhouse perennial, obtained by crossing *I. miniatum* and *I. Aitoni*; leaves lorate; flowers in large heads, resembling a large flowered *Cyrtanthus*, rich orange scarlet. Nat. Ord. *Amaryllidaceæ*.

INGA MACROPHYLLA. (*Bot. Mag.*) A handsome stove evergreen shrub; leaves large; flowers yellow, in beautiful heads. Native of *Peru*. Nat. Ord. *Fabaceæ*.

ISOTOMA SENECIOIDES. *var.* SUBPINNATIFIDA. (*Gard. Mon.*) A variety of a plant once well and admiringly known as *I. axillaris*. A showy annual of the *Lobelia* family, from *New South Wales*, and will, no doubt, do well in our borders where it is not very hot or dry. Nat. Ord. *Lobeliaceæ*.

JUANULLOA EXIMEA. See *Dyssochroma albido-flavum*.

LÆLIA PRÆSTANS. (*W. Day.*) A superb stove epiphyte; flowers very large, deep rose, except the trumpet-shaped lip, which is rich brilliant purple. Native of *Brazil*. Nat. Ord. *Orchidaceæ*.

LÆLIA XANTHINA. (*Bot. Mag.*) A fine showy species, resembling *L. flava*, but much larger and handsomer; pseudo bulbs, elongated or clavate; leaves oblong-lorate; flowers large, green-tinted, orange yellow, the lip paler, and pencilled with red. Native of *Brazil*.

LARIX GRIFFITHII. (*Flore des Serres.*) A graceful tree, inhabiting the mountains of *Bhotan* and *Sikkim*; head conical, the branches arcuately pendulous, with very long dependent branchlets. Some of the plants raised at Kew have stood the winter unharmed. Nat. Ord. *Coniferæ.*

LEMONIA SPECTABILIS. (*Gard. Mon.*) Stove evergreen shrub, of somewhat irregular habit; flowers axillary and terminal, with two or three flowers upon each peduncle; corolla tubular, composed of five elliptical lobes, the three lower of which are largest, rosy purple. Native of *Cuba.* Nat. Ord. *Rutaceæ.*

LINDENIA RIVALIS. (*M. Linden.*) A fine stove shrub; leaves oblong-lanceolate, acutish; flowers white, conspicuous from the ends of the branches, sessile, with a very slender tube five inches long, and a spreading star-shaped limb an inch in diameter. Native of *Tabasco.* Nat. Ord. *Cinchonaceæ.*

LINUM PUBESCENS. *var.* SIBTHORPIANUM. (*Bot. Mag.*) A pretty, hardy annual, with erect stems; leaves small oblong-acute, or lance-shaped; flowers pale rose color, with a bluish ring around the yellow eye. Native of *South of Europe, Syria, Mount Lebanon,* &c. Nat. Ord. *Linaceæ.*

LOBELIA TRIGONICAULIS. (*Gard. Mon.*) A new species from *Moreton Bay,* figured and described by Sir Wm. J. Hooker. A beautiful dense growing variety, each plant covering a space of ground 12 to 18 inches in diameter, with its ample bright green foliage (in the way of *Verbena Maonetti*) and large light blue flowers with fine white eye. Will be much in demand for bedding purposes. Nat. Ord. *Lobeliaceæ.*

LOMATIA BIDWILLII. (*Henderson.*) A distinct and elegant greenhouse evergreen shrub, remarkable for its foliage, which is pinnate, the leaflets spiny-margined, and curiously auricled. Native of *Australia.* Nat. Ord. *Proteaceæ.*

LOMATIA ELEGANTISSIMA. (*Henderson.*) A greenhouse evergreen shrub, with very elegantly-divided decompound leaves, much resembling the fronds of *Thyrsopteris.* Native of *Australia.*

LONICERA STIPULATA. (*Gard. Mon.*) Forms a large and somewhat straggling bush, the branches with peculiar large stipules, unusual in this order; the leaves are often four inches long, with dense buff wool on the under surface; flowers abundant, in bundles at the axilla of the leaves; berries pale yellow. From the temperate parts of the *Sikkim Himalayas.* Nat. Ord. *Caprifoliaceæ.*

LONICERA GLAUCOPHYLLA. (*Gard. Mon.*) Also found by Dr. Hooker in *Sikkim,* where it flowers in the early winter months. A slender glabrous plant, with short axillary spikes of flowers.

LUPINUS MENZIESII. (*Gard. Mon.*) A Californian annual, with spikes of bright yellow flowers nearly a foot in length. Nat. Ord. *Leguminosæ.*

LYCHNIS HAAGENA. (*L.' Illust. Hort.*) A handsome hardy perennial, obtained by crossing *L. fulgens*, with *L. Sieboldii* ; flowers rich orange scarlet, two inches or more in diameter, the petals having a singular spur-like lateral lobe about half way down on each side. Nat. Ord. *Caryophyllaceæ.*

LYSIMACHIA NUTANS. (*Gard. Mon.*) A very beautiful half hardy herbaceous perennial, with dark purple flowers. Native of *South Africa.* Nat. Ord. *Primulaceæ.*

MACODES PETOLA. (*Low.*) A beautiful dwarf plant of the *Anœctochilus* group ; leaves ovate, shaded green, ribbed and veined with glittering golden lines. Native of *Java.* Nat. Ord. *Orchidaceæ.*

MARANTA FASCIATA. (*M. Linden.*) A charming dwarf, compact-growing stove perennial ; leaves smooth roundish-oblong, glossy dark green, obliquely banded with white. Native of *Brazil.* Nat. Ord. *Marantaceæ.*

MARANTA PORTEANA. (*M. Linden.*) A handsome dwarf stove species ; leaves smooth, shining, oblong, apiculate, green, with white bands above, purple beneath. Native of *Brazil.*

MARANTA PULCHELLA. (*M. Linden.*) A pretty, and graceful plant, like a miniature *M. zebrina* ; leaves delicate green, rayed on each side with bands of dark velvety green. Native of *Bahia.*

MECONOPSIS SIMPLICIFOLIA. (*Gard. Mon.*) This is one of the most remarkable and handsome of the many gorgeous plants yet introduced from the *Himalaya* ; the blossoms are of the most beautiful indigo blue, with conspicuous yellow anthers ; the foliage is very pretty, being thickly covered with bright golden hairs. Nat. Ord. *Papaveraceæ.*

MEYENIA (THUNBERGIA) ERECTA. *var.* ALBA. (*Parker & Williams.*) A fine neat greenhouse shrub ; leaves small, ovate, angular-lobed ; flowers large, showy, broadly tubular, with an upward curve and spreading limb, white, stained in the throat with yellow. A variety of *garden* origin. Nat. Ord. *Acanthaceæ.*

MOMORDICA MIXTA. (*Bot. Mag.*) A large growing stove climber ; leaves palmately-lobed ; flowers large, pale yellow, stained at the base with black. Native of *Moulmiem.* Nat. Ord. *Cucurbitaceæ.*

MONEZIA EDULIS. (*Henderson.*) An herbaceous plant with ornamental Ferula-like leaves. Nat. Ord. *Umbelliferæ.*

MUSSCHIA WOLLASTONI. (*Veitch.*) A botanical curiosity of stately habit, adapted for large greenhouse conservatories; leaves long, lance-shaped, doubly serrated; flowers in a fine pyramidal panicle, erect on the horizontal or somewhat recurved branches, dull purplish-stained buff, with a narrow tube, and longer recurved limb-segments. Native of *Madeira*. Nat. Ord. *Campanulaceæ*.

MYOSOTIDIUM NOBILE. (*Bot. Mag.*) This plant is known as *Cynoglossum nobile*, and *Myosotis nobilis*. A lovely herbaceous perennial, half hardy; leaves large, cordate, obtuse, smooth, plicately ribbed; flowers corymbose, deep blue, paler, and almost white at the margin, nearly half an inch across. The fruits, which consist of broadly-winged nuts, or achenia, attached to a quadrangular receptacle, distinguish the plant from *Cynoglossum*. Native of *Chatham Islands*. Nat. Ord. *Boraginaceæ*.

NEPENTHES VILLOSA. (*Gard. Mon.*) This magnificent Pitcher plant was introduced into this country, from the mountains near *Sarawack*, by Mr. Lobb. The ascidia, or pitchers, are more than 12 inches long. It is by far the most noble of this interesting genus, superior to all others in size and color. The curious broad margins at the sides of the elongated mouth, resemble the gills of a fish in structure, and very similar in color. Nat. Ord. *Nepenthaceæ*.

NŒGELIA MULTIFLORA. (*Gard. Mon.*) Very much resembling *Gesnera zebrina* in habit of growth; flowers tubular, an inch long, white. It is well worthy a place in every collection of stove plants. Grown by the side of *G. zebrina*, the beautiful orange scarlet of the latter contrasts well with the white of the former; a color scarce amongst this tribe. Native of the *Eastern Cordillera of Oaxaca*. Nat. Ord. *Gesneriaceæ*.

ODONTOGLOSSUM UROSKINNERI. (*Gard. Chron.*) An elegant species, with the aspect and habit of *O. bictoniense*, but much finer; flowers several together (12 to 14 in their native country) on a tallish scape; sepals pale green, blotched with brown; the lip nearly circular, broadly cordate, frilled, blush white, thickly dotted with pale purple. Native ef *Guatemala*. Nat, Ord. *Orchidaceæ*.

ŒNETHERA BISTORTA VEITCHIANA. (*Gard. Mon.*) Promises to be one of the best of any yellow flowered plants for bedding out, the stems being of humble stature, the flowers large, with a copious succession on the racemes, and when fully expanded, the petals exhibit a dark-orange or blood-colored spot at the base of each petal, as in some of the *Cistus* tribe. Native of *San Diego* and *South California*. Nat. Ord. *Onagraceæ*.

OLEA ILICIFOLIA. (*Veitch.*) An exceedingly ornamental hardy evergreen shrub; leaves flat, oval, holly-like, serrated; flowers white, sweet-scented. Native of *Japan*. Nat. Ord. *Oleaceæ*.

OUVIRANDRA BERNIERIANA. (*Bot Mag.*) This beautiful stove aquatic, was discovered in the lake of *Madagascar* by the Rev. Henry Ellis, and has been flowered by Messrs. Jackson & Son, of Surrey, Eng. Nat. Ord. *Nymphæaceæ*.

PHILODENDRON ERUBESCENS. (*Hort.*) A stove plant; one of the most conspicuously handsome of the *Arum* tribe. The spathe is boat-shaped, six or seven inches long, of a deep blood-colored purple on the outside, and bright crimson within; the spadix arises like a small column of ivory and the foliage is of fine size, and rich glossy green. Probably found in the *Caraccas*. Nat. Ord. *Aroideæ*.

PIMELEA ELEGANS. (*Gard Mon.*) An extremely pretty species introduced from *New South Wales*. The blossoms are pure white, with very large and conspicuous yellow anthers, which give to the plant a striking appearance. Nat. Ord. *Thymelaceæ*.

PLOCOSTEMMA LASIANTHUM. (*Gard. Mon.*) Belongs to a new genus closely allied to *Hoya*; the present species was discovered by Mr. Low on the northwestern side of the island of *Borneo*. The plant, which is not a climber, presents a noble appearance, having very handsome foliage; is a most profuse bloomer. The flowers partake of the waxy character of the *Hoya*, color, orange: the petals reflex until they become quite perpendicular, and rest on the flower-stalk; the lower part of the petals is entirely covered with a velvety snow-white pubescence, giving them an unusually beautiful appearance. The flowers are fragrant and 14 have expanded in one cluster on a newly imported plant.

POGONIA DISCOLOR. (*Veitch.*) A beautiful dwarf stove plant; a companion for *Anœctochili*, having a single ornamental leaf, ovate, somewhat cucullate at the base, recurved, plicately ribbed, bronzy green, with conspicuous orange-red hairs. Native of *Java*. Nat. Ord. *Orchidaceæ*.

POTHOS ARGYRÆA. (*Veitch.*) A beautiful, dwarf, trailing, variegated stove plant, remarkably neat in habit, and almost rivalling the *Anœctochili*, in beauty; leaves obliquely ovate, acute, green, marked with silvery blotches, the blotches on each side the central rib running together into a broad irregular band. The plant is adapted either for pot or basket culture. Native of *Borneo*. Nat. Ord. *Orontiaceæ*.

PRIMULA STUARTII. (*Gard.Mon.*) An Alpine species, from the *Himalayas*. It has somewhat the character of an *Auricula*, with flowers of an orange and yellow color, and is altogether a very striking kind. Nat. Ord. *Primulacæ*.

NUS TRILOBA. (*Gard. Chron.*) A beautiful, dwarf, hardy, spring-flowering shrub; the long, slender, leafless branches are in spring loaded with compactly semi-double flowers of a delicate pale rose color; leaves later than the flowers, cuneately three-lobed or oblong. Native of *China*. Nat. Ord. *Drupaceæ*.

RHIPSALIS SARMENTACEA. (*Bot. Mag.*) A prostrate *Cactus*; the stems round, like those of the well known creeping *Cereus*, but smaller, creeping; flowers small, white. Native of *Buenos Ayres* and *South Brazil*. Nat. Ord. *Cactaceæ*.

RHODODENDRON AZALEOIDES CRISPIFLORUM. (*Gard. Mon.*) Raised by crossing an Azalea with a Rhododendron. Color, deep rose, spotted with crimson, throat white. An excellent addition. Nat. Ord. *Ericaceæ*.

RHODODENDRON CALOPHYLLUM. (*Gard. Mon.*) A strong growing kind from *Sikkim, Himalaya*. Flowers large, white, and tinged with yellow.

RHODODENDRON FORTUNII. (*Gard. Chrôn.*) A very remarkable and distinct species, as hardy as *R. ponticum*, and growing 10 to 12 feet high; leaves exactly oblong, flat, six inches long, and nearly half as broad, heart-shaped at the base, and cuspidate at the apex, deep opaque green above, white beneath; the footstalks strong and purplish. *Mr. Fortune*, who found it on the mountains in the province of *Chekiang, China*, 3000 feet above the sea, did not see it in bloom, but the ground beneath the plants, was strewn with fallen blossoms two much decayed for examination.

RHODODENDRON KENDRICKII. (*Bot. Mag.*) A fine half hardy species; leaves lance-oblong, green beneath; flowers in large somewhat open heads, deep rose-colored. Native of *Bhotan Mountains*. Scarcely surpassed by any in gorgeous coloring of flower.

RHODODENDRON MOULMEINENSIS. (*Gard. Mon.*) From a place of that name on the eastern side of the *Bay of Bengal*. Flowers white, tinged with yellow, 1 1-4 inch in diameter; leaves lanceolate coriaceous, 2 1-2 inches long. A plant 18 inches high, prodnced six trusses of flowers, each truss from 10 to 14 flowers. Is thought to be hardy in the South of England.

RHODODENDRON NOBILE PALLIDIFLORUM. (*Gard. Mon.*) This is considered but a pale variety of *R. nobile*.

RHODODENDRON NUTTALLII. (*Gard. Mon.*) Certainly one of the most glorious plants in cultivation. With noble leaves of the largest size, it bears masses of golden-eyed snow white flowers, represented in the drawing, which appeared in *Henderson's Bouquet* No. 5, as 18 inches around the edge.

RHODODENDRON SHEPHERDII. (*Bot. Mag.*) A fine showy species, related to *R. barbatum*; leaves linear-oblong, acute, green beneath; flowers in large terminal heads, deep crimson scarlet, found in company with *R. Hookerii*, and like that promises to be hardy. Native of *Bhotan*.

RHODODENDRON SMITHII. (*Gard. Mon.*) Native of the northern slopes of the *Lablung Pass, Bhotan*. Blooms in March. Flowers red.

RHODODENDRON THOMPSONII. (*Bot. Mag.*) A very charming species from the *Sikkim Himalayas*; flowers very showy, medium sized, very dark scarlet.

RHODODENDRON VEITCHIANUM. (*Bot. Mag.*) An *East Indian* species of remarkable beauty; flowers about five inches across, pure white, and crisped round the edges. Like *R. Gibsonii*, this bears some resemblance to an *Azalea*.

RHODODENDRON WILSONII. (*Bot. Mag.*) A pretty hardy hybrid, raised by Mr. Nuttall, between *R. ciliatum*, and *R. glaucum*; leaves elliptic-lanceolate, but without hairs, flowers intermediate, longer than in *glaucum*, but with its rose color evident; color a pale delicate rose, becoming whitish at the margin.

RHODODENDRON WINSORII. (*Gard. Mon.*) Another *Bhotan* species, resembling in form, and appearance, *R. Thomsonii*; the color is brighter, and the plant does not appear so interesting.

RHOPALA AUSTRALIS. (*M. Linden.*) A fine stove evergreen shrub, with rusty stems; leaves smallish, pinnately divided, six to eight inches long; leaflets or segments serrate, rhomboid, with a very oblique base, bulged and rounded on the anterior side. Native of *Brazil*. Nat. Ord. *Proteaceæ*.

RHOPALA GLAUCOPHYLLA. (*M. Linden.*) One of the larger-growing species, green, the leaflets serrated, and oblique at the base. Native of *Brazil*.

RICHARDIA ALBO-MACULATA. (*Bot. Mag.*) An interesting greenhouse or half hardy tuberous perennial; leaves hastate, marked with oblong white blotches, lying parallel with the nervation; flowering spathe greenish white, smaller, and less expanded than in the common *R. africana*, better known as *Calla æthiopica*. The spotting of the leaf is peculiar; where the spots are, the substance of the leaf is very thin and translucent, owing to an entire absence of coloring matter. Native of *Natal*.

RICHARDIA OCULATA. (*Gard. Chron.*) A pretty and distinct small-growing species; leaves oblong-cordate, obtusely sagittate; flower spathes erect, small, moderately expanded, about three inches long, bell-shaped with an oblique limb, clear rich greenish yellow, with a deep purple eye. It grows on higher ground than the common white sort, which occurs in bogs. Native of *Natal*.

RUBUS NUTANS. (*Cottage Gard.*) A hardy dwarf, trailing, species, branching copiously, lying close to the ground and rooting at the joints; petioles moderately long, covered with short, spreading, purple hairs; leaves trifoliate, latteral ones ovate, and the central ones nearly round; margins slightly lobed, and roughly serrated; stipules oblong, somewhat cut at the apex, and membranous; inflorescence axillary and terminal; calyx composed of five ovate, large acuminate sepals, villous on the outside, with long, soft, purple hairs; petals large, nearly round, pure white, spreading much; stamens very numerous; filaments nearly erect; anthers large, yellow; style as long as the filaments; stigma concave, expanded, and with a villous margin. Native of the *Himalaya*. Nat. Ord. *Rosaceæ*.

SALVIA CANDELABRUM. (*Gard. Mon.*) Sir W. Hooker says, this is the most beautiful of all the 400 known *Mexican* species. The Corolla is variegated, or marked with purple and white. Nat. Ord. *Labiatæ*.

SALVIA DASYANTHA. (*M. Linden.*) An ornamental stove or greenhouse sub-shrub; stem four-angled; leaves cordate, ovate-lanceolate, coarsely toothed; flowers in elongate racemes, showy rosy scarlet. Native of *New Granada*.

SANSEVIERA CYLINDRICA. (*Bot. Mag.*) A stove perennial plant, yielding fibre, and cordage called *ifé* in the Portuguese settlement of Angola, *Western Africa*; leaves dark-colored, terete; flowers whitish, inconspicuous. The cordage made from this plant, proves to be the strongest, and best fitted for deep sea-sounding of any fibre known. Native of *Mauritius*. Nat. Ord. *Liliaceæ*.

SAPONARIA ATOCOIDES. (*Gard. Mon.*) Is a native of *Syria*; has a stem shrubby to the base, bending and elevating themselves a little towards the sun. The flowers are in corymbs and of a beautiful rose color. The *Revue Horticole* says it grows freely in the open air, flowering in July, freely. It will doubtless make a good border plant. Nat. Ord. *Caryophyllaceæ*.

SINNINGIA AFFINS. (*Parker & Co.*) This plant illustrates a curious fact in hybridising; it was raised with about three hundred others similar in character, from the erect-flowered variety of *Gloxinia* named Madame Picouline, fertilised with *Sinningia guttata*: not one of the progeny resembled the female parent. Plant dwarf, with all the character and habit of *Sinningia*; leaves elliptic; flowers Gloxinia-like, dull purple with an angular ovary. Nat. Ord. *Gesneraceæ.*

SONERILA MARGARITACEA. (*Bot. Mag.*) A beautiful little stove annual; flowers pink, in corymbs; its principal beauty consists in the leaves, which are a dark glossy green, with pearl-like spots in rows between the veins. Native of *India.* Nat. Ord. *Melastomaceæ.*

SPATHODEA CAMPANULATA. (*Bot. Mag.*) A magnificent stove tree; leaves pinnate; flowers in massive, terminal, corymbose racemes, very large, rich orange red, broadly bell-shaped, curved. Native of *Tropical Western Africa.* Nat. Ord. *Bignoniaceæ.*

SPRAGUEA UMBELLATA. (*Bot. Mag.*) A curious and pretty dwarf herbaceous perennial, novel in character, free flowering, and very well suited for rockwork. or the margins of flower borders. Leaves rosulate, spathulate, fleshy; flowers close imbricated, two ranked; the two large scarious sepals, are whitish and persistent; the petals rosy lake, just protruding; the anthers purple, so that the flower-spikes appear to be white, dotted with purple. Native of *California.* Nat. Ord. *Portulacaceæ.*

STANGERIA PARADOXA. (*Bot. Mag.*) A singular, rather than ornamental plant, remarkable for the resemblance of its leaves to those of some coarse-pinnated fern; stem short, thick; leaves few, pinnated; fructification consisting of green cones, of which the males are cylindrical, the females shorter and more ovoid. Native of *Natal.* Nat. Ord. *Cycadaceæ.*

STANHOPEA MACROCHILA. (*L.' Illust. Hort.*) A fine stove epiphyte; flowers white or cream-colored, marked with crimson spots, disposed in lines. Native of *Mexico.* Nat. Ord. *Orchidaceæ.*

STANHOPEA RADIOSA. (*L.' Illust. Hort.*) Another fine species; flowers greenish yellow, finely dotted with purple; the interior of the pouch is marked with radiate lines of papillæ. Native of *Mexico.*

STATICE BRASSICÆFOLIA. (*Bot. Mag.*) An elegant greenhouse herbaceous plant; stems winged; leaves lyrately pinnatifid below; flowers white, seated on a purple calyx. Native of *Canary Islands.* Nat. Ord. *Plumbaginaceæ.*

STEPHANOPHYSUM BAIKIEI. (*Bot. Mag.*) A showy stove sub-shrub; stem four angled; leaves ovate-lanceolate, acuminate; the flowers in large compound terminal panicles, funnel-tubulose, curved, two inches long, bright crimson, very numerous. One of the introductions of the Niger Expedition. From *Tropical Africa*. Nat. Ord. *Acanthaceæ*.

SYRINGA OBLATA. (*Gard. Chron.*) A fine hardy deciduous shrub, about the size of the common *Lilac*, but more tree-like in habit; leaves large, fleshy, oblately cordate, as broad as long; flowers freely produced and very ornamental, about half as large as in the common sort, arranged in a thin loose panicle. Nat. Ord. *Oleaceæ*.

SYRINGA INSIGNIS. (*Gard. Mon.*) *This, and the four succeeding varieties are noted as among the new or not well known plants, that have recently bloomed in this country.* Short dense spikes; flowers pinkish purple before opening, lilac after, but a slight variation from the generally known kinds.

SYRINGA LIBERTII. (*Gard. Mon.*) Small lilac flowers of a bright lavender.

SYRINGA RUBRA MAJOR. (*Gard. Mon.*) Pink in the bud; after opening the flowers are pale pink, with a white spot on each of the broad segments of the Corolla.

SYRINGA SANGUINEA FL. PL. (*Gard. Mon.*) Flowers double in short dense spikes, pink before opening, afterwards lavender.

SYRINGA SANGUINEA RUBRA. (*Gard. Mon.*) Large dense panicles, of a pale purple while in bud, becoming a deep rosy purple when open. Of the *Persian* section, but with larger flowers.

TACHIADENUS CARINATUS. (*Bot. Mag.*) A handsome stove plant; suffruticose, with smooth four angled stems; leaves opposite, oval, acute; flowers in terminal cymes, large, hypocrateriform, rich purple, the tube very long and slender, and the limb broad, spreading horizontally. Native of *Madagascar*. Nat. Ord. *Gentianaceæ*.

THIBAUDIA (AGAPETES) BUXIFOLIA. (*Gard. Mon.*) Another very pretty form of *Vaccineæ* from *Bhotan*, where it is epiphytal on the mossy trunks of trees in damp forests. The scarlet bell-shaped flowers, and box-like foliage, give it a very interesting appearance. Nat. Ord. *Vacinaceæ*.

THOMASIA STIPULACEA. (*Gard. Mon.*) A handsome white-flower greenhouse plant of easy culture, flowering in autumn and winter. Native of *New Holland*. Nat. Ord. *Byttneriaceæ*.

THUNBERGIA HARRISII. (*Gard. Mon.*) Not so dark in color as *T. laurifolia*, but blooms in much larger clusters, and, apparently, more freely. It flowers in winter and early spring, and is a native of the *East Indies*. Nat. Ord. *Acanthaceæ*.

THUNBERGIA LAURIFOLIA. (*Gard. Mon.*) A beautiful species; a free bloomer, of a pretty blue color, blooming in winter and early spring. A very desirable acquisition.

THUNBERGIA NATALENSIS. (*Gard. Mon.*) The habit of this plant differs from most of the genus, being of a dwarf, shrubby, erect growth, two feet high; flowers yellow, two inches long, curved upwards.

TORENIA PULCHERRIMA. (*Gard. Mon.*) A singularly beautiful variety of the favorite *T. Asiatica.* The tube of the Corolla, and its eye, are a purple violet; the two side-lobes are the same color, fading at the edge into pure violet; the upper lobe is pale violet; the lower is with a purple oblate blotch at the point. This variety far exceeds the old original kind.

TRADESCANTIA ODORATISSIMA. See *Cochliostema odoratissimum.*

TRITOMA UVARIA. *var.* GLAUCESCENS. (*Henderson.*) A beautiful form of the fine old perennial *T. uvaria,* with smooth-edged leaves of a glaucous green, and producing long rich spikes of its orange-scarlet blossoms early in autumn, and considered the finest and richest colored of the varieties. Nat. Ord. *Liliaceæ.*

TRITOMA UVARIA. *var.* GRANDIFLORA. (*Henderson.*) A fine late-blooming variety, very robust in habit, with stiff, arching, broad leaves, and tall flower-stems, bearing a spike of blossoms a foot long, rich orange scarlet. The plants come into bloom later than the variety *serotina.*

TRITOMA UVARIA. *var.* SEROTINA. (*Henderson.*) This differs from *glaucescens* in having roughish edged leaves of a dull deep green, and blooming later in the season; flowers, at the last, very rich in color, though poor by comparison when it begins to blossom. The three varieties are valuable on account of the succession of bloom.

TROPÆOLUM MAJUS. *var.* NANUM LUTEUM. (*Carter & Co.*) The habit of this variety, known as the "Yellow Tom Thumb," is dwarf and compact; the flowers of a clear golden yellow. A useful flower garden and bedding plant. Nat. Ord. *Tropæolaceæ.*

UROSKINNERA SPECTABILIS. (*Gard. Mon.*) This is described as being a very showy plant; represented as of a dull purple color, in head about four inches across. The leaves appear coarse. Native of *Mexico.* Nat. Ord. *Gesneraceæ.*

VANILLA LUTESCENS. (*Gard. Chron.*) This fine plant has been imported from *La Guayra,* and flowered in the garden of the Faculty of Medicine at Paris. Unlike *Vanillas* generally, this has showy flowers, the blossoms being of a golden yellow, six inches across, and growing about a dozen in a cluster. Nat. Ord. *Orchidaceæ.*

VERBASCUM MULTIFLORUM. (*Gard. Mon.*) This is a showy herbaceous species imported from the *Crimea*; flowers golden yellow, free growth. Nat. Ord. *Schrophulariaceæ.*

VIOLA PEDUNCULATA. (*Gard. Mon.*) This Pansy-looking Violet is a native of *California.* It has showy yellow flowers on long stalks. The back of the two upper petals has each a crimson blotch thereon. Nat. Ord. *Violaceæ.*

POISONOUS PLANTS.

Ignorance of the true character of many of Nature's products, often leads to disastrous and fatal results. This is especially so in the case of poisonous plants, wild, or everywhere cultivated. Comparatively few persons know that the *flowers of the Daffodil*, the *seeds of the Laburnum*, the *roots of the Scarlet Runner*, the *leaves of Fool's Parsley*, the *spray of the Cypress and Yew*, the *berries of Belladonna*, and many other familiar plants, are extremely dangerous; how many a child has been poisoned by such things while the cause remained unsuspected. The common *Acacia* is now added to the list, as will be seen by the following extract from the *Botanische Zeitung* :—

"Dr. J. MOLLER in the *Zeitschrift für Naturund Heilkunde in Ungarn* relates the case of a little girl, eight years old, who was made seriously ill by eating a fresh root of the Acacia tree which she mistook for liquorice. The appearances of the disorder were extremely similar to those which result from eating the berries of Belladonna. A strong emetic of sulphate of copper removed the danger; lemonade and black coffee being afterwards administered. The next day all symptoms of indisposition disappeared, and only the depression consequent upon such attacks remained behind. The physician who was called in considered the following circumstances worthy of remark—before being poisoned the child was suffering from intermittent fever, which did not reappear after the attack. It is however uncertain whether the fever was removed by the emetic or by the eating of the Acacia roots; if by the latter, the action of Acacia would resemble that of Belladonna. Dr. MOLLER adds that a similar case of poisoning had occurred to himself in the instance of two children chewing fresh dug up roots of this Acacia (Robinia Pseudacacia), but that also terminated favourably."—*Gard. Chron.*

NEW FLOWERS OF THE YEAR.

ACHIMENES AND TYDÆAS.

These highly ornamental plants, which have been called into existence of late years by the genius and skill of hybridisers, are indeed a valuable acquisition in decorative gardening, owing to the lateness of their bloom, &c. Their easy cultivation, fine habit, beautiful foliage, and great profusion of brilliant-colored flowers, cannot fail to commend them to the attention of all the lovers of flowers, who strive to keep up a succession of bloom. Among the new varieties worthy of notice, are,—

Elegantissima (Tydæa). This is of a dwarfer habit and distinct features from the following. It has an orange-scarlet tube, expanding to a lobed salver-shaped limb of a blush-salmon ground color, and singularly marked with rich rosy carmine bands and spots.

Gigantea ignea (Achimenes). This is a herbaceous variety, with a fine robust habit of growth, and beautiful dappled velvety foliage. It produces an abundance of short-tubed, funnel-shaped flowers, of a brilliant shady crimson-scarlet color, and beautifully flecked with darker spots of the same color.

Ignescens (Tydæa). This produces a profusion of brilliant funnel-shaped flowers, with crimson tubes, expanding to orange-scarlet lobes, richly spotted with carmine on the lower limb, and relieved by a yellow throat, which is finely striped with scarlet.

Lady Digby (Tydæa). Flowers with crimson-scarlet tubes, expanding to finely formed salver-shaped lobes, nearly two inches in diameter, of a pure rosy-lake crimson color, and richly flecked with darker crimson spots. It is of neat bushy habit, and a profuse bloomer.

Longiflora flore-pleno (Achimenes). This is a remarkable variety, with flowers varying from double to semi-double; rich porcelain blue.

The following new hybrid *Achimenes*, recently announced in England, are said to be very distinct in handsome foliage, habit and beautiful flowers, viz.:

Adonis; *Aurora*; *Comet*; *Denton's Beauty*; *Delicata*; *Erecta*; *Multiflora*; *Mars, and Mazeppa.*

The following varieties are thus described in the Horticulturist:

Achimenes Meteor. A most splendid addition to this most beautiful, and useful class of plants. Color a rich crimson scarlet, with petals of great substance. It is, without exception, the finest Achimene ever raised.

A. Leighi. A very free blooming variety of excellent habit; color, light purple; nearly two inches in diameter, and beautifully sprinkled with carmine spots.

A. Carl Wolfarth. Very fine purple crimson; a very beautiful variety.

A. Dr. Hopf. White, with a beautiful lilac centre.

A. Edmond Bossieu. Color white, beautifully veined with lilac; a remarkably free bloomer, and fine habit.

A. Edouard Otto. Bright rose; centre white, with lilac veins, very fine.

A. Margaretta. Snow-white blossoms; the finest white in cultivation.

A. Sir Trehorn Thomas. A magnificent variety; color fine; bright crimson flowers very large.

AURICULAS.

Exhibitor (Turner). A grey-edged variety of more than average properties. Certificate Royal Botanic Society.

Imperator (Turner). A greer edged variety of first rate properties. Certificate R. B. Soc.

AZALEAS (INDIAN.)

Advance (Turner). An exceedingly beautiful variety in the way of Triumphans, but a decided advance; flowers large, well formed, bright rose color, richly spotted near the base of the upper segments. Certificate R. B. Soc.

Benno (Fraser). Flowers large and coarse; rose colored.

Blanc de Neige (J. Verschaffelt). Flowers white, with a green centre.

Bouquet de Flore. (Ivery & Son). Flowers small, clear rose color, with retuse segments; remarkable for its dwarf, neat habit.

Chameleon (Turner). Flowers white, striped with pale red; good form, but lacks distinctness.

Dr. Livingstone (Todman). Flowers large, finely shaped, and of good substance; bright, lively rose color. Certificate R. B. Soc.

Duchesse Adelaide de Nassau (Ivery & Son). Flowers large but not of first-rate form; pale carmine, purplish tubed, and spotted on the upper segments.

Duc de Brabant (Henderson). Rose-colored.

Elegantissima (Parker and Williams). Flowers white, striped with pale red; well formed, of tolerable substance.

Etoile de Gand. (Henderson). Flowers pink, with a few spots of Carmine.

Flower of the day (Ivery & Son). A remarkably flat, spreading, short-tubed flower, of large size and good substance; white slightly striped with crimson. This variety is peculiar from the flat expanded form of the flowers. Certificate R. B. Soc.

Gigantiflora (Gard. Mon.) Beautiful new hybrid; flowers nearly five inches across; bright rose, spotted with crimson or violet on the three upper petals. The form is perfect.

Leopold I. (Henderson). Flowers rose-colored; very similar to Duc de Brabant.

Leviathan (Ivery & Son). Flowers fine, of good substance; white, semi-double. Likely to prove a good decorative plant. Certificate R. B. Soc.

Miltoni (Turner). Flowers large, well formed; light rose with conspicuous spotting.

Model (Ivery & Son). An improved Murrayana; flowers clear, delicate rose pink, with smooth, even segments, the upper ones slightly spotted. Certificate R. B. Soc.

Perfection (Frost). Flowers of first-rate properties in form and substance; bright rose color. An excellent variety. Certificate R. B. Soc.

Prince Imperial (J. Verschaffelt). Flowers pink.

Queen Victoria (W. Ivery). Flowers white, striped with purple.

Reine des doubles (J. Verschaffelt). Flowers clear rose, double.

Reine des panachees (Henderson). Flowers white, streaked with crimson. Coarse.

Rosæflora plena (J. Verschaffelt). Flowers pale rose, double.

Sir H. Havelock (Frost). Bright salmon; upper part of the flower beautifully marked, very smooth, and of fine quality.

Striata flore-pleno (Ivery & Son). Flowers white, striped with red; double, but of indifferent character.

Tricolor (Ivery & Son). Flowers large, of average form; white, much striped and blotched with light red. Cert. R. B. Soc.

Triomphe de Gand (J. Verschaffelt). Flowers small, rose-spotted.

Vicompte de Nieuport (J. Verschaffelt). Flowers small, pale rose, semi-double.

Azalea occidentalis (Gard. Mon.) A very beautiful California species, with large heads of light colored flowers. The habit of the plant is like that of our Southern yellow species.

CALCEOLARIAS.

Lillio (Smith). A shrubby variety, with large bright yellow flowers, of good form and texture, very hardy, and well adapted for bedding.

Unique (Cole). This will prove a great acquisition as a true shrubby bedding variety, producing erect dense clusters of clear orange flowers.

CAMELLIAS.

Countess of Derby (Veitch). One of the finest light-striped Camellias in cultivation; flowers large, white, with broad smooth petals of great substance flaked with distinct broad stripes of deep rose. From *Italy*.

Eleanor (Turner). Flowers fine, boldy cupped, smooth petaled, of a bright rose color. Cert. R. B. Soc.

Lady Mary Labouchere (Turner). Very light rose, with a tendency to become blotched; petals cupped but not sufficiently often.

Pearl (Gard. Mon.) A really charming variety; the blossoms are snowy whiteness, exquisite form; petals of great substance, and beautifully imbricated.

Sasanqua var. *anemoniflora* (Gard. Chron). This plant, which is known as Fortune's Yellow Camellia, has recently flowered at Kew, and its systematic position has been determined by Dr. Seaman. Flowers in autumn; its leaf-buds petioles, and the veins of its leaves are pubescent, and its ovary wooly; stamen's transformed into short, spathulate primrose-colored petals. The yellow color is a new feature in the genus, deserving the attention of horticulturists.

Tricolor imbricata plena. (Henderson). This is a beautiful variety, of fine substance and outline, finely cupped and imbricated, with blush-white flowers, uniformly flaked with rich rose, and carmine. It has the fine form of the old double white.

Valtevaredo (Veitch). A beautiful variety of Italian origin, the flowers exquisitely formed, of medium size, cupped like a rose, and full to the centre; the color a deep rich rose, sometimes slightly blotched.

CARNATIONS AND PICOTEES.

Car.—Sir H. Havelock.* (Puxley). A scarlet-flake variety of first rate properties.

Car.—Illuminator. (Puxley). Scarlet flake; a bright and fine flower.

Car.—Lucia (Taylor). Rose flake; a well-marked flower, and of good size.

Car.—Marshal St. Arnaud. (Puxley). Scarlet flake; a fine large flower, of good substance, and very bright.

Car.—Nymph. (Puxley). Rose flake; large, bright flower; very fine.

Pic.—John Linton.* (Headley). A heavy purple edge; fine quality and very constant.

Pic.—Rival Purple.* (Headley). A heavy purple-edged variety; fine white ground; a good and useful flower.

Pic.—Rev. A. Mathews.* (Kirkland.) A heavy rose-edged variety; a good and useful flower.

* Those marked *, were favorably commended by the Floral Committee of the London Horticultural Society.

DAHLIAS.

Those marked thus * have received first-class certificates, and thus † were commended at the Floricultural Committee Meetings of the London Horticultural Society.

*Apollo** (Turner). Purplish crimson, distinctly and regularly tipped with white. A fancy variety, dense, well formed, and remarkably symmetrical.

*Beauty** (Turner). Beautiful form; colour light rose.

Compacta† (Rawlings). Lilac blush, tipped with purple.

Duke of Roxburgh (Dodd's). Bright buff; very fine.

*George Eliot** (Turner). Bright purple; one of the best of the year, very constant, and first rate in every respect; has had many certificates; full high centre, deep and round.

George Grapes† (Turner). Yellow buff, or maize colour, suffused with salmony red; good.

Harlequin (Grant.) Scarlet and buff; beautifully marked. Certainly *one* of the *two* best of the year, if not the very best.

*Lady Douglas Pennant** (Keynes). Pure primrose yellow, of the finest quality. We hardly know which of these two flowers claims the first place. This is a very first-class flower without a doubt.

Lady Taunton (Turner). Fine delicate color ; rather long in the petal, but appears to be very constant, and on that account desirable.

Leopard (Keynes). One of the finest-formed fancy flowers, but very similar to several others.

Lilac Queen (Grant). Pure lilac ; first class. Very fine, deep, close, compact.

Lilacina Variegata (Dodds). Promises to be one of the most popular ; color a charming light lilac ; leaves variegated.

Lord Clyde (Dodd's). Crimson ; first-rate ; fine color ; deep, even, close flower ; well up in the centre.

*Miss Sarah Boyce** (Rawlings). Light color, deeply edged with lake ; the best ever exhibited by this raiser ; his productions have almost always been too small ; has size with quality, and may be safely placed at the head of its class.

Mrs. Chetwode (Walker). Color inclining to fawn, or rather, shaded puce ; rather small, but a very good form.

*Mrs. Philip Bailhaiche** (Keynes). This is a most delicate peach color, quite distinct from anything out. Pure in color, and, if constant, truly beautiful.

Mrs. Vyse (Turner). Good early flower, light-edged lilac.

*Mrs. Wellesley Pigot** (Keynes). Pure white ; very full, fine centre, not too deep, but altogether the best white by far.

*Neville Keynes** (Keynes). Color yellow ground, tipped or edged with purple. A most desirable color, long wanted. This is a very certain flower, and, from first to last, has always had first class awarded it.

Oscar (Addis). A very pleasing variety, which can be safely recommended. Color bright rosy scarlet.

Pluto (Turner). Maroon crimson, tipped with cream ; not very distinct, but apparently very constant. Good flower.

Princess of Prussia (Pullen). A rich golden yellow, high, and even ; of great promise.

Purple Standard (Fellowes). Good colour ; good centre.

Queen Mab (Turner). Too uncertain, yet a color much wanted, a light-tipped red.

*Rev. Joshua Dix** (Keynes). Lilac, splashed with purple ; very full flower. Has received more awards than any other.

Rival Lilac (Dodds). Good lilac. Fine at the London Crystal Palace.

Salamander (Keynes). Red and crimson ; rather dull colors.

*Sir George Douglas** (Dodds). Yellow ground, deeply edged with crimson ; a wonderfully fine flower.

Splendid† (Green). Pale lilac blush, striped and spotted with bright deep crimson. A fancy variety, of good average form, and well filled.

*William Dodds** (Keynes). Pure chrome yellow; first-rate centre, apparently most constant, having been shown many times, and *always* awarded first class. The best yellow by far yet.

Zebra (Keynes). Scarlet and crimson; colors beautiful.

FUCHSIAS.

Alaric (Smith.) Sepals of a dull crimson colour, very broad, short, and expanding. Corolla large, deep purple. A distinct and showy variety, with a dwarf and free-flowering habit.

Butterfly (Smith). Tube short and stout. Sepals of a bright crimson color, tipped with white, broad, and well reflexed. Corolla pure white. A very pretty variety.

Distinction (Ivery). Tube and sepals bright coral red, the sepals broad and expanding, and the tube remarkably short. Corolla purple, large, and widely expanding.

Elegantissima (Smith). Tube and sepals rich scarlet crimson, the sepals broad and reflexed. Corolla violet purple, very large, and expanding.

Lord Clyde. Tube and sepals of great substance, rich glossy scarlet; sepals reflexed, exhibiting a large well folded corolla of rosy pink, distinctly flaked with broad stripes of bright violet purple.

Marquis of Bath (Wheeler). Tube and sepals of a deep coral red color, and of great substance. Corolla full, double, compact, and of a deep purple color. This is the best double Fuchsia which has yet been raised.

Princess Royal (Veitch). Tube and sepals scarlet; corolla white; flower reflex, of good form; habit of plant graceful, and an abundant bloomer. One of the very best of its class.

Senator (Smith). Tube and sepals bright waxy crimson. Sepals broad and well reflexed. Corolla of a rich violet color, large, and well expanded. This received a *first-class certificate* at the Royal Botanic Society's Exhibition.

Solferino (Smith). Tube and sepals bright crimson, the former short, and the latter well reflexed. Corolla deep purple, and very large. This variety is in the style of *Souvenir de Chiswick*, and was *commended* for its dwarf, free-flowering habit, combined with its good properties, by the Floricultural Committee of the London Horticultural Society.

GERANIUMS.

Beauty (Cutbush). Habit spreading. Leaves white-edged. Flowers large, light scarlet, in good trusses. A desirable addition to this family. Certificate, Royal Botanic Society.

Blackheath Beauty (Hally). Flowers produced in good-sized trusses, salmon-colored, with a white eye, and well formed. The plant has a neat dwarf habit, and well-marked horseshoe foliage. This was commended at a meeting of the Floral Committee of the Horticultural Society.

Cloth of Gold (Henderson). A compact, dwarf, bushy growth, with dense foliage which has the horseshoe marking, and bordered with golden-yellow belts; flowers brilliant scarlet. The whole plant is densely hairy.

Crimson Nosegay (Beaton). This has the habit and vigor of Tom Thumb; dwarf and compact. The flowers are produced in masses, of a bright carmine-lake color, and withstand the effects of sun and rain better than any other variety of this section. It is an excellent bedder, and quite new in color.

The Fairy (Henderson). A very dwarf, compact variety, with dense silver-edged foliage, which is sharply toothed on the margins. The flowers are produced in trusses, of rich rosy salmon color.

Golden Vase (Henderson). A dwarf, compact habit, with richer golden-edged foliage than *Golden Chain*, and with a darker zone on the margin of the green disk; flowers cherry red.

Jane (Turner). Leaves bordered with white. Flowers bold, light bright scarlet, in good trusses. A desirable addition. Certificate, Royal Botanic Society.

Magnet (Parker & Williams.) A desirable variety. Leaves flat, greyish green, with a cream-colored, irregular border. Flowers bright scarlet, not large, but of good outline, and growing in compact trusses of moderate size.

Mrs. Ponsonby Moore (Veitch). A charming decorative plant, very dwarf and free blooming. Flowers rose crimson, with large dark blotch on upper, and smaller ones on the lower petals.

Oriana (Henderson). A dwarf, compact habit, with dense foliage, which is bordered with a sulphur and shaded margin. An improvement on *Silver Queen*. Flowers rosy pink.

Picturatum (Turner). Leaves white-edged and grey-blotched, with a broad pink horseshoe mark. Very pretty.

Queen's Favorite (Henderson). A very dwarf habit, not more than six to nine inches high. The leaves have a green centre, encircled with a zone of dark olive green, which is bordered with a crimson, extending to the margin.

Sheen Rival (Kinghorn). Flowers large, cerise scarlet, borne in fine bold trusses. The habit is dwarf and robust, and the leaves distinctly horseshoe-marked. It is an improvement on General Pelissier, and was commended by the Floral Committee of the Horticultural Society.

Stella (Beaton). The habit and vigor of the plant are like Tom Thumb. The flowers are produced in large, free-blooming trusses of a dark purple color, which is quite novel. It will prove a valuable bedder, particularly for a ribbon or chain between the taller and dwarfer Scarlets.

Variegated Nosegay (Beaton). This has the habit of Golden Chain, with trusses of a unique rose color. It forms an excellent band or edging.

Vivid (Smith). Flowers produced in large trusses of a brilliant deep crimson scarlet, with a small white eye, and of good substance. *First-class certificate* at the Royal Botanic Gardens.

GLOXINIAS.

Attraction (Gard Mon.) A beautiful new variety, with a very rich carmine throat ; edge of the corolla clear white, and singularly recurved.

Cærulea variegata (Breeze). The ground colour is rich light porcelain blue, distinctly streaked with white, and partially mottled on the upper lobes; the throat marked with white flakes, passing through the margin. Good size and form.

Princess Alice (Gard. Mon.) An erect flowering variety, of circular form ; rosy pink.

Striata maculata (Breeze.) Flowers large, well formed, and drooping, of a rosy-salmon color, mottled with white on the upper lobes, and marked with three diverging white stripes, radiating from the throat to the margin.

HOLLYHOCKS.

Of these we notice only such as are really distinct and novel in character.

Agnes (Chater). Pink and blush, shaded ; good form and spike.

*Brunette** (Paul). Crimson maroon ; large and full.

Competitor (Chater). Fine crimson purple, shaded ; high and close.

Dulcis (Laing). French white, with a dark base.

Flora McDonald (Laing.) Primrose. A very superior variety.

General Havelock (Paul). Bright ruby scarlet.

Harriet† (Chater). Soft lilac, with a mauve tint, rather thin in texture.

Homer (Paul). Salmon ; fine spike.

In Memoriam (Paul). Crimson maroon ; very fine.

Joshua Clarke† (Chater.) Fine crimson ; large and close.

Mrs. Chater (Chater). Rosy carmine; in the way of Beauty of Walden, but lighter, and in some respects better.

*Leonora** (Chater). Mottled rose, shaded with fawn. A bold, well filled flower, with fine guard petals.

Nebo (Paul). Claret; good spike. Distinct.

Novelty† (Chater). Dull purple crimson, the light parts mottled, and edged with blush.

Optima (Chater). Pale straw colored, tipped with pink.

Ossian (Paul). Crimson, shaded with salmon; very symmetrical.

Plutarch (Paul). Plum-colored; very smooth and distinct.

Purple Prince (Laing). Purple; full, and of excellent form.

Red Rover (Paul). Dark fiery scarlet.

Sir David Baird (Downie). Lilac.

Sovereign (Paul). Dark peach.

Veritas (Paul). White, with a lemon base.

Vesta (Paul). Pure white.

* Those marked * received first-class certificates, and thus † were commended by the Floral Committee of the London Horticultural Society.

PANSIES.

The following have been carefully selected for their superiority over existing varieties:—

Alexander M'Nab (Downie & Laird). Dark self, beautifully shaded in the centre with light blue. Extra fine.

Black Doctor (Whittingham). A fine dark self.

Cherub (Hooper). Yellow self, closely resembling Yellow Beauty.

C. W. Ramsay (M'Farlane). Yellow ground, belted with bronzy purple. A distinct and fine variety.

Defiance (Auckland). A pure purple self, extra in substance, quality, and smoothness; the lower petal rather small.

Duchess of Hamilton (Downie & Laird). White ground, belted with light purple; large dense blotch. Smooth and fine form.

Mary (Douglas). White ground, heavily belted with light maroon. Fine.

Mary Jane (Middlemas). White ground, with medium purple belting; blotch dense and solid. Form and substance fine.

Miss Bate (Sadler). White ground, purple belting, bold dense eye. Fine.

Miss Carnegie (Downe & Laird). White ground, with nearly black belting. First rate.

Mr. Bate (Sadler). Deep yellow, the upper petals and belt bronzy purple. Fine.

Mrs M'Laren (Downie & Laird). Deep bronzy maroon; very smooth and fine. Early.

Queen of Purples (Sadler). Crimson purple; smooth and good form. Fine.

Rev. Joshua Dix (Downie & Laird). Dark glossy-shaded plum color; smooth and distinct. Fine.

William Griffiths (Oswald). Gold and rich bronzy maroon, fine quality, fair average form, and good blotch. A rich and distinct variety.

PANSIES (BELGIAN).

Some remarkable flowers have been received from France and Belgium during 1858 and 1859, possessing unusually large blotches, and are curiously marked; two of the varieties, *Ali Bey* and *Miracle*, having by far the largest blotch ever yet seen in a self Pansy. Some of these will no doubt prove to be the parents of many very fine varieties. The following are a few of the best:—

Agnes Sorel.—Lilac with an exceedingly large blotch on each petal. Fine.

Ali Bey.—Creamy white, with an immense dark blotch in each petal. Extra fine.

Diamant.—White; the top petals margined with light purple; large light purple blotch. Very large and fine.

Eva.—Top petals creamy yellow, edged with blue, the lower petals almost covered with a very dark blotch. Fine.

Floribunda.—A distinctly-marked white ground flower, with a very large blotch. Fine.

Masaniella.—Upper petals lilac, lower petals yellow and lilac; an immense blotch on each of the three lower petals. Very fine.

Miracle.—White, with an immense solid blotch in each petal. Very fine.

Napoleon III.—Creamy yellow, striped with purple, with an exceedingly large dark blotch in each of the lower petals. Very striking. Extra fine.

Parpaillot.—Bright bronzy-reddish purple; yellow centre, with an immense black blotch in each of the lower petals. Fine, and very distinct.

Prince Imperial.—A remarkable flower. Top petals purple, striped with lilac; side petals cream, striped with purple, with dark blotch in each; lower petals nearly covered with a very large dark blotch. Extra fine.

PELARGONIUMS.

Angelina (Hoyle). Rich dark maroon top petals; lower petals nearly white, slightly tinted with rose; very fine. Prize var.

Apollo (Beck). Bright crimson scarlet; dark blotch on top petals; narrow margin of crimson; very free and good.

Autocrat (Foster). Light lower petals, veined with crimson; black blotch in top petals; white centre; very fine. Prize var.

Bacchus (Foster). Deep crimson rose; top petals dark maroon; very showy and good.

Bracelet (Turner). Spotted variety; lower petals rose, with maroon spot; large dark blotch on top petals; very constant.

Bridesmaid (Beck). Pure white; rosy-carmine blotch on top petals; very strong dwarf habit, and good.

Czar (Hoyle). Similar in character to *Autocrat*. Prize var.

Douglas (Hoyle). Deep rose lower petals; maroon top, shaded with crimson; very fine.

Hero (Turner). Salmon spotted prize variety.

King of Purples (Turner). Spotted variety; lower petals rosy purple, with maroon spot; large maroon blotch on top petals; very fine. Prize var.

Lord Clyde (Foster). Very bright scarlet, of fine form; dark maroon blotch on top petals; good substance, and very smooth.

Mammoth (Turner). Spotted variety; a very large flower; rose, with large dark maroon spots on all the petals, and of good form.

Rifleman (Turner). Spotted variety; bright crimson scarlet, with black spots; very showy and free.

Spark (Turner). A small, but vivid scarlet, much the brightest of its class. Prize var.

Sweep (Turner). Spotted variety; very dark black maroon, with margin of rosy crimson; very showy.

Unique (Foster). Crimson; dark maroon blotch on top petals; fiery margin; of good shape and habit.

PELARGONIUMS (FANCY).

Amy Sedgwick (Turner). Rich deep rose; white centre; very fine form and quality.

Arabella Goddard (Turner). Soft rose, white eye and edge; fine form. Prize var.

Lady Craven (Turner). Purplish rose, suffused with lilac; white edges; very smooth.

Louisa Pyne (Turner). Lower petals white, slightly spotted with lilac; top petals crimson purple; white margin.

Musjid (Turner). Dark maroon, edged with white; white centre; very smooth.

Omega (Turner). Light purple; lower petals suffused with white; white centre; very fine form.

Sarah Turner (Turner). Bright deep crimson, suffused with purple; clear white eye; white margin; very fine.

PINKS.

Charles Turner (Maclean). Dark purple; very full flower, and very fine.

Edith (Maclean). Reddish purple; average size flower.

Eleanor (Turner). Rose; large full flower; good quality, and very fine.

Empress (Maclean). A fine red, of good qualities.

Little Gem (Maclean). Red; full flower, good form, and fine.

Millie (Maclean). A very fine dark flower, of good quality.

Minnie (Turner). Red; a very large full flower.

Miss Glover (Turner). Fine purple; large, and good form.

ROSES.

Altesse Imperiale (H. P.) Crimson and blackish purple, shaded.

Anna Alexieff (H. P.) Rose color; of free, good habit.

Anna de Diesbach (H. P.) Clear rose color; very large and showy.

Comtesse de Chabrilland (H. P.) Pink; beautifully cupped, large, full and very sweet.

Edith de Murat (Bour.) Flesh color, changing to white, blooming in clusters. Distinct and good.

Empereur de Maroc (H. P.) Rich velvety maroon. Distinct and good.

Eugene Appert (H. P.) A fine deep velvety crimson; a great improvement on Victor Trouillard. Commended at the National Rose Show, 1859.—*Mr. Standish.*

Homer (T.) Rose centre, salmon; variable, large and good.

Lælia (H. P.) One of the finest of its color, delicate satin rose, and most beautifully shaped.

L' elegante (H. P.) Color cherry red, flowers in large panicles like a *multiflora.*

Lord Elgin (H. P.) Crimson and blackish purple, shaded; foliage and habit fine.

Madame Damaizin (T.) Salmon; large and full. A good, hardy, free blooming Rose.

Madame Falcot (T.) Apricot; something in the way of Saffrano, but of a deeper shade, and more double.

Madame William. A new Yellow Rose, appearing for the first time.—*Gard. Mon.*

Mdlle. Auguste (H. P.) Deep pink; flowers globular, large, and fine.

Perfection (Bour.) Rose colored, dwarf habit.

President (T.) Rose, shaded with salmon; large, and of good form. Hardy and sweet.

Reine Blanche. A new pure white Moss Rose, faultless in shape, and of vigorous habit.

Rosa Bonheur (H. P.) Red, striped with white.

VERBENAS.

Angelique (Edmonds). Large rich cerise carmine, with prominent white eye; good form and truss.

Aurora (Breeze). Deep, rich, rosy crimson, with a large square white eye, and fine truss.

Beauty Supreme (Elphinstone). Bright rose; yellow eye.

Belvidere (Edmonds). Very rich glowing crimson; of dwarf habit and free bloom, with conspicuous creamy eye; average form and truss.

Concordia (Breeze). Fine deep lilac, with white eye; of excellent habit, large truss, and good form.

Diana (Breeze). Fine large rosy carmine, with conspicuous white eye.

Dr. Sankey (Edmonds). Average truss; large and finely-formed pips; rosy puce; with a lemon-colored eye. First-class certificate, Horticultural Society.

Duc de Gramont (Breeze). Beautiful violet purple, with a distinct white eye.

Earl of Shaftesbury (Banks). White, with crimson-tinted centre; free, compact, and beautiful.

Edith (Edmonds). Rose-tinted lilac with violet-shaded pale eye; good form and size.

Fanny Stracey (Ives). A very bright scarlety crimson, with shaded dark eye; profuse bloomer, and very effective. Conspicuous above any other in its class, and admirably adapted for a large bed or group.

Fascination (Breeze). New mauve color; fine habit, large truss, and small centre eye.

Flixtoniensis (Elphinstone). Very bright purplish rose; lemon eye.

Garribaldi (Breeze). Pale claret, with light eye; extra large truss, and fine form.

Gustavus (Edmonds). Rich violet rose, with large creamy eye; of close compact habit, free bloom, and good size.

Ida (Breeze). Delicate pink, with a yellow eye; beautiful.

Invincible (Breeze). Fine large light blue. An improvement on Blue Bonnet.

Lady Adair (Elphinstone). Salmon rose, with light eye.

Lady Middleton (Jeffries). Mauve color; very fragrant. An excellent bedder, and stands the weather well.

Merrie Monarch (Breeze). Very large, deep scarlet, with yellow eye; extra fine habit and truss.

Morning Star (Breeze). A clear and beautiful cerise rose, with round eye; good habit and form. An improvement on Evening Star.

Mrs. Moore (Edmonds). A very deep and red purple.

Ocean Pearl (Breeze). Extra large, fine purple, with very conspicuous white eye. An improvement on Leviathan.

Reine des Fleurs (Elphinstone). Light crimson; yellow eye.

Saladin (Breeze). Violet reddish purple; an improvement on Miss Breeze; large and good habit.

Thetis (Edmonds). A very showy blue purple, with a large, conspicuous white eye.

Undine (Breeze). Fine cerise rose, with white eye; good outline, and large truss.

NEW FRUITS.

APPLES.

BAKER. Described in the Maine Farmer as a very vigorous tree, spreading and an abundant bearer; fruit large, oblate, sometimes globular, approaching to conic; skin yellowish, mostly shaded with red, striped with crimson; stalk short and stout, inserted in a regular cavity of medium depth; calyx small and closed, set in a shallow basin; flesh yellowish, often tinged with crimson near the skin; very tender; middling juicy, with a sub-acid pleasant flavor. Sept. to Feb. and often keeps till April.—*Gard. Mon.*

CLAUDE. A new English variety, reported upon by the *British Pomological Society*, as worthy of extensive cultivation. Fruit oblate, generally irregular in form; greatest diameter, from apex to base, 2 1-2 inches; transversely, 3 inches; eye smooth, clean and wax-like; stalk medium length and thickness, deeply inserted; color greenish-yellow, irregularly flecked with minute specks of russet, rosy scarlet on sunny side, and semi-transparent; flesh firm and juicy; flavor rich and sugary. Said to keep till May.—*Gard. Mon.*

DUKE OF DEVONSHIRE. An English variety of recent introduction. Size medium; roundish ovate; skin of a uniform lemon-yellow color, with a dull red cheek, and veined with russet over the surface; eye large and open, set in a wide, deep basin; stalk short; flesh yellowish, crisp, and very juicy, rich and sugary with a fine aroma. In use from Feb. till May.

GRUVER'S EARLY. A Pennsylvania apple, originated in Springfield Township. Skin greenish-white on the sunny side, having a beautiful blush tint, and usually covered with deep rosy streaks; flesh white, fine grained, mealy, and of good flavor. August.—*Gard. Mon.*

HICKS. A Long Island variety. Fruit large, roundish-oblong, flattened on the crown; skin, when ripe, fine yellowish green, frequently striped with crimson on the sunny side; calyx coarse, in a wide plaited basin; stalk three-quarters of an inch long, not projecting above the fruit; flesh yellowish-white, coarse, sweet, mellow, and rather dry. Apparently an excellent market fruit.—*Gard. Mon.*

LODGEMORE NONPAREIL (*Clissold's Seedling*). Another English variety, of recent introduction. Reinette-shaped, medium size; skin of a deep golden-yellow color, flecked with minute grey dots, and with a blush of red on one side. Eye slightly closed, set in a narrow saucer-like depression; stalk 1-4 inch long, deeply inserted; flesh yellowish, firm, crisp, and juicy; rich and sugary, with a fine aroma. Keeps till the end of May and the beginning of June.

SCHELL. Originated in Hardy County, Virginia. Fruit large and beautiful, round, and a little feathered at the poles, of a bright yellow color; flesh fine gold color, rich in flavor, slightly acid, and very juicy; has no superior, as an eating apple, when fully ripe. Season, middle or latter part of August.—*Gard. Mon.*

SUSAN'S SPICE. Said to be a seedling of Franklin County, Pennsylvania. Fruit medium, compressed; stalk about half an inch long, in a deep cavity; skin thin, smooth and glossy, light crimson on one side, deep crimson on the other, flecked with fawn colored dots on the sunny side; calyx small, set in a regular, smooth, and shallow basin; flesh yellowish-white, stained occasionally with red, mellow and juicy, with a very pleasant aromatic flavor. Season, last of October. Pronounced one of the handsomest, and best apples of its season. —*Gard. Mon.*

GRAPES.

BLACK TENNESSEE. Described by Mr. Nelson in the *American Cotton Planter*, as a fine sweet grape; bunches large, long, and shouldered; berries medium size, compact; not black—as the name indicates—but brownish crimson, covered with a blue bloom, and very juicy.—*Gard. Mon.*

BUCKLAND SWEET WATER. A new foreign variety. A first-rate white Grape, producing bunches as large as a well-grown Black Hamburgh. The berries, when highly ripened, are of a fine amber color, and richly flavored. May be ripened in a cool vinery.—*Ivery & Son.*

CHASELAS NAPOLEON. A large and beautiful white Grape, of fair promise.

CHASSELAS VIBERT. Bunches long, with large berries, like the B. Sweet Water; round, yellowish-white, and transparent. An excellent out-door Grape in England, ripening against walls, and also well adapted for a cool vinery.—*Rivers.*

CLARA. This valuable seedling of Mr. P. Raabe, Philadelphia, is thus described by Dr. Brinklé: Bunch medium, berry medium; round, green, faintly tinged with salmon when exposed to the sun; flesh tender, juicy; flavor rich sweet and delicious; quality best. Period of maturity September.—*Hort.*

EARLY GREEN MADEIRA. Bunches good size, cylindrical, slightly compact; berries oval, medium sized; skin of a green color, which it retains till maturity, when it becomes a little clearer, though still retaining the green tinge; flesh rich and sugary in flavor. One of the earliest grapes known; ripens in a cool vinery from the first to middle of August.—*Cottage Gard.*

GOLDEN HAMBURGH. (*Stockwood Park Golden Hamburgh. Busby's Golden Hamburgh.*) Bunches large, branching and heavily shouldered; berries large, roundish-oval, highly-colored, pale amber, and of delicious flavor. Ripens well in a cool vinery.

KEMSEY ALICANTE. A very late foreign grape. Bunches long, not shouldered, rather thickly set; berries very large; skin thick, tough, of a deep blue color at the apex, when ripe, but towards the stalk greenish-yellow, mottled with purple; flesh firm, sweet, and with a fine aroma when fully ripe.—*Cottage Gard.*

KING. A new native white grape, probably a seedling from the Clinton; originated in Rochester, N. Y. Bunches medium, shouldered, compact; berries medium, round, sweet, free from pulp, good flavor. Season middle of September.—*Hort.*

LADY DOWNE'S SEEDLING. A valuable late foreign variety. Bunches shouldered, eight or 10 inches long, and rather loose; berries nearly round, above the medium size; skin rather thick, tough, and membraneous, reddish-purple at first, but quite black when fully matured, and covered with a delicate bloom; flesh white, firm, sweet, and richly flavored. —*Cottage Gard.*

MUSCAT HAMBURG. Another excellent foreign grape, of rich flavor, with a high Muscat aroma, and may be ripened in the same heat as that generally given to the Black Hamburg; berries oblong, and of a jet black color.—*Henderson.*

TAYLOR. From Mr. Samuel Miller, a small white variety of the Clinton section apparently, with thin skin, little pulp and very large seeds; flavor quite pleasant, but hardly equal to the Rebecca. It is a true native, having been found in a wood, on the Cumberland Mountains.—*Gard. Mon.*

TRENTHAM BLACK (*Muscat Noir d'Espagne*). This is a very excellent foreign Grape, ripening with the Black Hamburg, but keeps plump long after that variety shrivels. Said to resist a powerful sun better than any other variety. It has not a Muscat flavor, as the synonyme seems to indicate.

UNION VILLAGE. This variety has not fruited here (Newburgh); it is very vigorous in its growth, but so far as tested, has not proved as hardy as the other native grapes, but may become so when fully established. The fruit is larger than the Isabella, and a little earlier.—*Mr. C. Downing in Hort.*

YORK MADEIRA. A hardy Grape, ripening its wood well, growth moderately vigorous, very productive; bunch and berry of medium size, very compact, of pretty good quality, ripening a few days before Isabella. *Hyde's Eliza, Canby's August,* and *Baldwin's Early,* as I have received it, so strongly resemble the above as to lead to the opinion that they are identical with it.—*Mr. C. Downing in Hort.*

PEARS.

Those marked *, are "extracts from Charles Baltet's descriptions of new or but little known sorts which may prove useful," being "(condensed from *Les Bonnes Poires, leur description abregee, et la maniere de les cultiver.* Troyes, 1859.)"

BEURRE D'ALBERT*. Tree moderately vigorous, and productive. Fruit very large, pyriform; skin Isabella red on a green ground. Flesh fine, buttery, and melting; apt to lose its flavor if the fruit is not gathered before it parts readily from the tree. Does not succeed well on Quince. Sept.—*Gard. Chron.*

BEURRE BACHELIER*. Fruit large, oblong-oval; skin green, becoming brighter towards maturity. Flesh fine, melting, with an agreeable juice. Oct.—Nov.—*Gard. Chron.*

BEURRE DUMORTIER*. Fruit middle-sized, roundish-oval; skin greenish, becoming yellow towards its period of maturity. Flesh fine, melting, delicious, not apt to give way at the core. Tree moderately vigorous and productive. Sept.—Oct. —*Gard. Chron.*

BEURRE DE LUCON*. Tree moderately vigorous and very productive; does not do well on Quince. Fruit rather large, with a somewhat irregular outline, short ovate; at full maturity, the skin which is gritty beneath, peels off with the hand. Flesh tolerably fine, melting, with an agreeable aroma; sometimes gritty near the core. Dec.—Jan.—*Gard Chron.*

BEURRE MILLET*. Fruit small or medium, short, slightly ribbed towards the eye; skin brown, strongly marbled with russet-red. Flesh fine, juicy, excellent. Tree moderately vigorous on Pear, but weakly on Quince. Dec.—Jan.—*Gard. Chron.*

BEURRE NANTAIS. Skin clear, golden yellow, above medium, stalk, large and stout, inserted by a lip with little cavity, calyx rather large, open; flesh melting, juicy, of first quality. End of September.—*Gard. Mon.*

BEURRE SIX*. Fruit large, pyramidal; skin of a uniform green, sprinkled with olive-green dots. Flesh very fine and close grained, sea-green under the skin, melting, very juicy and buttery. Tree of moderate vigor; not well suited to the Quince. Nov.—Dec.—*Gard. Chron.*

COMTE DE FLANDRES. A large and very handsome Pear; color, when fully ripe, a fine red and yellow; though not so melting as some, it is very juicy and good; hardy, and an abundant bearer. The leaves, when young, are of a silvery white. Dec.—*Gard. Chron.*

CONSEILLER DE LA COUR, or *Marechal de la Cour.* A large and good dessert Pear, ripening in October. Van Mons, the raiser of it, had the highest opinion of its excellence. Varies in quality; some seasons it is of the most exquisite flavor. A good bearer and very luxuriant on Quince.—*Gard. Chron.*

DOYENNE DU CORNICE*. Fruit very large, nearly round; skin pale yellow, slightly tinged with carmine, and spotted with light brown. Flesh fine, tender, and melting, with an abundance of rich sugary juice. Tree vigorous, and bears abundantly on Quince. Nov.—*Gard. Chron.*

GENERAL TOTLEBEN. Size large, about four inches long, and three in diameter; shape pyriform; skin yellow, traced and spotted with brown; flesh rose-color, very melting, perfumed, slightly gritty; juice abundant, and very sugary. Tree of medium vigor, productive; growth pyramidal, wood brownish red; buds short; leaves ovate-lanceolate, finely serrated. A very handsome Pear. Dec.—Feb.—*Gard. Mon.*

MONSEIGNEUR DES HONS*. Fruit below medium size, pyriform, greenish-yellow, marbled with red, speckled with nut brown. Flesh tolerably fine grained, melting juicy, with a musky

Rousselet flavor; ripens in succession. The tree is of fine habit, vigorous, and productive. A quite new, and good sort raised at Troyes, by M. Gibey-Lorne. Aug.—*Gard. Chron.*

MORGAN. Originated in New Hanover Co., N. C. Fruit large, to very large, oblate varying to obtuse-pyriform; stem slender, and about one inch in length; basin abrupt and deep; calyx small and destitute of segments; color greenish-yellow, flecked with grey russet specks; flavor sweet, juicy, slightly vinous; flesh white, and a little gritty. Quality very good, nearly best. Will not succeed on Quince. Oct.—*J. Van Buren in Hort.*

NABOURS. Fruit medium to large, elongated turbinate; stem from one and a half to two inches in length; basin shallow; calyx of medium size; color greenish yellow, thickly covered with grey russet specks and tracery; flavor buttery, juicy, and sweet; flesh white. Quality nearly best. Sept.—*J. Van Buren in Hort.*

POIRE D'AVRIL. A large handsome stewing Pear, which in March and April becomes fit for the dessert; its flesh is then crisp but tender and very juicy. It is hardy, and bears well as a standard, but succeeds better on Quince, and commences bearing very young.—*Gard. Chron.*

RAVENSWOOD (Erhard's). Fruit small to medium, obtuse pyramidal, tending to obovate; stem thick, very short; skin yellowish green, covered with numerous small brown specks; flesh slightly aromatic, with a rich vinous flavor. July—Aug.—*Hort., & Gard. Mon.*

RAVU*. Fruit medium size, turbinate; skin pale-yellow, dotted with russet. Flesh fine, melting, sugary, remaining sound when ripe. Tree moderately vigorous and very productive. A new variety obtained by M. F. Gaillard at Brignais. Aug.—Sept.—*Gard. Chron.*

SEIGNEUR (Esperen)*. Fruit medium size, round; skin bright green changing to yellow, spotted with grey. Flesh fine, melting, and very sugary. One of the very best of Pears. Tree tolerably vigorous, very productive, bearing in clusters. Sept.—Oct.—*Gard. Chron.*

TAVERNIER DE BOULOGNE*. Fruit large, pyramidal, ventricose, stalk long and curved; skin thick, shining, green, sprinkled with ocellated green and red. Flesh coarse, crisp, juicy, and stewed in the simplest way is delicious. Keeps a whole year. This variety is either little known, or confused with the *Tarquin des Pyrenees.*

ACTION OF LIGHT ON THE RIPENING OF FRUITS.

According to the experiments of M. Niepce de St. Victor, if a solution of starch or dextrine be exposed for about a quarter of an hour (for a small quantity) to the action of solar light, the solution will be converted into grape sugar. This tends to explain the ripening of fruits and many other natural phenomena. M. Niepce believes that if bunches of grapes, at the beginning of autumn were inclosed in paper bags steeped in a solution of tartaric acid, the ripening would be accelerated, and the quantity of sugar in the fruit greatly increased, tartaric acid, like nitrate of uranium, having the property of absorbing and retaining the light in its condition of chemical efficacy.

PEAS.

The following, which we extract from the "Gardner's Chronicle," will be interesting to many of our Seedsmen, and others, as a matter of reference, comparison, &c.; being "the results of a series of examinations undertaken by a sub-committee of the Fruit and Vegetable Committee of the Horticultural Society, for the purpose of ascertaining the correct names and the quality of the varieties of Peas; a considerable collection of kinds obtained from various seedsmen, having been grown under the same circumstances for this purpose, in the Garden of the Society at Chiswick in the past summer."

CLASS 1.—Seeds smooth or indented on the Surface. § 1. Seeds White.

DICKSON'S FAVORITE (Nutting & Son). Syn.: *Dickson's Early Favorite*, *Torwoodlee* (Lawson & Son). Sown, March 24; in flower, June 11; fit for use, June 28. Height, 5 feet. Plant of vigorous growth and very prolific. Pods, 10 to 12 on a stem, long, round when fully grown, curved, hooked at the extremity, but not so much so as in the Auvergne, to which in many respects it bears much resemblance. The pods are remarkably well filled, containing from 8 to 10 Peas of medium size, round, and very white. It is highly deserving of cultivation as a second early Pea.

DILLISTONE'S FIRST EARLY (Hurst & M'Mullen). Sown, March 24; in flower, June 1; fit for use, June 16. Height, about 3 feet; habit slender. Pods, 6 to 7 on a stem, straight, cylindrical, scarcely so large as in Sangster's No. 1, containing 5 to 6 small Peas. It was considered to be the same as *Prince Albert*, or *Early Kent*.

EARLY DWARF BRANCHING MARROW (Paul & Son). Sown, March 24; in flower, June 11; fit for use, June 30. Height, 2 feet. Pods, about 6 on a stem, nearly straight, flattish, containing 7 to 8 Peas of good size and quality.

EARLY PEA A (Wrench). Sown, March 24; in flower, June 1; fit for use, June 18. Height, 4 feet. The Committee decided that this was the same as the *Early Emperor*. The dried Peas of this and the preceding sorts are very similar.

EXCELSIOR MARROW (Carter & Co.; Fraser, Richardson, & Goad). Syn.: *Knight's Excelsior* (Sutton & Sons, Nutting & Son). Sown, March 24; in flower, June 11; fit for use, June 28. Height, 5 feet. A strong grower, with broad foliage. Pods, 10 to 12 on a stem, large, round, slightly curved, containing 8 to 9 middle-sized Peas of good quality. An excellent variety.

HARRISON'S PERFECTION (Carter & Co.) Sown, March 24; in flower, June 6; fit for use, June 30. Stems 3 feet, robust. Pods, 14 to 15 on a stem, small, straight, containing 5 Peas of good size and quality. The only defect is, that the pods do not fill well. When growing this cannot be distinguished from *Harrison's Glory*; but in the mature state the seeds of the former are smooth and white, those of the latter indented, and of an olive colour.

PARADISE MARROW. (Nutting & Son). Syn.: *Early Paradise Marrow* (Minier & Co.) Sown, March 24; in flower, June 11; fit for use, June 30. A strong grower, 5 feet high. Pods, 10 to 12 on a stem, large, round, slightly curved, containing 8 to 9 middle-sized Peas. Very similar to the Excelsior Marrow, but is scarcely so early.

RINGWOOD MARROW (Nutting & Son). Sown, March 24; in flower, June 6; fit for use, June 25. Height, 4 feet. Pods, about 7 on a stem, nearly straight, well filled, containing about 6 large Peas.

SANGSTER'S No. I. (Lee). Syn.: *Daniel O'Rourke* (Lee), *Dunnett's First Early* (Carter & Co., Sutton & Sons, Minier & Co.), *Carter's Earliest* (Carter & Co.), *Veitch's First Early* (Veitch & Son, Exeter), *Early Pea B* (Wrench), *Early Pea C* (Wrench). The above were all sown March 24; they came in flower June 1; and were fit for use June 16. Height, 3 1-2 to 4 feet. Pods, averaging 6 to 8 on a stem, short, straight, round when full, containing 5 to 6 Peas. The best very early Pea.

TOM THUMB (Paul & Son). Sown, March 24; in flower, June 4; fit for use, June 20. Height, 1 foot. Pods, 5 to 6 on a stem, short, a little flattened, containing 5 to 6 Peas, which are rather larger than those of the Early Frame. From its dwarf habit, it is very eligible for forcing in frames. This is the *Pois Nain Hatif* extra of the French.

§ 2. Seeds Blue, Green, or Light Olive-colored.

BATT'S WONDER (Batt, Rutley, & Silverlock). Sown, March 24; in flower, June 18; fit for use, July 5. Height, 3 feet, and of robust growth; foliage dark green. Pods, 10 to 12 on a stem, narrow, nearly straight, but exceedingly well filled, containing 7 to 9 Peas of medium size, which become small, smooth, and bluish-green when dry. This variety withstands drought well, and the pods will hang long before the Peas get too old for use. It is an excellent Pea for a second crop.

BECK'S PRIZETAKER (Carter & Co.) Syn.: *Prizetaker* (Hurst & McMullen, Nutting & Son); *Prizetaker Green Marrow* (Sutton & Sons; *Rising Sun* (Nutting & Son). Sown, March 24; in flower, June 11; fit for use, June 30. Height, 4 1-2 to 5 feet. Pods, 9 to 10 on a stem, roundish, curved or hooked near the end, well-filled, containing 8 to 9 middle-sized Peas, of a fine green colour when young, and mixed olive and white when dry. One of the best varieties for main crops.

BURBIDGE'S ECLIPSE (Nutting & Son). Sown, March 24; in flower, June 14; fit for use, June 30. Height, 18 inches. Pods, about 10 on stem, short, flat, and containing 5 to 6 large Peas, of good quality, bluish olive-green and slightly indented in the dried or ripened state.

DENYER'S PROLIFIC GREEN MARROW (Sutton & Sons). Sown, March 24; in flower, June 20; fit for use, July 11. Height, 6 to 7 feet. Pods 10 on a stem, straight, containing 6 to 8 Peas, of a fine green color, but not very sweet; they are mixed light-colored and white when dry, but mostly white, and they are also indented.

FLACK'S VICTORY (Nutting & Son). Sown, March 24; in flower, June 14; fit for use, June 30. Height, 2 feet. Pods, 10 on a stem, short, straight, rather flat, containing about 6 medium-sized Peas, mixed olive and white when dry, and also indented.

GARBUTT'S AMAZON (Flanagan & Son). Sown, March 24; in flower, June 14; fit for use, July 5. Height, 6 feet. Pods, 8 to 9 on a stem, slightly curved, roundish, well filled with 7 to 8 large Peas, which are mixed olive-colored and white when dry, and slightly indented.

HARRISON'S GLORY (Nutting & Son, Carter & Co.) Sown, March 24; in flower, June 6; fit for use, June 27. Height, 3 feet, of a bushy, robust habit of growth. Pods, about 16 on a stem, rather short, nearly straight, and flattish, containing 5 to 6 medium-sized Peas of good quality; light olive mixed with white when dry, and also slightly indented. A good variety, but, like Harrison's Perfection above noticed, it has the defect of the pods being frequently not well filled.

LEICESTER DEFIANCE (Minier & Co.)—Sown, March 24; in flower, June 11; fit for use, June 30. Height, 5 feet. Pods, 9 to 10 on a stem, round, slightly curved, containing 8 to 9 middle-sized Peas, mixed olive and white when dry. Very similar to *Beck's Prizetaker*.

NEW GREEN MARROW (Frazer, Richardson, & Goad). Sown, March 24; in flower, June 6; fit for use, June 27. Height, 5 feet. Pods, 10 to 12 on a stem, long, narrow, slightly curved, containing 7 to 8 large Peas, which are compressed from being much crowded. A very distinct sort, on account of its long pods, narrow in proportion to their length. In appearance and quality, however, it is not equal to *Beck's Prizetaker*.

STRADSETT MARROW (Flanagan & Son). Sown, March 24; in flower, June 14; fit for use, July 5. Height, 6 feet. Pods, 8 to 9 on a stem, straight, broad, and flattish, containing 7 to 8 large Peas, of a fine green color, but tasteless when cooked; their skins, moreover, are too thick. Such being the case, the variety cannot be recommended for cultivation. The seeds when dry are mostly light olive, very few being white and they are slightly indented.

SUTTON'S BERKSHIRE HERO (Sutton & Sons). Sown, March 24; in flower, June 21; fit for use, July 11. Height, 8 feet, of strong growth. Pods, 12 on a stem, large, long, very slightly curved, well filled, with 7 to 8 large Peas, which are greyish-olive, and some yellowish-white when dry. The dry seeds are large compared with most others in the same state, and compressed as well as slightly indented.

CLASS II. Seeds Compressed and wrinkled on the Surface.

§ 1. Seeds White.

ALLIANCE (Carter & Co.) Syn.: *Eugenie* (Nutting & Co., Lee). Sown, March 24; in flower, June 3; fit for use, June 24. Height, about 3 feet, and of strong robust growth. Pods, 10 on a stem, nearly straight, flattish, not very well filled; Peas, 5 to 6, large and sugary.

CARTER'S VICTORIA (Carter & Co.) Syn.: *Carter's Eclipse* (Carter & Co.), *Thorne's Royal Britain* (Hurst & McMullen), *Buckley's Gen. Wyndham* (Hurst & McMullen). Sown, March 24; in flower, June 20; fit for use, July 8. Height, 6 to 7 feet. Pods, 10 to 12 on a stem, very large, very slightly curved, containing 7 to 9 large Peas, which are sweet and excellent. It continues to bear late; and the pods and Peas are larger than those of Knight's tall white Marrow. This is one of the best late tall Peas.

LYNN'S PROLIFIC WRINKLED (Nutting & Son). Sown, March 24; in flower, June 23; fit for use, July 11. Height, 3 1-2 feet. Pods, 10 to 12 on a stem, small, cylindrical, nearly straight, very closely packed with 6 to 8 Peas, which are rather small and much crowded, their adjoining sides being quite flat, so that the Peas in their green state have the form of short sections of a cylinder, and when dry, the ends become depressed. The hilum is marked with a small black speck; as in the worthless Egg Pea, sometimes called Black-eyed Susan.

§ 2. Seeds Blue, Green, or Light Olive-colored.

CLIMAX (Carter & Co., Lee). Syn.: *Napoleon* (Nutting & Son). Sown, March 24; in flower, June 4; fit for use, June 25. Height, 3 1-2 feet, somewhat robust in growth. Pods, 10 to 13 on a stem, straight, flat, not very well filled, containing only 5 to 6 Peas, which are however large and sugary. Dry seeds light-olive, few being nearly white. Very similar to *Alliance*, the only difference being in the color of the seeds. Both are of excellent quality as early sugary Marrows, but they are not prolific.

COMPETITOR (Charlwood & Cummins). Sown, March 24; in flower, June 14; fit for use, July 4. Height, 5 feet. Pods, 8 to 10 on a stem, large, straight, cylindrical, containing only 5 to 6 Peas, but these are very large; dry seeds of a nearly uniform olive color.

FAIRHEAD'S EXCELSIOR (Sutton & Sons). Sown, March 24; in flower, June 6; fit for use, June 27. Height, 3 1-2 feet. Pods, 12 on a stem, small, straight, not very well filled, containing 5 to 6 medium-sized Peas, of an olive color when dry.

LORD RAGLAN (Carter & Co.) Sown, March 24; in flower, June 6; fit for use, July 4. Height, 3 1-2 feet. Pods, 10 to 12 on a stem, small, nearly straight, and not very well filled, containing 5 to 7 Peas, of a fine green color, but not so sugary as those of Veitch's Perfection and Climax. The dry seeds are light olive.

MONARCH (Nutting & Son). Sown, March 24; in flower, June 18; fit for use, July 5. Height, 6 feet. Pods, 8 to 10 on a stem, large, flat, straight, but containing only 6 large Peas of a fine green color and sweet; dried seeds light olive.

NE PLUS ULTRA (Lee, Nutting & Son). Syn.: *Jay's Conqueror* (Nutting & Son), *Paynes Conqueror* (Hurst & McMullen). Sown, March 24; in flower, June 18; fit for use, July 5. Height, 7 feet. Pods, 10 to 12 on a stem, large, slightly

curved, well filled, containing 7 to 9 large Peas of a fine green color, sugary and excellent; the dried seeds dark olive, and some white. This is one of the best tall Marrows.

TALL GREEN MAMMOTH (Nutting & Son). Sown, March 24; in flower, June 18; fit for use, July 5. Height, 8 feet. Pods, 12 to 14 on a stem, flattish, nearly straight, not well filled, containing only 4 to 6 Peas, light olive and white when dry.

VEITCH'S PERFECTION (Veitch & Son, Exeter; Veitch, Chelsea). Sown, March 24; in flower, June 14; fit for use, July 8. Height, 3 1-2 to 4 feet, of strong robust growth, somewhat branched. Pods, 10 to 12 on a stem, large, flat, straight, containing 6 to 8 large Peas, which are very sugary and excellent. The dried seeds are large, of a light olive-green color, some being nearly white. It is one of the very best Peas for main or late crops.—*Hort. Society's Proceedings.*

The following table exhibits the proportion of nutritious matter and water, contained in 100 lbs. of each of the substances named:—

Substances.	Lbs. *Nut. Mat.*	Lbs. *Water.*	*Substances.*	Lbs. *Nut. Mat.*	Lbs. *Water*
Apples,	16	84	Melons,	3	97
Apricots,	26	74	Oatmeal,	75	25
Barley Meal,	88	12	Peaches,	20	80
Beans (White),	95	5	Pears,	16	84
Beets,	15	85	Plums,	29	71
Cabbage,	7¼	92½	Potatoes,	22½	77½
Carrots,	10	90	Rice,	86	14
Cherries,	25	75	Rye Flour,	79	21
Corn Meal,	91	9	Strawberries,	10	90
Cucumbers,	2½	97½	Turnips,	4½	95½
Grapes,	27	73	Wheat Flour,	90	10

LIST OF AGRICULTURAL AND HORTICULTURAL PATENTS, ISSUED FROM THE U. S. PATENT OFFICE, DURING THE YEAR 1859.

Apple Grinding Machines.

Clark, R. P., Johnstown, N.Y.
Dean, A., Jerusalem, N. Y.

Apple Paring, Coring, and Slicing.

Armfield, J.I., Jamestown, N.C.
Ledbetter, A.F. Westminst'r, N.C

Bee Hives.

Aiken, G. C., Nashua, N. H.
Bartholomew, E., Cleveland, Ohio
Clark, G.H., E. Washington, N.H.
Dawes, J.G., San Francisco, Cal.
Gushee, H., " "
Harbison, J.S., Sacramento, "
Jacobs, J., Yellow Springs, Ohio
Leedy, J. K., Woodstock, Va.
Palmer, J.W., Port Republic, Va.
Torrey, R. S., Bangor, Me.
Underhill, T.S., St. Johnsville, NY
Walker, S.H., Somerville, Tenn.
West, W. L. Elmira, N.Y.

Cabbage Cutter.

Elias, G.G., Lancaster, Pa.

Cattle Pumps.

Augspurger, J., Trenton, Ohio
Gerrad, H., Sparta, Ill.
Irwin, J. H., Carlenville, Ill.
Nichols, W., Lima, Ohio

Cheese Cutters.

Pollock, T.H., Greenville, Conn.
Stevens, DeWitt, Newark, N.J.

Cheese Presses.

Cope, Sam'l, Enterprise, Ill.
Emery, A.H., Mexico, N.Y.
Leech, Wm., Clarkson, N.Y.

Cheese Vats.

Sage, O., Wellington, Ohio
Wilkins, C.M., Madison, Ohio

Cherry Stoning Machine

Custer, E. C., Evansburgh, Pa.

Churns.

Austin, A., Altona, Ill.
Bohrer, H., Strasburgh, Pa.
Campbell, S.N., Elgin, Ill.
Campbell, W., Waterloo, Pa.
Closs, Jacob, Decatur, Ind.
Clow, P. L., Cohoes, N.Y.
Cornell, A. L., New York City
Devlan, P. S., Reading, Pa.
Dorsey, E. L., Greenwood, Ind.
Fiester, J. U., Winchester, O.
Gilpatrick, G.L., Saco, Me.
Gissinger, S., Alleghany, Pa.
Guthrie, A., Chicago, Ill.
Hall, W. S., Quincey, Mass.
Harsha, M. S., Sycamore, Ill.
Hassler, M.B., Columbia City, Ind.
Hopkins, G.P., Cabot, Vt.
Jebb, T. A. Buffalo, N.Y.
Kelly, Wm., Hastings, Mich.
Lake, L., Middlebury, Pa.
Langdon, S. S., Cleveland, Ohio
Lapham, R., New York City
Leharge, J.J., Reading, Pa.
McClintock, W.H., Frankfort, O.
Merrill, J. O., Chichester, N.H.
Mitchell, J., Gosport, N.Y.
Parker, J.R., Sing-Sing, N. Y.
Patterson, A., Birmingham, Pa.
Pratt, E. L., Philadelphia, Pa.
Sperry, A. L., Auburn, Ind.
Sprinkle, E.N., Marion, Va.
Stoddard, O., Busti, N. Y.
Stubbs, J., Dublin, Ind.
Taylor, J., Rushville, Ill.
Westbrook, L., New York City.
Wicks, L. J., Racine, Wisc.

Cider Mills.

Hoffman, A.D., Belleville, Mich.
Ritter, C., Reading, Pa.
Rosencraus, J., Avoca, N. Y.

Clover Hullers.

Birdsell, S.H., W. Henrietta, N.Y.
Eames, N., Hanover, Pa.
Overocker, A., McHenry, Ill.
Reif, C., Hartleton, Pa.

Composition

For destroying Insects injurious to Fruit Trees.

Sheldon, P.B., Prattsburgh, N.Y.

Corn and Cob Mills.

Coursey, T. B., Frederica, Del.
De Train, J., Philadelphia, Pa.
Marston, J.R., New York City.
Sailor, Wm., Philadelphia, Pa.
Shinn, S. B., " "
Taylor, J. W., " "

Corn Crib.

Furbee, A. B., Dresden, Ohio

Corn Huskers.

Clapp, J.C., Seneca Falls, N.Y.
Davis, A.R., E. Cambridge, Mass.
Gragg, M.H., So. Boston, "
Gragg, S.N., Sheburne Falls, "
Naeher, Jacob, N. Orange, N.J.
Rowe, W.N., Sharpsburgh, Md.
Shaw, G.F., Woburn, Mass.
Smith, D. C., Tecumseh, Mich.

Corn Planters.

Adams, J. C., Greensburg, Ind.
Allen, E. C., Le Roy, N.Y.
Bingham, L. F., Chicago, Ill.
Brinkerhoff, A.W., Upper Sandusky, Ohio.
Campbell, Alex., Harrison, Ohio
Coonley, J.P., Farmington, Mich.
Elliott, S., Washington, Ind.
Freylinghousen & Heilman, Johnstown, Pa.
Gilbert, R. B., Sutherland Springs, Tex.

Corn Planters—*Cont'd.*

Hartwell, S. E., New York City
Haynes, J., Cameron, Ill.
Hoag, J. L., Geneva, Ill.
Hughes, J., Cambridge, Md.
King, W. H., Charleston, Ill.
Kirlin, A., New Boston, Ill.
Lees, Wm., Germantown, Ohio
McCune, O.C., Darby Creek, "
Mitchell, J. G., Collington, Md.
Mitchell, M., Alton, Ill.
Moran, O. P., Hainesville, Mo.
Morrison, Wm., Carlisle, Pa.
Peel, L. C., Webster Co., Geo.
Plater, P., Moore's Hill, Ind.
Ropp, C., McLean Co., Ind.
Thompson, A.G. & A.J., Belleville, O.
Udell, C. G., Morris, Ill.
Varmer, R. M., Oxford, Miss.
West, J. W., Hillsboro, Ohio.
Whitaker, C., Davenport, Iowa.
Wiley, H., Frankfort, O.

Corn Shellers.

Bomberger, M., Hummelstown, Pa.
Bridendolph, B., Clear Spring, Md.
Burr, N., Batavia, Ill.
Carter, C.W., Westville, Ind.
Hovey, W. M., Springfield, Mass.
Johnston, J. J., Alleghany, Pa.
Siddall, A., Ransom, Mich.
Smith, H. E., Philadelphia, Pa.
Tolhurst, G.W., Liverpool, Ohio
Vant, A. B., Milford, Mass.
Wells, Wm., Boston, Mass.

Cotton Cultivators.

Beard, G.W., Canton, Miss.
Cannady, C., Indianapolis, Ind.
Hall, J. M., Warrentown, Geo.
King, J. R., Raleigh, Tenn.
Monaghan, P., Camak, Geo.
Rivers, W.J., Sumter District, S.C

Cotton Scraper.

Henderson,J.,Bluff Springs,Miss.

Cotton Seed Huller.

Lowber, C. A., Medina, N.Y.

Cow-milking Machines.

Kingman, J.W., Dover, N.H.
Lowe, S. W., Philadelphia,Pa.

Cultivators.

Alden, M., Auburn, N. Y.
Batson, J.W. & L., Clarksville, [Md.
Cunningham, J., Marshall, Mo.
Dawson, C.H., Jacksonville, Ill.
Dennis, O. H., Altona, Ill.
Doss, W.C., Lavacca,Tex.
Duane, J. B., Schenectady, N.Y.
Dundas, J., Little Rock, Ill.
Eastburn,C., Spencer Co., Ky.
Essington,G., Plainfield, Ill.
Field, B. F., Sheboygan Falls, [Wisc.
Frampton,J.H., Hopewell,Ohio.
Freeland, P.F., Newark, Ill.
Gilliard, H., Mount Hope,Wisc.
Heermans,T.,Mitchellville,Tenn
Johnson,W.D., Raleigh, N.C.
Keith, A.M., Kosciusko, Miss.
Kribs, P., Jefferson Furnace,Pa.
McQuiston, T., Morning Sun,O.
Markham, D.& A.S., Monmouth, [Ill.
Melton, R. M., Criglersville,Va.
Miller, E. & B., Rising Sun, Ind.
Morgan, B. S., Delhi, Iowa.
Mowry, S., Womelsdorf, Pa.
Packard, L., Galesburgh, Ill.
Palamountain,J.B.,Tarboro,N.C
Preston, A., Unionville, Ohio
Rogers, M. L., Spring, Pa.
Rue, J., Englishtown, N. J.
Seeley, Wm., Chilicothe, Ill.
Smalley, J., Bound Book, N. J.
Smith, A., Westfield, Ohio.
Stoddard,J.C., Worcester,Mass.
Thirlwell, J., Galesburgh, Ill.

Cultivators.

Tolhurst,G.W.,Liverpool, Ohio
Tracy, S. D., Vernon, N.Y.
Veal, F., Hallettsville, Tex.
Warren, A., Westport, Conn.
Wells, H., Walnut Grove, Ill.
Whitehall, N., Newtown, Ind.
Whiteside, J., Fuller's Corners, [Ind.
Whitney, J. M., Bolton, Mass.
Wilson, W. J., Franklin, Ind.
Young, J., Joliet, Ill.

Cultivator Teeth.

Ford, W. P., Concord, N.H.
Maynard, G., Ilion, N.Y.
Sanders, H., Utica, N. Y.

Ditching Machines.

Barcroft, J.W., Friendship,Va.
Crane, J. R., Warsaw, Mo.
Hoskins, J., Wilmington,Ohio
Inman, G. E., Buffalo, N. Y.
Provines, Wm., Columbia, Mo.

Draining Machines.

Backlin, M., Grafton, N. H.
Miller, A., Mount Pleasant,Iowa

Drain Tile laying Aparatus.

Briggs, B. B., Sharon, Ohio.

Fertilizers.

Blanchard, E., Greenfield Mills, [Md.
Bruce, D., Paspebiac, Can.
Hall, W. D., Hamden, Conn.
Harper, L., Riceville, N. J.
Mapes, J. J., Newark, N. J.
Stewart, D., Annapolis, Md.

Field Fences.

Beecher,T.G.,Beaver Dam,N.Y.
Cheney, S., Raintone, N.Y.
Curtis, D. S., Madison, Wisc.
Drown, J., Huron, N.Y.
Garside,T.B., Danville, Iowa.
Haines,J., W.Middleburgh,Ohio
Wentworth, J.L., Spread Eagle, [Pa.

Fruit Basket.

Cook, D., New Haven, Conn.

Fruit Packing Machine.

Law, R., Lockport, N. Y.

Gates (Self Opening and Closing.)

Ayers, J. A., Hartford, Conn.
Baker, G.W., Neponset, Ill.
Betts, F. B., Brownhelm, Ohio
Butler, J. H., Cohocton, N. Y.
Cole, B. R., Geneva, N. Y.
Curtis, A. J., Frankfort, Me.
Dorr, B. M., Kenawee, Ill.
Iske, A., Lancaster, Pa.
Lloyd, J. S., Philadelphia, Pa.
Warren, D., Gettysburgh, Pa.

Grain Binders.

Durkee, C. H., Hartford, Wisc.
Meyer, F., Naperville, Ill.
Osborn, J.D., Constantine, Mich.
Sherwood, A., Auburn, N. Y.

Grain Bin.

Badger, D. D., New York City.

Grain Cleaning Machines.

Treadwell, J.N., Redding, Conn.
Wagener, T. F., Trenton, N.J.
Wait, J., Watertown, N.Y.
Wallace, H., N. Sewickley, Pa.
Zimmerman, W., Quincy, Ill.

Grain Cradle.

Flanders, M.R., Parishville, N.Y.

Grain Drill.

Ford, J., Wabash, Ind.

Grain Gatherer.

Waggoner, W. M., Middletown, [Ind.

Grain Measurer.

Murray, D., Fairfield, Conn.

Grain Separators.

Ankney, P. J., New Lexington, [Ohio
Benner, J., Alleghany, Pa.
Booth, J.L., Cuyahoga Falls, Ohio
Crist, J. B., Evansville, Ind.

Grain Separators—*Cont'd.*

Griswold, P., Hudson, Mich.
May, F. J., Beverley, N.J.
Moffit, J. R., Piqua, Ohio.
Montgomery, H., Silver Creek, [N.Y.
Nash, J., Jamesville, Wisc.
Potter, A., Williamson, N.Y.
Siebold, J., New Berlin, Pa.
Spencer, D., Cortlandt, N.Y.
Swift, F., Hudson, Mich.
Vaughn, J., Magnolia, Ill.
Wagener, D.S., Penn Yan, N.Y.
Wilmington, W., Toledo, Ohio

Grain Shovel.

Rogers, D. B., Pittsburgh, Pa.

Grain Weighers.

Hunter, C. H., Shelbyville, Ind.
Stoner, J. B., Bennington, Ind.
Van Horne, J., Magnolia, Ill.

Grinding Mills.

Broughton, J., New York City
Brown, C.W., Boston, Mass.
Buckingham, C. P., Mount Ver- [non, Ohio.
Carl, J., Grenada, Miss.
Hemphill, F.M., Newport, Ky.
Hope, W.H., Washington, D.C.
Lyons, J. C., Auburn, N.Y.
Orvis, A., Niagara, N. Y.
Perry, P., Troy, N. Y.
Proseus, A., Philadelphia, Pa.
Russell, J., Troy, N. Y.
Sanford, G., Poughkeepsie, N.Y.
Sedgebeer, J., Cincinnati, O.
Selser, G., Philadelphia, Pa.
Todd, G., St. Louis, Mo.

Harrows

Barrett, O. D., Cleveland, Ohio
Buckles, R. W., Graysville, Ill.
Cook, G., Paris, Ill.
French, J. H., Syracuse, N. Y.
Gingrich, C.&J.K., Annville, Pa.
Goolman, W. P., Dublin, Ind.

Harrows—*Cont'd.*

Green, O. C., Dublin, Ind.
Hamsher, S. W., Decatur, Ill.
Herald, J., Trumansburg, N Y.
Hildrup, W.Y., Harrisburg, Pa.
Hogle, S. S., Cleveland, Ohio
House, M.W., " "
Howell, C., " "
Jerome, A.E., Monroeville, Ohio
Kilgore, M.C., Washington, Iowa
McLean, J. W., Lebanon, Ind.
Toleman, G. W., Augusta, Ky.
Wade, S. M., Andover, Ohio

Harvesters.

Ball, E., Canton, Ohio.
Beach, W., Baltimore, Md.
Bishop, L., Tilladega, Ala.
Brownlick, A.C., Buffalo, N.Y.
Brinkerhoff, C.R., Batavia, N.Y.
Burnham, J.P., Rockford, Ill.
Burrall, T. D., Geneva, N.Y.
Butler, T. B., Norwalk, Conn.
Butler, J., Buffalo, N. Y.
Carter, H., Green, N. Y.
Chamberlin, G. & W., Oberlin, [N. Y.
Chapman, J. L., Kinmundy, Ill.
Chenoweth, G.E., Baltimore, Md.
Clow, D., Janesville, Wisc.
Cogswell, W., Ottawa, Ill.
Colburn. L. H., Baltimore, Md.
Crumling, T., Hellam, Pa.
Currier, B. T., Bath, Me.
Custer, J. D., Morristown, Pa.
Dickinson, C. G., Poughkeepsie, [N.Y.
Dodge, T. H., Washington, D.C.
Duffield, J. A., McHenry, Ill.
Ebner, J., Lancaster, Pa.
Emery, H. L., Albany, N.Y.
Esterly, G., White Water, Wisc.
Falk, J. A., Altona, Ill.
Fitzhugh, B.G., Frederick, Md.
Garlinghouse, C. B., Allensville, [Ind.

Harvesters—*Cont'd.*

Gore, J., Brattleboro, Vt.
Griffin, J., Louisville, Ky.
Hardenbergh, J. E., Fultonville, [N.Y.
Hawkins, J. S., Greenfield, Ind.
Hubbard, M.G., Penn Yan, N.Y.
Hussey, O., Baltimore, Md.
Inskeep, A. S., Middleburg, Ohio
Keese, H. R., Bridport, Vt.
Ketchum, W.F., Buffalo, N.Y.
King, O. H., Salem, Ohio
Kinyon, D. P., Raritan, N.J.
Kirby, W. A., Buffalo, N.Y.
Kite, J. H., Conrad's Store, Va.
Kniffen, L.G., North Salem, N.Y.
Lindsay, S. A., Unionville, Md.
Little, J., Chambersburg, Pa.
Lord, G., Watertown, N.Y.
Luther, H. H., Warren, R. I.
McAleer, J., Chambersburg, Pa.
McGeorge, H. D., Morgantown, [Va.
Macpherson, J., Pennington, N.J.
Marcellus, H., Amsterdam, N.Y.
Mauck, R.C., Conrad's Store, Va.
Miller, L. & J., Canton, Ohio
Miller, W. R., " "
Moore, J. A., Louisville, Ky.
Morrison, W., Carlisle, Pa.
Newman, S V.R., Covington, N.Y
Otstot, J. D., Springfield, Ohio.
Persons, S., Panama, N.Y.
Purse, S. N., Ashley, Mo.
Ramsey, H.B., Indianapolis, Ind.
Rauch, D., Intercourse, Pa.
Ray, B. F., Baltimore, Md.
Ray, S., Alliance, Ohio
Reamer, J., Conrad's Store, Va.
Richardson, G.W., Grayville, Ill.
Russell, J. S. & H. R., New Mar- [ket, Md.
Sanford, D., Taylor, Ill.
Schnebly, W. & T., Hackensack, [N. J.

Harvesters—*Cont'd.*

Scoville, H. M., Syracuse, N.Y.
Smalley, J., Bound Brook, N.J.
Smith, J. D., Lancaster, Ohio.
Stetson, W. S., Baltimore, Md.
Stipher, A.G., Richmond, Ind.
Taylor, R. R., Reading, Pa.
Thomas, S., Burnett, Wisc.
Tyler, S.W., Greenwich, N. Y.
Warner, R., Brattleboro, Vt.
Webber, W. & J., Rockton, Ill.
Wemple, J.V.A., Chicago, Ill.
Whitehead, J., Manchester, Va.
Whitely, W.M.& A., Springfield, [O.
Willard, H., Vergennes, Vt.
Wilson, W. H., Denton, Md.
Windle, T., New Albany, Ind.
Wood, W.A., Hoosic Falls, N.Y.
Young, McC., Jr., Frederick, Md.
Zug, D., Shaefferstown, Pa.

Hay Making Machines.

Goff, T. J., Warren, R. I.
Stoddard, J.C., Worcester, Mass.

Hay Manger.

Packer, J., Philadelphia, Pa.

Hemp Brakes.

Bouton, J. K., Luray, Va.
Feagan, Z., Palmyra, Mo.
Hindman, J., Haynesville, Mo.
Mann, H. F., Laport, Ind.
Mansley, R., Philadelphia, Pa.
Rinehart, J.W., Lexington, Mo.
Stafford, S., Carrollton, Mo.
Vertrees, W.A., Winchester, Mo.

Hoes.

Adams, J. M., Canton, Mass.
Baker, H. H., New Market, N.J.
Boyd, S., Brooklyn, L. I.
Paterson, A., Birmingham, Pa.
Tuttle, E. C., Naugatuck, Conn.

Hop Frame.

Aylsworth, T. D., Ilion, N.Y.

Milk Can.

Denniston, E. R., Middletown [N.Y.

Milk Cooler.

Mansfield, J., Jefferson, Wisc.

Ox Yokes.

Foster, J. D., Montgomery, Ala.
Judson, H. P., Bethlehem, Conn.

Peach Cutting & Stoning Apparatus.

Kuhn, J. H., Boonville, Ark.

Peach Parer.

Hemans, M. E., Henderson, Tex.

Pitch Fork.

Herald, J., Trumansburgh, N.Y.

Plant Protector.

Mosher, E., Flushing, Mich

Plows.

Brooks, R. M., Greenville, Geo.
Bryan, C. M., Wright City, Mo.
Burdin, L. E., Paris, Ky.
Cook, J., Haynesville, Mo.
Cotton, G. D., Galesburgh, Ill.
Davidson, E., Batesville, Ark.
De Yampert, T. J., Shohola, Pa.
Dickson, A. A., Anderson, S.C.
Eldred, D., Monmouth, Ill.
Emery, G., Newfield, Me.
Gorham, J., Bairdstown, Geo.
Griffies, W.J., Marietta, Geo.
Hall, J. M., Warrenton, Geo.
Harris, J. P., Byhalia, Miss.
Holmes, W.C., Barnesville, Geo.
Hood, B. R., Clinton, N. C.,
Jones, W. T., Joliet, Ill.
Lee, E. D. & Z.W., Blakely, Geo.
Molthrup, J. C., Bucyrus, Ohio
Moore, E., Slabtown, S. C.
Nichols, W., Floyd Co., Geo.
O'Neil, W., Pine Level, Ala.
Peck, S. F., Pennfield, Geo.
Roney, G.W., Bailey's Mill, Fla.
Rulofson, J., Penn Yan, N. Y.

Plows—*Cont'd.*

Snyder, J. S., Lancaster, Ohio.
Townsend, J. T., Brenham, Tex.
Van Camp, E., Beadington, N.J.
Walker S., Kingston, Geo.
Whitney, J. M., Bolton, Mass.
Williams, S., Jr., Hume, N.Y.
Williams, W.B., Warrenton, N.C.
Wilson, W. H., Summerfield, O.
Yeager, W. F., Starkville, Miss.

Plows (Ditching).

Bartlett, O. S., Romulus, N.Y.
Watson, A., Walnut Run, Ohio.

Plows (Mole).

Avery, B. F., Louisville, Ky.
Baker, H. F., Centreville, Ind.
Bales, M., Big Plain, Ohio.
Bowers, A., Monmouth, Ill.
Carrington, J., Avoca, N. Y.
Case, J., Bloomington, Ill.
Crandall, C.W., Cameron, Ill.
Creamer, J., London, Ohio.
Elmer, A., Shabbona Grove, Ill.
Goolman, W. P., Dublin, Ind.
Hammond, A., Jacksonville, Ill.
Hinckley, F. E., Galesburgh, Ill.
Hobson, J., Stoub's Grove, Ill.
Hussey, R., Walnut Run, Ohio.
Jerome, H.R., Monroeville, Ohio.
Jones, S. F., St. Paul, Ind.
Lee, J., Galesburgh, Ill.
Miller, A., Mount Pleasant, Iowa
Morrison, J., De Witt, Ill.
Robbins, D.F., De Witt, Ill.
Rowland, H.W., Newport, Ohio
Whitcomb, G., Springfield, Ohio

Plows (Steam.)

Bassett, S. K., Galesburgh, Ill.
Fawkes, J.W., Christiana, Pa.
Hawkins, J., Wilkins, Pa.
McGaughey, A.E., Wastedo, Min.
McLean, J.W., Indianapolis, Ind.

Potatoe Diggers.

Allen, R. L., New York City.
Capron, A.S., Grass Lake, Mich.
Griswold, L. B., Penfield, N.Y.
Niven, R., Yates, N.Y.
Stoddard, J.C., Worcester, Mass.
Tiffany, G.F., Palmyra, Mich.

Potatoe Parer.

Coates, W. B., Philadelphia, Pa.

Potatoe Planter.

Stoddard, J.C., Worcester, Mass.

Pruning Knives.

Belcher, G.G., Worcester, Mass.
Goodall, F.P., Decring, N.H.

Rakes (Horse).

Bradley, M., Dundee, Ill.
Bridendolph, B., Clear Spring, [Md.
Brown, W.H., Middletown, N.Y.
Burget, J.C., Davenport Centre, [N.Y.
Crane, T., Fort Atkinson, Wisc.
Deming, L.S., Newington, Conn.
Geiger, E., Lancaster, Pa.
Hall, G. N., Mamakating, N.Y.
Harris, E., Princeton, Ill.
Hersh, H., Lancaster, Pa.
Kneeland, F.C., Hartford, Wisc.
Lebzetter, P., Lancaster, Pa.
Pier, O., Ludlow, Vt.
Pierce, G., Ercildown, Pa.
Reaser, M., Reading, Pa.
Reynolds, G. S., E. Bethel, Vt.
Steffe, T. J., Lancaster, Pa.
White, W.H., Garrettsville, N.Y.

Roller (Field).

Lindley, G., Chicago, Ill.

Seeding Machines.

Allen, J. P., Midville, Geo.
Anderson, C. F., Charlestown, [N. H.
Andrews, J., Clinton, Mass.

Seeding Machines—*Cont'd.*

Baker, J. C., Mechanicsburgh, [Ohio.
Baker, P. B., Wall Hill, Miss.
Baxter, E. O., Forreston, Ill.
Bean, J. C., Grayville, Ill.
Beauchamp, E.P., Preston, Geo.
Beckwith, J.F., S. Alabama, N.Y.
Bell, H., Clinton, Ill.
Benthall, J.C., Oakland, Tex.
Blessing, W., Jeffersonville, Ohio
Bouton, J., Macon City, Mo.
Boyer, M., Germantown, Ohio.
Brooks, R.M., Greenville, Geo.
Brown, Z. B., Granby, Conn.
Bryant, J., Brooklyn, L. I.
Bulgin, W. G., West Jersey, Ill.
Burrows, S., Lima, Wisc.
Carpenter, L.R., Lancaster. Ohio
Clark, W., Palmyra, Ill.
Collier, T.T., Lavernia, Tex.
Cramton, G., Marshall. Mich.
Crutcher, J. P., Silver Spring, [Tenn.
Davis, F. M., Footville, Wisc.
Dennis, O. H., Altona, Ill.
Duane, J. B., Schenectady, N.Y.
Eggleston, C.&D.E., Beloit, Wisc
Evans, G. M., Pittsburgh, Pa.
Fisher, D. S., Mauckport, Ind.
Foreman, D., Navarre, Ohio.
Garrett, C.C., Spring Hill, Ala.
Harrah, W.D., Davenport. Iowa.
Henry, S., Chenoa, Ill.
Hunter, S. R., Cortlandt, N.Y.
Huntley, J.W., Lane's Creek, [N. C.
Johnson, W. D., Raleigh, N.C.
Kesler, C., Columbus, Tex.
Klaus, A., Belleville, Ill.
Lancaster, L.L., Rocky Mount, [N. C.
Learned, C., Indianapolis, Ind.
Lee, J. H., Camanchee Iowa.

Seeding Machines—*Cont'd*

McKenney, E., Montgomery, Ohio
McKown, J., Geardstown, Va.
McMillan, J. B., Tipton, Ind.
Maize, J., Wooster, Ohio.
Markham, D., Monmouth, Ill.
Maurer, A., New Carlisle, Ind.
Melendy, O. H., Delhi, Iowa.
Mercer, J. T., Seneca, Ohio.
Merrill, A. N., Batavia, Ill.
Messenger, C., Warren, Ohio.
Morrell, Z. N., Cameron, Tex.
Murphy, W. G., Seguin, Tex.
Nichols, D., Onarga, Ill.
Penn, W. P., Belleville, Ill.
Prentiss, J.W., Pultney, N.Y.
Prindle, D. R., Bethany, N.Y.
Randall, S. G., New Braintree, [Mass.
Richardson, G.W., Grayville, Ill.
Rogers, T. B., Wethersfield, Conn.
Root, A. R., Keokuk, Iowa.
Seaman, J. F., Clyde, N. Y.
Short, T., Danville, Ill.
Simmons, A., Nova, Ill.
Simmons, M., Ira, Ill.
Sloan, H., Franklin, Ind.
Smith, D. M., Springfield, Vt.
Smith, P. M., Lavernia, Tex.
Stinson, E., Plainfield, Vt.
Stockstill, S.L., Medway, Ohio
Stuart, W. H., Millington, Md.
Tatlow, T.H., Jr., Palmyra, N.Y.
Tourtelett, M.L., Neshonoc, Wisc
Veal, F., Hallettsville, Tex.
Wasterbury, S. J., Altona, Ill.
Watt, G., Richmond, Va.
Wells, M. D., Morgantown, Va.
Worth, W. H., Canton, Mo.

Seed Planters (Cotton).

Baker, P. B., Wall Hill, Miss.
Beauchamp, E. P., Preston, Geo.
Brooks, R. M., Greenville, Geo.

Seed Planters (Cotton)—*Con.*
Collier, T. T., Lavernia, Tex.
Crutcher, J.P., Silver Spring, [Tenn.
Garrett, C.C., Spring Hill, Ala.
Huntley, J.W., Lane's Creek, N.C.
Kesler, C., Columbus, Tex.
Morrell, Z. A., Cameron, Tex.

Sheep Shearing Machine
Morgan, W.F., Rochester, N.Y.

Sifting Shovel.
Sabbaton, P. A., Albany, N.Y.

Smut Mills.
Barnhart, E., Shippensburg, Pa.
Benner, J., Alleghany, Pa.
Clark, E. M., Lancaster, Pa.
Frank, C., Cleveland, Ohio.
Noble, T.A., Akron, Ohio.
Shaw, D. P., Rochester, Ind.
Starbuck, G. H., Troy, N. Y.
Ward, R., Edinburgh, Ind.

Sowing Machines (Fertilizer).
Burrall, E. J., Geneva, N.Y.
Davis, C.B., Lawrenceburgh, Ten.
Leach, J. H., Oakville, Md.
Morrell, Z. N., Cameron, Tex.
Peeler, J., Tallahassee, Fla.
Tyler, L., Havana, N.Y.

Spading Machines.
Field, G. B, St. Louis, Mo.
Gedney, G.W.B., New York City

Straw Cutters.
Baker, E., Fredonia, N.Y.
Baker, W.H., Tamaqua, Pa.
Bean, J., Hudson, Mich.
Blink, A.F., Indianapolis, Ind.
Brown, A.D., Columbus, Geo.
Daniels, R., Woodstock, Vt.
Drake, J. B., Goshen, Ind.
Elliott, S., Richmond, Ind.
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Hickok, W.O., Harrisburgh, Pa.
Hinds, W., Little Falls, N.Y.
Hunt, F. B., Cincinnati, Ohio

Straw Cutters—*Cont'd.*
James, A. E., Decatur, Ill.
Lash, J. S., Carlisle, Pa.
Leavenworth, L., Trumansburgh, [N.Y.
Mumma, J. H., Harrisburgh, Pa.
Okey, P.B., Indianapolis, Ind.
Roushe, G., Lima, Ohio.
Schultze, C., Covington, Ky.
Smith, S. P., Crescent, N.Y.
Trumbull, H., Central College, [Ohio.

Stump Extractors.
Hall, E. B., Woodbury, N.J.
Harris, G.D., Fitchburg, Mass.
Hosmer, E., Bedford, Mass.
Kenny, G., Milford, N. H.
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Pate, C.B., Moore's Hill, Ind.
Wills, E., Augusta, Me.

Syringing Apparatus.
Bagniki, E., New York City.

Threshing Machines.
Ford, J. B., New Albany, Ind.
Moffitt, J. R., Piqua, Ohio.
Rollman, J., Sinking Springs, Pa.
Rollow, J.I., Fredericksburgh, [Va.
Siddall, J., Philadelphia, Pa.
Willbanks, D. A., Harmony [Grove, Geo.

Tree Girdling & Felling Machine.
Torrence, A.P., Oxford, Geo.

Vegetable Cutters.
Chapman, A.J., Scipio, N.Y.
Clary, J., Dayton, Ohio.
Davis, J., Muskegon, Mich.
Davol, W. C., Fall River, Mass.
Fraser, J., Rochester, N.Y.
Hoyt, B. C., Port Washington, [Wisc.
Parmelee, C., Wilmington, Vt.

LIST OF HORTICULTURAL & AGRICULTURAL JOURNALS.

COMPILED FROM THE "HORTICULTURIST" AND "GARDENER'S MONTHLY."

ALABAMA.

Alabama Planter, Mobile.

American Cotton Planter, Montgomery ; N. B. Cloud, Ed. and Pub.; monthly, 32 pages octavo. $1 per year. Commenced in 1847.

CALIFORNIA.

California Culturist, San Francisco ; Wadsworth, Ed. ; Wadsworth & Terrell, Pubs. Monthly, 48 pages. $5. 1858.

California Farmer, San Francisco ; Col. Warren, Ed. and Pub. Weekly, 8 pages quarto. $5. 1850.

CANADA.

Canadian Agriculturist, and Journal and Transactions of the Board of Agriculture of Upper Canada, Toronto. Monthly, 48 pages octavo. 50 cents. Published by the Board of Agriculture, and edited by their Secretary.

Farmer's Journal, and Transactions of the Board of Agriculture of Lower Canada, Montreal ; in French and English ; James Anderson, English Ed. ; J. Perrault, French Ed. ; De Montigny & Co., Pubs. Monthly, 48 pages octavo. $1. 1849.

CONNECTICUT.

The Homestead, Hartford ; William Clift, T. S. Gold, H. A. Dyer and M. C. Weld, Eds. G. D. Rand, Pub. 16 pages quarto, weekly. $2. 1856.

GEORGIA.

South Countryman, Marietta ; C. W. Howard, Ed., Kingston ; W. H. Hunt, Pub. Monthly, 32 pages. $1.

Southern Cultivator, Augusta ; D. Redmond and C.W. Howard, Eds ; W. S. Jones, Pub. Monthly, 32 pages. $1. 1843.

Southern Field and Fireside, Augusta ; D. Lee, W. W. Mann, and Wm. N. White, Eds. ; J. Gardner, Pub. Weekly folio. $2.

ILLINOIS.

Emery's Journal of Agriculture and Prairie Farmer, Chicago ; H. D. Emery, C. D. Bragdon and C. Kennicott, Eds. ; Emery & Co., Pubs. Weekly, 16 pages quarto. $2. 1857.

Illinois Farmer, Springfield ; S. Francis, Ed. ; Bailhache & Baker, Pubs. Monthly, 16 pages. $1.

North-Western Prairie Farmer, Chicago ; J. C. Medill and Charles Betts, Eds. ; W. S. Honnold, Pub. ; weekly, 16 pages quarto. $2. 1858.

INDIANA.

Indiana Farmer, Indianapolis; J. M. Ray, Ed.; E. Wellhouse & Co., Pubs., weekly, folio. $1. Jan., 1859.

Indiana Farmer, Indianapolis, monthly, commenced in 1852, now made up from the weekly above noticed. 32 pages. $1.

IOWA.

North-Western and Horticultural Journal, Dubuque; Miller & Lombard, Eds.; Miller & Brayton, Pubs.; monthly, 32 pages octavo. $1. 1856.

Pioneer Farmer, Des Moines; W. S. Simmons & Co., Editors and Publishers. Semi-monthly. $1.

KENTUCKY.

Kentucky Farmer, Frankfort; A. G. Hodges, Ed. and Pub.; monthly, 16 pages quarto. $1. 1858.

MAINE.

Maine Farmer,* Augusta; Holmes & Eaton, Eds.; Homan & Manley, Pubs.—$1 75. Established in 1832.

Rural Intelligencer,* Gardiner; William A. Drew, Ed.; A. D. Brock, Pub.—$1 50. 1855.

MARYLAND.

American Farmer, Baltimore; N. B. Worthington & Co., Eds. and Pubs. Monthly, 32 pages octavo. $1. This was the first agricultural paper published in this country, having been commenced in 1819.

Rural Register, Baltimore; S. Sands & Mills, Pubs.

MASSACHUSETTS.

Boston Cultivator, Boston; S. Howard & J. Pedder, Ag. Eds.; Otis Brewer, Pub.; weekly, large quarto; $2. 1839.

Magazine of Horticulture, Boston; C. M. Hovey, Ed.; Hovey & Co., Pubs. 48 pages octavo. $2. 1835.

Massachusetts Ploughman,* Boston; W. & W. J. Buckminster, Eds. and Pubs. $2. 1842.

New England Farmer,* Boston; Simon Brown, Ag. Ed.; Joel Nourse, Pub.; $2. 1845. The New England Farmer, Monthly, 32 pages, octavo, is made up from the weekly paper, $1.

MICHIGAN.

Michigan Farmer, Detroit; R. F. Johnstone, Ed. and Pub. Weekly, 8 pages quarto. $2. About 1840.

MISSISSIPPI.

Southern Rural Gentleman, Grenada; Dr. M. W. Philips, Ag. Ed.; J. S. Davis, Gen. Ed. and Proprietor. Weekly, 8 pages. $2 50.

Weekly folios. One page devoted to rural affairs.

MISSOURI.

Farmer, Miner, and Mechanic, St. Louis ; P. R. Elliott, Ag. Ed. ; Thomas & Schutz, Pubs. ; Semi-monthly, folio. $1. 1856.

The Valley Farmer, St. Louis ; N. J. Colman, Ed. and Pub. ; and H. P. Byram, Travelling Ed., Louisville, Ky. ; Monthly; 32 pages octavo. $1. 1850.

NEBRASKA.

Nebraska Farmer, Brownville ; R. W. Furnas, Ed. and Pub. Monthly, 16 pages. $1.

NEW HAMPSHIRE.

New Hampshire Journal of Agriculture,* Manchester ; Z. Breed, Weare, Ag. Ed. ; Gilmore & Martin, Pubs.—$1 50. 1858.

NEW JERSEY.

New Jersey Farmer, Trenton ; David Naar, Ed. and Pub. Monthly, 32 pages octavo. $1. 1856.

NEW YORK.

American Agriculturist, New York ; Orange Judd, Ed. and Pub. Monthly, 32 pages quarto. $1. 1842.

American Stock Journal, New York ; D. C. Linsley, Ed. and Pub. Monthly, 32 pages octavo. $1. 1857.

Country Gentleman, Albany ; Luther Tucker & Son, Eds. and Pubs. ; J. J. Thomas, Associate Ed. Weekly, 16 pages quarto. $2. 1853.

Cultivator, Albany ; Luther Tucker & Son, Eds. and Pubs. ; John J. Thomas, Associate Ed. Monthly, 32 pages. 50 cents.

Genesee Farmer, Rochester ; Joseph Harris, Ed. and Pub. Monthly, 32 pages. 50 cents.

Horticulturist, New York ; Peter B. Mead, Ed. ; C. M. Saxton, Barker & Co., Pub. Monthly, 48 pages octavo. $2 ; with colored plates, $5. 1846.

Moore's Rural New Yorker, Rochester ; D. D. T. Moore, Ed. and Pub. Weekly, 8 pages large quarto. $2. 3 pages devoted to rural affairs. 1850.

Rural American, Utica ; T. B. Miner, Ed. and Pub. Weekly, 8 pages quarto. $1 50. 1856.

Working Farmer, New York ; J. J. Mapes, Ed. ; Chas. J. Mapes, Pub. Monthly, 24 pages, quarto. $1.

NORTH CAROLINA.

North Carolina Planter, Raleigh ; S. W. Westbrook, Hort., and W. H. Hamilton, Floricultural Ed. ; A. M. Gorman, Pub. Monthly ; $1. 1858.

OHIO.

American Ruralist, Springfield, J. R. Dodge, Ed. and Pub. Weekly, 8 pages quarto. $2. 1858.

Cincinnatus, College Hill; F. G. Cary and J. A. Warder, Eds. F. G. Cary, Pub. Monthly, 48 pages octavo. $2. 1856.

Ohio Cultivator, Columbus; S. D. Harris, Ed. and Pub. Semi-monthly, 16 pages octavo. $1. 1845.

Ohio Farmer, Cleveland; Thomas Brown, Ed. and Pub. Weekly, 8 pages quarto. $2. 1852.

Ohio Valley Farmer, Cincinnati; B. F. Sanford, Ed. and Pub. Monthly, 16 pages quarto. $1. 1856.

The Wool Grower, Cleveland; Monthly, 8 pages quarto. 50 cents. 1857.

OREGON.

Oregon Farmer, Portland; A. G. Walling, Ed.; W. R. Taylor & Co., Pubs. Monthly, 16 pages quarto. $2. 1858.

PENNSYLVANIA.

Farmer and Gardener, Philadelphia; A. M. Spangler, Editor and Proprietor. Monthly, 16 pages quarto. $1.

Gardener's Monthly and *Horticultural Advertiser*, Philadelphia; Thomas Meehan, Germantown, Ed.; 32 pages royal octavo. $1. 1859.

Germantown Telegraph, Germantown; Philip R. Freas, Ed. and Pub. Weekly, $2.

National Agriculturist, Pittsburg; J. T. F. Wright, Ed. and Pub. Monthly, 8 pages, quarto. $1. 1856.

SOUTH CAROLINA.

Farmer and Planter, Columbia; W. Summer, Hort. Ed.; R. M. Stokes, Proprietor. Monthly, 32 pages. $1.

TENNESSEE.

Southern Homestead, Nashville; L. P. Williams & Co., Eds. and Pubs.; weekly, 8 pages quarto. $2. 1856.

VIRGINIA.

Southern Farmer, Petersburgh; T. S. Pleasants, Ed. Small folio, weekly. $1. 1855.

Southern Planter, Richmond; J. E. Williams, Ed.; August and Williams. Pubs. Monthly, 64 pages octavo. $2. 1841.

Virginia Farmer, Richmond; M. S. Crockett, Ed. and Pub. Folio, weekly. $2. 1859.

WISCONSIN.

North-Western Cultivator, Madison; Powers & Hoyt, Eds. and Pubs. Monthly, 32 pages octavo. $1. 1849.

GLOSSARY.

Acuminate. Having a tapering point.
Acute. Sharp pointed.
Altitude. Height.
Angular. Consisting of angles.
Anterior. Growing before, or in front of.
Anther. The summit or top of a stamen.
Apex. The termination of any part
Apiculate. Ending in a little point
Aquatic. Growing in, or belonging to water.
Arcuate. Curved, or bent like a bow.
Auricled. Resembling an ear.
Axilla. The angle formed by the union of the leaf and stem.
Axillary. Growing in the axilla.
Basal. Growing from the base.
Bracts. Small leaves growing near the calyx.
Branchlets. Small branches
Calyx. The cup attached to the flower stalk, containing the corolla.
Caudex. The trunk or stem.
Ciliated. Resembling eyelash hairs.
Clavate. Club shaped.
Compact. Close, solid.
Concave. Hollow.
Conical. Resembling a cone.
Cordate. Heart shaped.
Corolla. The colored portion of the flower.
Corymb. A raceme or panicle, in which the stalks of the lower flowers, are longer than those of the upper, bringing all the flowers on the same level.
Corymbose. Arranged after the manner of a corymb.
Crenate. Notched.
Cucullate. Curved inwards in a manner resembling a hood.
Cuneate. Shaped like a wedge.
Cuspidate. Suddenly tapered to a point.
Cylindrical. Resembling a cylinder.
Cyme. A mode of flowering resembling a flattened panicle.
Cymose. Flowering in cymes.
Deciduous. Losing its foliage annually.
Decompound Doubly compound.
Digitate Resembling an open hand.
Disk. The entire surface of a leaf; the central part of a radiate compound flower.
Dissected. Divided into parts.
Distichous. Two-rowed; producing leaves or flowers in two opposite rows.
Divergent. Departing from each other.
Elliptical. Having the form of an ellipse.
Elliptical lanceolate. Between elliptical, and lanceolate.
Elongated. Lengthened, extended
Epiphytes Plants growing upon other plants, without deriving any nutriment from them
Fascicle. A bundle; an aggregate of fastigiate flowers.
Fasciculate. Arranged in bundles or parcels.
Fastigiate. Tapering to a narrow point like a pyramid.
Filament. A thread-like appendage supporting the anther.
Flecked. Spotted.
Fringed Having a border like a fringe.
Frond. A union of leaf and stalk, or branch and stem, having no distinct connecting joint.
Fructification. The constituent parts of the flower and fruit of plants.

Glabrous. Smooth.
Glandular. Having glands.
Glaucous. Having a decided hoary grey surface.
Globose or *Globular.* Round or spherical
Herbaceous. Plants, the stems of which perish annually.
Hispid. Rough with stiff hairs.
Hybrid. The result of a combination of two or more species
Hypocrateriform. Salver-shaped.
Imbricated. Overlapping each other.
Inflated. Puffed, swelled out.
Inflorescence. Disposition of flowers.
Intermediate. Lying between.
Keel. The external elevation of the midrib of a leaf or petal.
Lanceolate. Shaped like a lance or spear.
Lateral. On one side.
Lax. Loose, not compact.
Leaflets. Small parts of compound leaves.
Ligulate. Strap-shaped.
Linear. Having parallel sides.
Lingulate. See *Ligulate.*
Lobe. A division of a leaf.
Lorate. Shaped like a thong or strap.
Lurid. A color between purple, yellow, and grey.
Lyrate. Having the form of a lyre.
Membranous. Having the texture of a membrane.
Midrib. The large vein which passes from the petiole to the apex of a leaf.
Mottled. Marked with spots of different shades of color, more or less blended into each other.
Nodding. Drooping; hanging down.
Notch Indentations upon the margin of leaf or flower.
Oblate. Oppositely flattened or depressed.
Oblique. Deviating from a right line.
Oblong. Longer than broad.
Obovate. Having the narrow end downward.
Obtuse. Blunt.
Occellated. Resembling an eye.
Opaque. Dark; impervious to light.
Oval. Having the form of an ellipse.
Ovate. Shaped like an egg.
Ovoid. See *Ovate.*
Palmate. Hand-shaped.
Peduncle. The common footstalk of flowers.
Peltate. When the petiole is fixed in the disk instead of the margin.
Pendulous. Drooping; hanging down.
Pentagonal. Having five angles.
Perennial. Lasting many years without perishing.
Persistent. Remaining; not falling off.
Petals. Divisions of the corolla.
Petiole. Footstalk of a leaf.
Pinnate. Divided into numerous smaller leaves or leaflets.
Pinnatifid. Divided into lobes from the margin nearly to the midrib.
Plicate. Plaited
Pouch. A little sack or bag at the base of some petals and sepals.
Procumbent. Trailing.
Profuse. Abundant.
Proliferous. Forming young plants, in abundance, about the roots.
Pseudo. Spurious; false.
Pubescence. A downy substance covering the surface.
Quadrangular. Four-angled.
Raceme. A form of inflorescence, consisting of a main stem with stalked flowers arranged along it.
Racemose. Flowering in racemes.
Radiate. Having the florets of the circumference or ray, long and spreading, and unlike those of the disk.
Rayed. Streaked; marked with long lines.

Receptacle. That part of the fructification which supports the other parts.

Recurved. } Bent backward.
Reflexed. }

Retuse. Abruptly blunt.

Revolute, Rolled back.

Rib. The projecting vein.

Rigid. Stiff.

Rosulate. Having the leaves arranged in rose-like clusters.

Sagittate. Shaped like an arrow-head.

Scape A stem rising from the root, and bearing nothing but flowers.

Scarious. Membranous and dry.

Segments. Parts of anything.

Selfs. The original species, from which varieties are produced.

Sepals. The segments of the calyx.

Serrate. Having notches like the teeth of a saw.

Sessile. Without footstalks

Sinuate. Bending in and out

Spadix. A spike proceeding from a spatha.

Spatha. A broad sheathing leaf enclosing flowers arranged upon a spadix.

Spathulate. Shaped like a spathula, a knife so called.

Spike. Flowers sessile upon a long footstalk.

Stamen. The male organ of a flower,

Standard. The upper segment of the flower of Leguminosæ

Stigma. The female organ of a flower.

Stipules Small scales at the base of the petiole of some leaves.

Striated. Having small streaks, channels, or furrows.

Studded. Dotted.

Style. The stalk which supports the stigma.

Subulate. Tapering gradually to a fine point from a broad base.

Succulent. Fleshy and filled with juice.

Suffruticose. Shrubby in a slight degree.

Terete. Tapering, round and long.

Terminal. Ending, or at the top.

Tetramerous. Should be *Tetrandrous.*

Tetrandrous. Having four stamens.

Throat. The orifice of a flower.

Thyrsoid. Resembling a dense panicle.

Toothed. Divided so as to resemble teeth.

Translucent. Transparent; clear.

Transversely. Cross-wise,

Triangular. Having three angles.

Trichotomous. Branches divided in threes.

Trifoliate. Three-leaved.

Tripinnate. Divided in threes.

Truss. A tuft of flowers formed at the top of the main stalk or stem.

Tube. The narrow, hollow part of a monopetalous flower, by which it is fixed to the receptacle.

Tuberous. Bearing solid, fleshy, roundish roots, like the potato.

Tubular. Having the form of a tube,

Umbel. A tuft of flowers produced on a number of stalks in one head.

Umbellate. Consisting of umbels,

Undulate. Waved.

Veins. The channels through which the sap is transmitted along the leaves.

Villous. Shaggy, with long loose hairs.

Wing. A membranous border, surrounding some kinds of seeds: a side shoot, or other leafy appendage.

Zone. Stripe, or belt.

Horticultural Directory.

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ALLENDER, W. A. & Co., *Nurserymen*, Montgomery.
Hedge Plants, &c.

ASHLEY & NELSON, *Towassau Nursery*, Montgomery.
40 Acres; principally Fruit Trees for Southern climate. Established 1859.

WILSON, JOS. W., *Montgomery Nursery*, Montgomery.

DEVELIN, JOSEPH, *Washington Square Nursery*, Mobile.
5 Acres; principally Ornamental Shrubs Plants and Flowers. Established 1852. 5000 square feet of Glass.

GACHET, C. B. & N., *Nurserymen*, Enon.
Principally Fruit Trees.

MOULTRIE, J. L., *Union Springs Nursery*, Union Springs.

California.

ADAMS, D. T., *Hope Nursery*, San Jose.

ARAM, J. & Co., *Railroad Nursery*, San Jose.

BEACH, G. H., *New England Nursery*, Marysville.

BRIGGS, G. G., *Briggs' Ranch Nursery*, Maysville.

DELMAS, A., *French Garden Vineyard*, San Jose.

FOX, B. S. & Co., *San Jose Valley Nursery*, San Jose.

GOULD, L. A., *Santa Clara Nurseries*, Santa Clara.

HYDE, T.W. & H. F., *Calusa Nursery*. Calusa.

LEWELLING, A. & Co., *Fruit Vale Nursery*, San Antonio.

LEWELLING, J., *San Lorenzo Nursery*, San Lorenzo.

MYERS, A. H., *Pioneer Nursery*, Alameda.

MERRILL, E., *Mountain View Premium Nursery*, San Jose.

PREVOST, L., *San Jose Nurseries*, San Jose.

REED & Co., *Nurserymen*, Sacramento.

SANDERSON, L. F. & Co., *River Bank Nurseries*, San Jose.

SMITH, A. P., *Nurseryman*, Sacramento.

SMITH, C., *Pacific Nursery*, San Jose.

California—*Continued.*

SMITH, J., *Nurseryman*, Sacramento.

SMITH & WINCHELL, *Nurserymen*, San Jose.

THOMPSON, S., *Suscol Nurseries*, Suscol Ferry, Napa Co.

THOMPSON, W. N. & Co., *Nurserymen*, Napa.

WALKER, W. C., *Golden Gate Nursery*, San Francisco.

WASHBURN, R. W., *Shell Mound Nursery*, Brooklyn.

WHITE, A.W., *Fruit Garden & Nursery*, Oakland.

Canada.

ARNOLD, CHAS., *Paris Nursery*, Paris.
General Nursery Stock.

BEADLE, C., *Saint Catharines' Nurseries*, St. Catharines.
50 Acres; principally Fruit Trees, and hardy ornamentals. Established 1836.

BROWN, WM., *Cotes des Neiges Nurseries*, Montreal.

BRUCE & MURRAY, *Nurserymen*, Hamilton.
15 Acres; general Nursery stock, small Fruits, Roses, Florists' Flowers, &c. Established 1856. 7000 sq. ft. of Glass.

BURGESS, THOS., *Nurseryman*, London.

CUSTEAD, N. T. & Co., *Goderich Nurseries*, Goderich.
20 Acres; general assortment of Nursery Stock. Established 1850.

DUNNING, M. & Co., *Wellington Square Nurseries*, Wellington Square.

FEARMAN, F. W., *Grape Grower*, Hamilton.

FLEMING, JAS., *Nurseryman, &c.*, Toronto.

GILMOUR, J. W., *Nurseryman*, Peterboro.

GRAY, JOHN, *Lake View Nurseries*, Toronto.
General assortment of Nursery Stock.

GREIG, JAMES, *Pickering Nursery*, Pickering.
4 Acres; principally hardy Fruits and Evergreens. Established 1855.
See Advertisement.

HOLTON, W., *Hamilton Nurseries*, Hamilton.
Plum Trees, &c.

KELLY, E. & Co., *Nurserymen*, Hamilton.

LESLIE, GEO., *Nurseryman*, Toronto.

MCBROOM, THOS., *Nurseryman, &c.*, London.

RACEY, THOS., *Rose Bank Nursery*, Mount Pleasant.

SHEPHERD, GEO., *Nurseryman, &c.*, Montarel.

Connecticut.

AFFLECK, GEO., *Nurseryman, &c.*, Hartford.

AUSTIN, T. C., *Suffield Nursery*, Suffield.

BARKER, DANIEL, *Horticultural Agent*, West Meriden.

CLARK, E. E., New Haven.
Small Fruits, &c.

GONE, J. W., Norfolk.
Fruit Trees, Vines, Verbenas, &c.

DEWEY, D. S., *Grape Grower*, Hartford.

HOYT, S. & SONS, *New Canaan Nurseries*, New Canaan.
35 Acres; principally hardy Fruit and Ornamental Trees. Established 1848.

LEWIS, J. A., *Nurseryman, &c.*, Willimantic.
10 Acres; principally hardy Fruit and Ornamental Trees, Vines, &c. Established 1858.

MASON, J. & Co., *Washington Street Nursery*, Hartford.

NEWBURY, E., *Nurseryman, &c.* Brooklyn.
Vines, small fruits, Dahlias, Bedding plants, &c.

REVELL, ROBERT, *Broad Street Nursery*, Norwich.
Greenhouse Plants, hardy Shrubs, Roses, Grapes, and small fruits. Established 1854. 2200 sq. ft. of Glass.

SEYMOUR. G. & Co., *Nurserymen*, South Norwalk.

STARR, WM. H., *East New London Nurseries*, New London.
General Nursery Stock.

TROWBRIDGE, F., *New Haven Nursery*, New Haven.
Hardy Fruit and Ornamental Trees, small fruits, &c.

VEITCH, ROBT., *Florist*, New Haven.

WHITING, E. A., *Tallcott Mountain Nurseries*, Hartford.
12 Acres, devoted to hardy Fruit and Ornamental Trees, Shrubs. Grapes, &c. Established 1838.

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CAMMACK, W., *Florist*, Washington.

PEIRCE, JOSHUA, *Linnæan Hill Nursery*, Washington.

WARD, THOS. G., *Rose Grower*, Washington.

REICHARD, D. M., *Cedar Glen Nursery*, Washington.
40 Acres; principally Fruit Trees. Established 1854. 2000 sq. ft. of Glass.

SAUL, JOHN, *Nurseryman, &c.*, Washington.
60 Acres, general Nursery stock.

Georgia.

BERCKMANS, P. J., *Fruitland Nurseries*, Augusta.
50 Acres; principally devoted to Southern Fruits; an assortment of Ornamental Trees, Evergreens, Roses, Native and Foreign Grapes, &c. 100 Acres devoted to Orchards, and Vineyards, for the testing of all cultivated varieties of Fruits. 1000 sq. ft. of Glass, for propagating Roses, fine Evergreens, Grapes, &c. Established 1857. See Advertisement.

CAMP, H. & Son, *Nurserymen*, Covington.

FLEMING & NELSON, *Nurserymen*, Augusta.
10 Acres; principally Southern Fruit Trees; also an assortment of Roses, and Ornamental Shrubbery. 50 Acres devoted to Orchards and Vineyards. Established 1858.

JOHNSON, R. C., *Nurseryman*, Atlanta.

KIDD & DUNCAN, *Nurseryman*, Columbus.

LEE, KIDD, & DUNCAN, *Nurserymen*, Columbus.

MAUGE, F. A., *Augusta Nursery*, Augusta.
Principally Roses, with an assortment of Fruit Trees, adapted to the South.

PARSONS, E. & SON, *Jasper Spring Nursery*, Savannah.
General assortment of Nursery stock.

PETERS, HARDEN & Co., *Downing Hill Nursery*, Atlanta.
General assortment of Nursery stock.

REDMOND, D., *Vineland Grape Nursery*, Augusta.
10 Acres; devoted principally to hardy Grape Vines, native and foreign. About 150 varieties now growing in the open air. Established 1858. See Advertisement.

STANFORD, J. R., *Nurserynan*, Clarkesville.

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Illinois.

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BABCOCK & BRO., *Saint Clair Nurseries*, Summerfield.
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BACON, E. E., *Nurseryman*, Willow Creek.

BLISS, H. N., *Bliss' Nursery*, Buda.

BROOKS, SAM'L., *Cleaverville Nursery*, Chicago.

BRYANT, A. & SON, *Persimmon Grove Nursery*, Princeton.
25 Acres; Fruit and Ornamental Trees, Evergreens, &c. Established 1847.

BUBACH, JOHN G., *Princeton Nurseries*, Princeton.

CLEM & TENBROOK, *Nurserymen*, Paris.

COLEMAN, E. B., *Horticultural Garden*, Peoria.

Illinois—*Continued.*

COLEMAN & DRAKE, *McLean Co. Nursery*, Bloomington.

DOUGLAS, ROBERT, *Waukegan Nursery*, Waukegan.
General Nursery stock.

DUNLAP, M. L., *Nurseryman*, Urbana.

EDWARDS, SAM'L., *Evergreen Nursery*, La Moille.
General Nursery stock.

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100 Acres, devoted to general Nursery stock.

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SCOFIELD, D. C., *Elgin Nurseries*, Elgin.
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HILTON, G. O., *Mississippi Valley Nursery*, Keokuk.

HORR & BEEBEE, *Nurserymen*, Dubuque.

HULL, L., *Fort Madison Nursery*, Dallas City.

LAER, WM., *Nurseryman*, Garden Grove.

LONGWORTH, WM., *Pleasant Hill Nursery*, Dubuque.

NEALLY, BROS., & BOCK, *Bird's Nest Nursery*, Burlington.
General Nursery Stock.

NEGUS, ISAAC, *Nurseryman*, Muscatine.

ORDWAY, G. & Co., *Nurserymen*, Waterloo.

SAUNDERS & Co., *Nurserymen*, Decatur City.

VAN PELT & HEYER, *Commercial Nurseries*, Dubuque.
General Nursery Stock.

WEED, JAMES, *Iowa Pomological Gardens*, Muscatine.

WOOD, G. P., *Wood's Nursery*, Springdale.
Fruit Trees, &c.

ZIMMERMAN, WM. & Co., *Nurserymen*, Oskaloosa.

Kansas.

BRACKETT, G. C., *Nurseryman*, Lawrence.

CAMPBELL, H., *Nurseryman*, Topeka.

CHASE, WILSON & Co., *Nurserymen*, Atchison.

HOUSLEY & BURR, *Nurserymen*, Leavenworth.

Kentucky.

ALLEN, WM., *Allen Nurseries*, Jeffersontown.

AMMERMAN, P., *Pleasant Retreat Nursery*, Cynthiana.

BABCOCK, D., *Nurseryman*, Lexington.

BACON, W. A., *Nurseryman*, Paris.

BAGLEY, JAS., *Nurseryman*, Northcutt's Store.

BAKER, P. H., *Greenville Nurseries*, Greenville.
30 Acres; Fruit and Ornamental Trees, Shrubs, Roses, and Greenhouse Plants. Established 1854. 1200 sq. ft. of Glass.

Kentucky—*Continued.*

BELL, C. S., *Cemetery Garden and Nursery*, Lexington.
6 Acres; Fruit and Ornamental Trees, Shrubs, Greenhouse Plants, &c.
Established 1845. 2000 sq. ft. of Glass.

CAREY, PETERS & CAREY, *Bear Grass Nurseries*, Louisville.

CURTIS, G. G. & Co., *Kentucky Nurseries*, Maysville.

DOWNER. J. S. & SON, *Forest Nursery*, Elkton.
General Nursery Stock.
Established 1835.

DUNCAN, H. S., & C. T., *Fern Creek Nursery*, Fern Creek, P. O.

ELLWANGER & FOX, *Florists*, Louisville.

HITE, O., *Riverside Nurseries*, Louisville.

HOBBS, WALKER & Co., *Evergreen Nursery*, O'Bannon, P. O.
75 Acres; General Nursery Stock.

JOHNSON, J. & W. G., *Nurserymen*, Cedar Creek.

JONES, F., *Jones' Nursery*, Athens, P. O.

MATTISON, A., *Nurseryman*, Paducah.

MCKEE, J. A., *Nurseryman*, Cynthiana.

MOORE & SERB, *Louisville Nurseries*, Louisville.
30 Acres; Fruit and Ornamental Trees, Shrubs, Roses, Evergreens, &c.
Established 1855. 10,000 sq.ft. of Glass.

MORAT, F. & L., *Woodland Garden*, Louisville.

NANZ, HENRY, *Florist*, Louisville.

RANDOLPH, B.E., *Richland Nurseries*, Hopkinsville.
Fruit Trees, Plants, &c.
Established 1857.

REEDER, A. L., *Silver Beach Nursery*, Carrollton.

TAYLOR, JOS., *Terrace Garden Nurseries*, Newport.

THATCHER, J. & Co., *Florists*, Louisville.

TRUIT, J. P., *Hickory Grove Nursery*, Quincy.

WILSON, EDWARD, *Nurseryman and Florist*, Louisville.
6 Acres, devoted to Ornamental Shrubbery, Greenhouse Plants, &c.
Established 1834. 6000 sq. ft. of Glass.

YOUNG, L. & SON, *Springdale Nursery*, Louisville.

Maine.

ADAMS, JNO. W., *Adams' Nursery*, Portland.
Native Evergreens, &c.

GOODALE, S. L., *Nurseryman*, Saco.

LITTLE, H. & Co., *Nurserymen*, Bangor.

MAHONY, DANIEL, *Commercial Nursery*, Saco.
Established 1853.

MANN, WM., *Forest Nursery*, Bangor.

Maryland.

BRACKENRIDGE, W. D., *Rosebank Nurseries*, Govanstown.
Fruit and Ornamental Trees, Plants, &c.

CORSE, WM. & SON, *Clairmont and Furley Hall Nurseries*, Baltimore.
220 Acres; Fruit and Ornamental Trees, Shrubs, &c. Established 1828.
2500 sq. ft. of Glass.

FEAST, JOHN & SON, *Florists and Seedsmen*, Baltimore.
New and Rare, hardy, and Exotic Plants. Established 1823.
12000 sq. ft. of Glass.

FEAST, S. & SONS, *Florists, &c.*, Baltimore.

FEAST, W., *Florist*, Baltimore.

GIDDINGS & CRANE, *Nurserymen*, Crownsville.

HALLIDAY, R., *Florist and Nurseryman*, Baltimore.
25 Acres in Nursery. 25,000 sq. ft. of Glass in Greenhouse Department. Established 1837.

PENTLAND, JAS., *Greenmount Gardens*, Baltimore.
Principally Roses. Established 1850. 10,000 sq. ft. of Glass.

REICHARD, JOHN, *Arch Springs Nursery*, College St. James.

WILLS, S. E., *Nurseryman*, Cecilton.
Fruit and Ornamental Trees.

Massachusetts.

ANTHONY & MCAFEE, *Nurserymen*, New Bedford.
General hardy Nursery stock.

BARNES & WASHBURN, *Florists and Seedsmen*, Harrison Square.
Choice Greenhouse, Hardy Herbaceous, and Hedge Plants. Roses, Shrubs, Bedding Plants, Small Fruits, &c.

BATES, SULLIVAN, *Cranberry Culturist*, Bellingham.

BLISS, B. K., *Florist and Seedsman*, Springfield.
Choice Greenhouse and Bedding Plants, Flowers, &c.

BOWDITCH, A., *Nurseryman and Florist*, Roxbury.

BREWER, D. C., *Hampden Nurseries*, Springfield.
30 Acres; Native and Foreign Grapes. Established 1848.

BULL, E.W., *Nurseryman*, Concord.

CAPRON, W.C. & SON, *Nurserymen*, Uxbridge.

CLEMENT, A., *Dracut Nursery*, Lowell.

COLTON, S. H., *Nurseryman*, Worcester.
12 Acres; principally Fruit and Ornamental Trees. Established 1839.

CURTIS & COBB, *Washington Street Nursery*, Boston.
Trees, Plants, Seeds, &c.

CUTLER, S. M., *Winthrop Nursery*, Holliston.
Trees, Shrubs, Vines, Plants, &c.

DANA, FRANCIS, *Nurseryman*, Roxbury.

Massachusetts—*Continued.*

DAVENPORT, GEO., *Small Fruit Grower*, Dedham.

GROUT, JONATHAN, *Florist, &c.*, Worcester.

HILL, SAM'L., JUN., *Florence Nursery*, Florence.
20 Acres; General assortment of Fruit and Ornamental Trees.
Established 1845.

HOVEY & CO., *Nurserymen*, Cambridge.
General Nursery Stock.

HYDE, J. F. C., *Nurseryman*, Newton Centre.

HYDE, S. & G., *Nurserymen*, Newton.

KEITH, OLIVER, *Nurseryman and Florist*, South Bridgewater.
Fruit Trees, Shrubs, Evergreens, &c.
Established 1855.

LINCOLN, D. W., *Nurseryman, &c.* Worcester.

LOVELL, J. D., *Nurseryman, &c.*, Worcester.

MANNING, J. W., *Nurseryman*, Reading.

MANNING, R., *Pomological Garden*, Salem.
Established 1823.

MYRICK, ELIJAH, *Shaker Nursery*, South Groton.

SNOW, DEXTER, *Verbena Grower*, Chicopee.

SPOONER, WM. H., JR., *Florist*, Jamaica Plain.
Bedding Plants, &c.

STONE, J. C., *Nurseryman*, Shrewsbury.

STRONG, W. C., *Nonantum Hill Nursery*, Brighton.
70 Acres; complete assortment of Fruit and Ornamental Trees, Plants, &c.
Established 1851. 11,000 sq. ft. of Glass.

TRAUTMAN, M., *Florist*, Roxbury.
Bedding Plants, &c.

TYLER, D.R., *Nurseryman*, Warren.
Fruit and Ornamental Trees, Shrubs, &c.

WALKER, SAM'L., *Nurseryman, &c.*, Roxbury.

WATSON, B. M., *Old Colony Nurseries*, Plymouth.
Fruit and Ornamental Trees, Shrubs, Plants, &c.

WILDER, M. P., *Dorchester and Roxbury Nurseries*, Boston.
Fruit Trees, Grape Vines, &c.

WILSON, GEO. W., *Nurseryman*, Malden.
Fruit Trees, &c.

Michigan.

ADAIR, WM., *Adair's Nurseries*, Detroit.
25 Acres; General Nursery Stock. The Pear a speciality. Established 1840.
4000 sq. ft. of Glass.
See Advertisement.

BLOIS, JOHN T., *Jonesville South Nursery*, Jonesville.
20 Acres; principally Fruit Trees, with some hardy Ornamentals.
Established 1854.

Michigan—*Continued.*

FISHBURN, M., *Nurseryman*, Waterloo.

HUBBARD & DAVIS, *Nurserymen*, Detroit.
20 Acres; General Nursery stock.
Established 1846.
2500 sq. ft. of Glass.

INGLEFRITZ, J. E., *Monroe Nursery*, Monroe.
General Nursery Stock.

PENNIMANN, H. P., *Battle Creek Nurseries*, Battle Creek.
Fruit and Ornamental Trees, Shrubs, Vines, Roses, &c.

RANDALL, WM. L., *Nurseryman*, Adrian.

STEERE, B. W., *Nurseryman*, Adrian.

TAYLOR, GEO., *Mountain Home Nursery*, Kalamazoo.
5 Acres; devoted principally to Evergreens. Established 1856.
300 sq. ft. of Glass.

TOMLINSON & BRO., *Michigan Central Nurseries*, Battle Creek.

WHITE, G. H. & Co., *Southern Michigan Nurseries*, Coldwater.

WILLIAMS & VANDEVANTOR, *Sturgis Nursery*, Sturgis.
50 Acres; General Nursery Stock.
Established 1855.

Minnesota.

FORD, L. M. & Co., *Nurserymen, &c.* St. Paul.

GOODYEAR, ROBT., *Nurseryman*, Mankato.

JOHNSON, P. C., *Nurseryman*, Stillwater.

STEWART, A., *Nurseryman*, Le Seur.

Mississippi.

AFFLECK, THOS., *Southern Nurseries*, Washington.

BURFORD, W. H., *Bloomingdale Nurseries*, Cuddyhunk.
Fruit and Ornamental Trees, Shrubs, Vines, Roses, &c. Established 1851.

COLMANT, JOHN J., *Nurseryman*, Columbus.
Fruit Trees, Grape Vines, Evergreens, Shrubs, Small Fruits, &c.

HATCH & CO., *Central Nurseries*, Jackson.
40 Acres; Fruit and Ornamental Trees, Shrubs, Plants, &c. Established in Vicksburgh 1841. Removed to Jackson 1854. 2000 sq. ft. of Glass.

JONES, JAS., JR., *Columbus Nursery*, Columbus.

SIMS, J. & H. S., *Nurserymen*, Grenada.

Mississippi—*Continued.*

SWASEY, C. B. & Co., *Mississippi Nurseries*, Yazoo City.

TUCKER, W. C., *Washington Nursery*, Columbus.

WALKER, W. S. G. & Co., *Belmont Nurseries*, Canton.

Missouri.

BARNARD, A. A., *La Clede Nurseries*, St. Louis.

BOARDMAN & PARTRIDGE, *Western Nurseries*, St. Louis.

CLARK & BARNARD, *Valley View Nursery*, St. Louis.

COLEMAN, JOHN T., *Nurseryman*, St. Louis.
General Nursery Stock.

ELLIOTT, A. W., *Nurseryman*, St. Louis.

ELLIOTT, F. R., *Landscape Gardener, &c.*, St. Louis.

HUSMANN & MANWARING, *Herman Nursery*, Herman.
General Nursery Stock.

KEY, WM. J., *Hedge Planter, &c.*, Glasgow.

MALLINKRODT, JULIUS & Co., *Nurserymen*, Augusta.
General Nursery Stock.

MOCK, F. & Co., *Lafayette Nurseries*, Lexington.
General Nursery Stock.

SANDERS, CAREW & Co., *St. Louis Nursery*, St. Louis.
General Nursery Stock.

SEYMOUR, JOHN S., *St. Louis County Fruit Garden*, St. Louis.
Small Fruits, &c.

Nebraska.

DRAPER, JOEL, *Nurseryman*, Nebraska.

MASTERS, J. H., *Nurseryman*, Nebraska City.

New Hampshire.

BURT, LEVI, *Nurseryman*, Walpole.

COPP, JOHN, *Nurseryman*, Wakefield.

CUTTER, B.F., *Nurseryman*, Pelham.

CHILDS, STEPHEN & SON, *Nurserymen*, Cornish Flatt.

PINNEO, JOS., *Nurseryman*, Hanover.

WIGGIN, ANDREW, *Nurseryman*, Stratham.

New Jersey.

ALLEN, EDWIN, *Nurseryman*, New Brunswick.

General Nursery Stock.

AUBRY, L. & CH. SOUCHET, *French Nursery*, Carpenter's Landing.

General Nursery Stock.

DAVIS, CHAS., JR., *Nurseryman*, Phillipsburgh.

General Nursery Stock.

DAY, WM., *Nurseryman*, Morristown.

General Nursery Stock.

DEACON, GEO. B., *Nurseryman*, Burlington.

FULLER, WALTER, *Nurseryman*, Rahway.

33 Acres; Fruit and Ornamental Trees, Shrubs, &c.

GIBSON & SONS, *West Jersey Nursery*, Mullica Hill.

20 Acres; devoted principally to hardy Fruits. Specimen Orchards in connection. Established 1851.

GRISCOM, D. J., *Evergreen Nursery*, Woodbury.

General Nursery Stock.

GUSTIN & PITMAN, *Nurserymen*, Newark.

HANCE, A. & SON, *Rumsom Nurseries*, Red Bank.

20 Acres; Fruit and Ornamental Trees. Shrubs, Roses, Grape Vines, &c. Peach Trees for Orchardists a speciality. See Advertisement.

HARVEY, L. I., *Nurseryman*, Newark.

HENDERSON, JOHN, *Washington Nursery*, Jersey City.

New and choice soft wooded, and Bedding Plants. 7000 sq. ft. of Glass.

HENDERSON, PETER, *Florist, &c.*, Jersey City.

Roses, Dahlias, Bedding Plants, &c.

LIPPINCOTT, J. S., *Nurseryman, &c.*, Haddonfield.

Small Fruits, &c.

PARRY, WM., *Pomona Garden and Nursery*, Cinnaminson.

General Nursery Stock.

PERKINS, JOHN, *Fairview Nurseries*, Moorestown.

General Nursery stock.

PULLEN, ISAAC, *Hightstown Nursery*, Hightstown.

General Nursery Stock.

PULLEN, R. F., *Nurseryman*, Hightstown.

REEVES, SAMUEL, *Nurseryman*, Salem.

REID, WM., *Elizabethtown Nurseries*, Elizabeth.

35 Acres; Fruit and Ornamental Trees Shrubs, Plants, &c. A model Nursery

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THORBURN, G. C., *Nurseryman, &c* Newark.

WARNOCK, WM., *South Camden Nursery*, Camden.

New York.

AINSWORTH, S. H., *Nurseryman*, West Bloomfield.

ARCHER, WM., *Nurseryman and Florist*, Utica.

15 Acres; General Nursery Stock. Established 1850. 11,000 sq. ft. of Glass.

BAILEY, JOHN W. & SON, *Plattsburgh Nurseries*, Plattsburgh.

BAKER, ISAAC, *East Hamburgh Nurseries*, East Hamburgh.

8 Acres; Fruit Trees, Vines, Strawberry Plants, &c. Established 1841.

BATTEY, J., Agent, *Nurseryman*, Keeseville.

BERGER, S., *Nurseryman*, New Rochelle.

BISSELL & SALTER, *Nurserymen*, Rochester.

Grapes, Small Fruits, &c. Established 1855.

BLACK, JAS., *Rural Cemetery Garden*, Albany.

BLOSS, J. O. & CO., *American Nursery*, Rochester.

General Nursery Stock.

BOARDMAN, E. & SON, *Monroe Street Nursery*, Rochester.

BOARDMAN, SILAS, *Rochester Nursery*, Brighton.

50 Acres; Fruit Trees, Evergreens, Roses, &c. Established 1828.

BOSTWICK, H. H. & J. H., *Florists, &c.*, Auburn.

BOSWORTH, J. M., *Nurseryman*, Adams' Centre.

BOWEN, P. & CO., *East Aurora Nursery*, Buffalo.

30 Acres; Hardy Fruit and Ornamental Trees. Established 1844.

BOYCE, F. W., *Nurseryman*, Utica.

BRADBURY, J., *Nurseryman*, Rondout.

BRAMAN, A., *West Hill Nursery*, Ithaca.

General Nursery Stock.

BRIDGEMAN, ANDREW, *Florist, &c.*, Astoria, L. I.

BRINCKERHOFF, D., *Fishkill Landing Nurseries*, Fishkill.

Every description of Nursery Stock. Established 1842.

BROCKSBANK, WM., *Prospect Hill Nursery*, Hudson.

General Nursery Stock. Established 1836.

BROOKSBY, ALEX'R., *Union Turnspike Nursery*, Hudson.

General Nursery Stock.

BRONSON, MERRILL, & HAMMOND, *Nurserymen*, Geneva.

BUCHANAN, ISAAC, *Florist and Nurseryman*, Astoria, L. I., and 9 West 17th St., N. Y.

7 Acres; Rare Hothouse, Greenhouse, and Bedding Plants, &c. Established 1840. 16,000 sq. ft. of Glass.
See Advertisement.

New York—*Continued.*

BURR, ZERAH, *Perinton Nursery*, Fairport.

CALDWELL, JOS., *Nurseryman*, Troy.

CARPENTER, H. & J., *Nurserymen*, Poughkeepsie.
Raspberries, Strawberries, &c.

CARPENTER, S. P., *Huguenot Nurseries*, New Rochelle.

COLLINS & CURTIS BROS., *Owasco Lake Nurseries*, Auburn.
General Nurseries Stock.

COLTON, A. S., *Orleans Nurseries*, Gaines.
Fruit and Ornamental Trees, Shrubs, Roses, &c.

CORNING, J. H., *Kinderhook Nursery*, Valatie.

CONKLIN, R. M., *Evergreen Nursery*, Cold Spring Harbor, L. I.
Small Fruits, Roses, Vines, &c.

COWLES, ROBERTS & CO., Successors to Cowles & Warren, *Highland Nurseries*, Syracuse.
90 Acres; Fruit and Ornamental Trees, Vines, Shrubs, Roses, &c.
Established 1847.

CURTIS, HARVEY, *Owego Nursery*, Owego.
15 Acres; Fruit Trees, hardy Grapes, Roses, &c. Established 1853.

DAILLEDOUZE & ZELLER, *Delmonico Nursery*, Brooklyn, L. I.

DECKER, EDWARD, *Washington Nursery*, New Brighton, L. I.
Flowering Plants, &c.

DELL, WM. S., *Botanic Garden*, Waterloo.

DINGWALL, JOHN, *Florist*, Albany.

DONADI, M., *Florist*, Astoria, L. I.

DONNELAN, J. & CO., *Rochester and Lake Ave. Nurseries*, Rochester.
General Nursery Stock.

DUBOIS, C., *Nurseryman*, Fishkill.

EASTMAN & Co., *Maple Grove Nurseries*, Waterville.

ELLWANGER & BARRY, *Mount Hope Nurseries*, Rochester.
500 Acres. Every variety of Fruit and Ornamental Trees, Shrubs, Plants, Roses, &c., &c. Established 1838.
16,000 sq. ft. of Glass.
The most extensive Nurseries in the world. See Advertisement.

ESHBAUGH, H. & CO., *Olcott Nursery*, Olcott.
35 Acres; General assortment of Fruit and Ornamental Trees, &c.
Established 1856.

FERRIS, W. L., *Oakland Nursery*, Throgg's Neck.

FISH, B. & SON, *West End Nurseries*, Rochester.
Established 1854.

FREEMAN, H. C., *Fruit Garden and Nursery*, Ravenswood, L. I.

FREER, M. D. & Co., *Schuyler County Central Nurseries*, Watkins.
General Nursery Stock.

New York—*Continued.*

FROST, A. & CO., *Genesee Valley Nurseries*, Rochester.

200 Acres. Comprising a general assortment of Fruit and Ornamental Trees, Shrubs, Vines, Roses, Plants, &c., &c. Established 1848.
A thriving establishment.

FROST, E. C., *Seneca Lake Highland Nurseries*, Havana.

General assortment of Fruit and Ornamental Trees, Stocks, &c.
Established 1842. 440 sq. ft. of Glass.

FULLER, A. S., *Brooklyn Nursery*, Brooklyn, L. I.

Fruit and Ornamental Trees Shrubs, Plants and Vines.

GRANT, C. W., *Iona Nurseries*, Peekskill.

Native Grape Vines, &c.

HAGGERTY & KETTELL, *Nurserymen, Florists, &c.*, Poughkeepsie.

Fruit and Ornamental Trees, Plants, Evergreens, Vines, &c.

HEFFRON, D. S., *Grape Grower*, Utica.

HENKING, E., *Florist*, Buffalo.

HIGLEY, S. H., *Nurseryman*, Port Byron.

HOAG & CRAINE, *Woodlawn Nurseries*, Lockport.

Grape Vines and Small Fruits.

HOCHSTEIN, A., *Horticultural and Floral Artist*, New York City.

HOLMES, E. S. & Co., *Hopewell Fruit Gardens*, Wilson.

HOOKER, FARLEY & CO., *Rochester Wholesale Nurseries*, Rochester.

200 Acres; Fruit Trees, Evergreens, &c. Established 1854.

HOOKER, H. E. & CO., *Commercial Nurseries*, Rochester.

150 Acres; General Nursery Stock. Established 1830.

HOYT, W. M. & CO., *East Avenue Nurseries*, Rochester.

Fruit Trees, Shrubs, Evergreens, &c.

INGERSOLL, J. D., *Vinwood Grape Nursery*, Ilion.

INGERSOLL, MURPHY & Co., *Livingston Nurseries*, Dansville.

JAYNE & PLATMAN, *Benton Nurseries*, Bellona.

20 Acres; Fruit and Ornamental Trees, Small Fruits, &c. Established 1854.

KELLY, S. B., *New York Central Nurseries*, Brighton.

KELSEY, S. T. and CO., *Great Valley Nursery*, Great Valley.

10 Acres; principally Hardy Ornamentals for the Trade. Established 1856.

KIMBER, G. D., *Nurseryman*, Flushing, L. I.

KING and RIPLEY, *Bloodgood Nursery*, Flushing, L. I.

70 Acres; Hardy Nursery Stock. Established 1798.

KING, WM., *Prospect Hill Nursery*, Rochester.

New York—*Continued.*

LAWTON, WM., *Blackberry Grower*, New Rochelle.

LOUD, WM. P., *Nurseryman*, Egypt.
General assortment of Fruit and Ornamental Trees.

MACKAY, WM., *Nurseryman*, West Morrisania.

MACKIE, M., *Clyde Nursery*, Clyde.
General Nursery Stock.

MANLY, D. S., *Buffalo Nurseries*, Buffalo.
General Nursery Stock.
Established 1825.

MARC, G., *Florist, &c.*, Astoria, L.I.

MARSHALL, EDWIN, *Small Fruit Nursery*, Poughkeepsie.

MATTISON, JAS. M., *Nurseryman*, Jacksonville.
Fruit and Ornamental Trees, Shrubs, Vines, &c.

MENAND, L., *Watervliet Nursery*, Albany
Flowering Plants, Shrubs, &c.

MAXWELL, O. B. & CO., *Canaseraga Nurseries*, Dansville.
Fruit Trees, &c.
Established 1853.

MAXWELL, T. C. & BROS., *Old Castle Nurseries*, Geneva.
Hardy Fruit Trees, Stocks, &c
Established 1848.

McLALLEN, G. J., *Trumansburgh Nursery*, Trumansburgh.
20 Acres. General assortment of Fruit Trees, Stocks, &c.
Established 1850.

MILES & REEVE, *Nurserymen*, Southold, L. I.
5 Acres; General Nursery Stock.
Established 1856.

MOODY, GEO. H., *Niagara Nurseries*, Lockport.

MOULSON, CHAS., *Union Nurseries*, Rochester.
General Nursery Stock.

MOULSON, SAM'L, *Old Rochester Nurseries*, Rochester.
General Nursery Stock.

NELSON & BARKER, *Clover Street Nursery*, Rochester

NICHOLS, JOHN A., *Washington Nursery*, Spencer.
30 Acres; General Nursery Stock.
Established 1854.
1000 ft. of Glass.

PARSONS & CO., *Nurserymen, &c.*, Flushing, L. I.
General Nursery Stock.
Established 1848.

PECK, ISRAEL, *Suffolk County Nursery*, Southold, L. I.
22 Acres; Fruit and Ornamental Trees, &c. Established 1856.
300 sq. ft. of Glass.

PERRY, DANIEL, *Lake View Nursery*, Oswego.

PETTIBONE, E.J., *Elba Nurseries*, Elba.
25 Acres; Fruit and Ornamental Trees, Shrubs, Roses, &c.

POTTER, A. W. & Co., *Grape Lawn Nurseries*, Knowlesville.
Grape Vines, Small Fruits &c

New York—*Continued.*

PRINCE, WM. R. & Co., *Linnæan Botanic Garden and Nursery*, Flushing, L. I.

REAGLES, C. & SON, *Union Nurseries*, Schenectady.
50 Acres; principally Plum Trees, with a general assortment of Nursery Stock. Established 1830.

RICHARDSON, S. & CO., *Wilson Garden and Nurseries*, Olcott.
70 Acres; Fruit and Ornamental Trees, Shrubs, Roses, &c.

RICHARDSON, WM., *River View Nurseries*, Albany.

ROOT, J. A., *Nurseryman, &c.*, Skaneateles.
Native Evergreens.

RYAN, C. J. & CO., *Rochester and Charlotte Nurseries*, Rochester.
Fruit and Ornamental Trees, Shrubs, Roses, Plants, &c.
Established 1850.

SAUL, A., *Highland Nurseries*, Newburgh.
50 Acres; general assortment of Nursery Stock. Established 1816. Successor to A. J. Downing since 1847.

SEELYE, C. W., *Rochester Central Nurseries*, Rochester.
40 Acres; general Nursery Stock.
Established 1853.
7500 sq. ft. of Glass.

SLOAN, JOHN, *Corning's Nursery*, Albany.
General Nursery Stock.

SMITH & HANCHETT, *Syracuse Nurseries*, Syracuse.
300 Acres; Fruit and Ornamental Trees, Shrubs, Roses, Plants, &c.
Established 1830.

SMITH, W. T. & E., *Geneva Nurseries*, Geneva.
150 Acres; general Nursery Stock.

SYLVESTER, E. W., *Lyons Nursery*, Lyons.
20 Acres; Fruit Trees, Grape Vines, &c.
Established 1853.

THOMAS and HERENDEEN, *Wayne County Nurseries*, Macedon, and Union Springs.
90 Acres; principally Hardy Fruit and Ornamental Trees. Established 1838.

TILLOTSON, J. S., *Nurseryman*, Kinderhook.

TOMPKINS, WM., *Grape Grower*, Germantown.

TOWNSEND, W. P., *Melrose Farm and Nursery*, Lockport.

UNDERHILL, R. T., *Grape Grower*, Croton Point.

WEIR, JAS., *Bay Ridge Nursery*, Bay Ridge, L. I.
18 Acres; Fruit and Ornamental Trees, Grape Vines, Roses, &c
Established 1854. 17000 sq.ft. of Glass.

WHITE, R. & CO., *Newark Nursery*, Newark.

70 Acres; Fruit Trees, &c. at wholesale.
Established 1854.

WILBUR, JOHN, *Nurseryman*, Walton.
Fruit Trees, &c. Established 1858.

WILLIAMS. RAMSDEN & Co., *Faulkner Nurseries*, Dansville.
Fruit Tree Stocks, &c.

New York—*Continued.*

WILSON, JOHN, *Nurseryman, &c.*, Albany.

WILSON, MARK D., *Nurseryman*, West Bloomfield.
17 Acres; general Nursery Stock.
Established 1857.

YALE, T. B. & Co., *Nurserymen, &c.*, Brighton.
80 Acres; principally Fruit Trees.
Established 1837.

YEOMANS, T. G., *Walworth Nurseries*, Walworth.
25 Acres; Fruit Trees, &c., mostly Pear.
Established 1842.

ZIMMERMANN, GODFREY, *Pine Hill Nursery*, Buffalo.
20 Acres; principally Fruit Trees, with a small assortment of Ornamentals.
Established 1849.

North Carolina.

CARTER, THOS., *Garden and Nursery*, Raleigh.
60 Acres; Fruit and Ornamental Trees, Evergreens, Roses, Vines, &c.
Established 1857. 1300 sq. ft. of Glass.

EVANS, MOSES, *Nurseryman*, Abbott's Creek.

FENTIES, T. H., *Nurseryman*, Greensboro.

LINDLEY, J. & O., *Pomological Gardens*, New Garden.

WESTBROOK & Co., *Nurserymen, &c.*, Greensboro.

Ohio.

AUKENBAUER, G. & F., *Nurserymen, &c.*, Cumminsville.

BAILEY, A. H., *Hamilton County Fruit Gardens*, College Hill.
Fruit Trees, &c.

BATEHAM, M. B. & CO., *Columbus Nursery*, Columbus.
80 Acres; Fruit and Ornamental Trees, Evergreens, &c. Established 1855.

BEAUMONT & Co., *Willson Avenue Nursery*, Cleveland.

BECK & TOEPFER, *Florists, &c.*, Cincinnati.

BLACK, R. J., *Nurseryman*, Bremen.

BOALT, G. & S., *Norwalk Nurseries*, Norwalk.
General Nursery Stock.

BONSALL, E., JUN., *Plank Road Nursery*, Salem.
General Nursery Stock.
Established 1846.

BOWEN, J. F., *Nurseryman*, Montgomery.

BOWEN, W. F., *Nurseryman*, Sharonville.

CAMPBELL, GEO. W., *Nurseryman*, Delaware.
10 Acres; principally Native Grape Vines, with some small Fruits.
Established 1858. 2000 sq. ft. of Glass.

Ohio—*Continued.*

CASE, WM., *Case Nursery*, Cleveland.
35 Acres; Hardy Fruit Trees, Plants, and Evergreens. Managed by C. W. Eigel. Established 1848.

CHASE, T., *Nurseryman*, Marion.

CLARKE, JOHN D., *Beechwood Nurseries*, Somerset.

COE, J. C. & Co., *Nurserymen*, Sydney.

COFMAN, S., *Spring Grove Nursery*, Carroll.

COOK, J. S., *Walnut Hills Nursery*, Cincinnati.
General Nursery Stock. Established 1846.

CRAIG, E., *Cheviot Gardens*, Cincinnati.

CRILLY, ISAAC, *Nurseryman*, Springfield.

CURTIS, JOS., SEN., *Hamilton Nursery*, Hamilton.

CURTIS, WM., *Nurseryman*, Brighton.

DANA, GEO. & SON, *Nurserymen*, Belpre.

DAVIES, R., *Union Nursery & Fruit Garden*, Lebanon.

DOLE. W. C., *Olive Branch Nursery*, Olive Branch.

EDGERTON, JAS., *Sugar Grove Nurseries*, Barnesville.
20 Acres; Fruit and Ornamental Trees, Shrubs, Plants, &c. Established 1855.

ENSIGN & FORD, *Ohio Nurseries*, Toledo.
80 Acres; Fruit Trees, and Hardy Shrubbery. Established 1855.
See Advertisement.

ERNST, A. H., *Spring Garden Nursery*, Cincinnati.
General Hardy Nursery Stock.

EVANS, WM., *Columbia Nurseries* Pleasant Ridge.

FAHNESTOCK, A. & SONS, *Toledo Nurseries*, Toledo.
170 Acres; devoted to a general assortment of Fruit and Ornamental Trees, Shrubs, Evergreens, Roses, Plants, &c. Established 1857. See Advertisement.

FAIR, JOSHUA, *Nurseryman*, Tippecanoe.

FERRIS, I. C. & Co., *Nurserymen, &c.*, Pleasant Ridge.

FLETCHER, J. P., *St. Clair Street Nursery*, Cleveland.

GALLOWAY, J. L., *Camden Nursery*, Milford.
11 Acres; Fruit Trees, Shrubs, Evergreens, Vines Roses, &c.
Established 1855.

GALLUP, J., *Nurseryman*, Cleveland.

GAMBLE, J.W., *Nurseryman*, Hillsboro.

GRAVETT, JOHN, *Lancaster Nursery*, Lancaster.
6 Acres; general assortment of Fruit and Ornamental Trees, Evergreens, Shrubs, Roses, &c. Established 1854.

Ohio—*Continued.*

GULICK & WILLIAMSON, *Franklin Nurseries*, Bevis.

HALL & Co., *Hickory Grove Nurseries*, Toledo.

HAMMITT, J. and Co., *Nurseryman*, College Hill.

HAMPTON, W. C., *Tree & Seed Dealer*, Mount Victory.

HARRINGTON, E. W., *Nurseryman*, Yellow Springs

HARRIS, JOSEPH, *St. Clairsville Nursery*, St. Clairsville.
20 Acres; Fruit and Ornamental Trees, Evergreens, &c.

HAYES, O., *Nurseryman*, Bellefontaine.
Fruit and Ornamental Trees, &c.

HAZELTINE, S. W. and Co., *Rose Hill Nursery*, Avondale.
Fruit and Ornamental Trees, &c.

HEAVER, WM., *Reading Road Nursery*, Cincinnati.
Fruit and Ornamental Trees, Shrubs, and Plants.

HILL, F. G., *Franklin Nursery*, Dallasburgh.

HUBBELL, W. W., *Nurseryman, &c.*, Rutland.

HUMRICKHOUSE, T. S. & W., *Nurserymen*, Coshocton.

JACKSON, S. S. & SONS, *Jackson's Nurseries*, Cincinnati.

JOHNSON & COOKE, *Spring Hill Nursery*, New Milford.

JOHNSON, WM. M. & SON, *Hanover Nnrsery*, Hanoverton.

KELLY, M. & Co., *Clifton Nursery*, Cincinnati.

KELLEY, W. D., *Nurseryman*, Ironton.

KENYON, D., *River Bank Nursery*, Rockville.

KIMMEL, S. B., *Westfield Nursery*, Seville.

KINNEY, H. R., *Springhill Nursery*, Portsmouth.

KINSEY, J. G., *Mount Pleasant Nursery*, Mount Pleasant.

KNOTT, THOS., *Locust Grove Nursery*, Cincinnati.

LEWIS, WM. F. & E., *Berlin Nursery*, Shaler's Mills.
Principally Fruit Trees, for local trade. Established 1831.

LIPSEY, W. B., *Gilead Nursery*, Cardington.

MARSHALL, S. B., *Prospect Hill Nursery*, Massillon.
25 Acres; Fruit Trees, Evergreens, &c. Established 1846.

MCAVOY, D., *Garden of Eden Nursery*, Cincinnati.

MCCREARY & BERRY, *Nurserymen*, Oxford.

MCCULLOUGH, J. M. & SON, *Nurserymen, &c.*, Pleasant Ridge.

Ohio—*Continued.*

MEARS, W. E., *Nurseryman*, Mount Washington.

MEARS, W. E. & SON, *Clermont Nurseries*, Milford.

MERRIAM, J. P., *Nursery Agent*, Sandusky.

MILLER, N., *Nurseryman*, Bellefontaine.

MORRISON & BELL, *Nurserymen*, Portsmouth.
52 Acres; general Nursery Stock.
Established 1857.

MORRISON, H. & S., *Nurserymen*, St. Clairsville,

MORSE, T. W., *Glenville Nursery*, Cleveland.

MUMMA, G. R., *Dayton Nursery*, Dayton.

MURRAY, C. B., *Little Miami Nurseries*, Foster's Crossings.

MURRAY, M. M., *Fruit Hills Nurseries* Twenty Mile Stand.

NICHOLSON, L., *Lake Erie Nursery*, East Rockport.
30 Acres; Fruit Trees, &c.
Established 1850.

PENTLAND, F., *River Road Nursery*, Cincinnati.

PETICOLAS, T. V., *Pomona Nursery*, Mount Carmel.

PFEIFFER, A., *Avondale Nurseries*, Cincinnati.
Fruit and Ornamental Trees, Shrubs, &c.

PLUMLEY, J. W., *Nurseryman*, Marietta.

PRENTICE, F., *Great Western Nurseries*, Toledo.
125 Acres; Fruit and Ornamental Trees, Shrubs, Vines, Roses, &c.
Established 1847.
Branch Nurseries at Coldwater, Mich.

PULLEN, J. B. & SON, *Nurserymen*, Lebanon.

RAMSEY, WM., *Nurseryman*, Dayton.

ROBB, CHAS., *Hedge Builder*, New Richmond.

SAYERS & HUTCHINSON, *Cottage Garden Nurseries*, Cincinnati.

SHINKLE, J. L., *Brown County Nursery*, Hammersville.

SHOWER, LEITER & MILLIKEN, *Miami Valley Nurseries*, Hamilton.

STELZIG, J. L. & Co., *Grape Growers*, Columbus.

STOW, E. S. & CO., *Milan Nursery*, Milan.
30 Acres; Fruit and Ornamental Trees, Shrubs, Hedge Plants, &c.
Established 1835.

SWAN & GOODWIN, *Nurserymen*, Enon.

TAYLOR, DR. E., *Cove Dale Nurseries*, Cleveland.
30 Acres; Fruit and Ornamental Trees, Shrubs, Hedge Plants, &c.
Established 1856.

TURLEY, C., *Hopewell Nursery*, Quaker Bottom.

Ohio—*Continued.*

VAN CLEVE, J. W., *Nurseryman*, Dayton.

WARDER, J. T., *Oakland Nursery*, Springfield.

WARDER, R. H., *Nurseryman*, North Bend.

WISE & SONS, *Nurserymen*, Dayton.

WOOD, SAM'L. & SON, *Smithfield Nursery*, Smithfield.

20 Acres; Fruit and Ornamental Trees, Evergreens, Shrubbery, &c. Established 1816.

Oregon.

BRISTOW, W. W., *Nurseryman*, Pleasant Hill.

LUELLING & MERRICK, *Nurserymen*, Milwaukie.

PORTER, J. R., *Forest Grove Nursery*, Forest Grove.

RUBLE, W., *Cherry Hill Nursery*, Eola.

STANTON, A., *Nurseryman*, Salem.

WALLING & ANGEL, *Nurserymen*, Spring Valley.

WALLING, G. W. & Co., *Willamette Nursery*, Portland.

Pennsylvania.

BENNETT, A., *Florist*, Wilkinsburgh.

BOCKSTOCE & AMMON, *Lebanon Nursery*, Pittsburgh.

BRIGHT, WM., *Logan Nursery* Philadelphia.

BRINTON, W. P., *Nurseryman*, Christiana.

BUIST, R. & SON, *Rosedale Nurseries*, Philadelphia.

General assortment of Fruit and Ornamental Trees, Shrubs, Roses, Plants, &c

CONARD, A. F. & BRO., *West Grove Nurseries*, West Grove.

COOK, T. E. & SONS, *Pleasant Ridge Nurseries*, Bendersville.

CORSON, A. W., *Nurseryman*, Plymouth Meeting.

DARLINGTON, J. L. & CO., *Morris Nurseries*, Westchester.

75 Acres; General assortment of Fruit and Ornamental Trees, Roses, Grape Vines, &c Small Stock for the Trade, a speciality. Established 1847. 15,000 sq ft. of Glass. See Advertisement.

DICK, JOHN, *Helendale Nurseries*, Kingessing.

General Nursery Stock.

DREER, H. A., *Belmont Nursery*, Philadelphia.

New and Rare Plants, Grape Vines, &c.

DRYBURGH, A., *Florist, &c*, Philadelphia.

Pennsylvania—*Continued.*

DUNDAS, JAS., *Florist, &c.*, Philadelphia.

EVANS, EDWARD J. & CO., *Central Nurseries*, York.
100 Acres; Fruit and Ornamental Trees, Grape Vines, Roses, &c., Pears & Southern Apples, specialities.
3000 sq. ft. of Glass. Established 1857.
See Advertisement.

FERGUSSON, D., *Laurel Hill Nursery*, Philadelphia.
General Ornamental Stock.

FISHER, W. P., *Nurseryman*, Unionville.

GERNEY, JOHN, *Florist, &c.*, Philadelphia.

GLEASON, JAS., *Mount Airy Nursery*, Germantown.

HAINES & HACKER, *Cheltenham Nurseries*, Cheltenham.
10 Acres; general assortment of Fruit and Ornamental Trees, Shrubs, &c.
Established 1857.

HARSHBARGER, A., *Juniata Vineyard*, McVeytown.

HASTINGS, W. M., *Calmdale Nurseries*, Lebanon.

HOBBS, O. T., *American Garden of Experiments, and Vineyard Nursery*, Randolph.
10 Acres; principally Native Grapes, with an assortment of other Fruits, Flowers, &c. Established 1859.
5000 sq. ft. of Glass.

HOOPES & BRO., *Cherry Hill Nurseries*, Westchester.
40 Acres; Fruit and Ornamental Trees, Shrubs, &c. Grapes, Roses, and new and rare Evergreens, specialities.
Established 1854. 3,500 sq. ft. of Glass.

JACKSON, J. & Co., *Harmony Grove Nurseries*, Jennersville.
Successors to T. M. Harvey.

KNOX, J., *Small Fruit Grower*, Pittsburgh.

LATSHAW, D. B., *Nurseryman* East Vincent.
10 Acres; Fruit and Ornamental Trees.

LYTE, L. C., *Nurseryman*, Enterprise.

MCDONALD, JAS., *Florist, &c.*, Philadelphia.

MACKENSIE, PETER, *Exotic Gardens*, Philadelphia.

MAUPAY, S. & CO., *Rising Sun Nurseries*, Rising Sun.
Fruit & Ornamental Trees, Evergreens, Shrubs, Roses, Vines, &c.

MEEHAN, THOMAS, *Germantown Nurseries*, Germantown.
General assortment of Fruit and Ornamental Trees, Shrubs, Roses, &c.

MILLER, D., JUN., *Cumberland Nurseries*, Carlisle.
General Nursery Stock.

MISH, H. A., *Keystone Nursery*, Harrisburgh.
General Nursery Stock.

MOON, MAHLON, *Garden and Nursery*, Morrisville.
General assortment of Fruit and Ornamental Trees.

MURDOCH, JOHN, JUN., *Oakland Nursery*, Pittsburgh.

Pennsylvania—*Continued.*

MURDOCH, WM. & JAS., *Hedge Farm Nursery*, Pittsburgh.

NEGLEY & Co., *Nurserymen*, Pittsburgh.

PEIRCE, LUKENS, *Ercildown Nurseries*, Ercildown.
10 Acres; Fruit and Ornamental Trees, Apple and Peach specialities. Established 1845.

PETERS, GEO., *Fairmount Nurseries*, Bendersville.
General Nursery Stock.

PRICE, J. M., *Wallingford Nurseries*, Oakdale.

RAABE, PETER, *Florist*, Philadelphia.

RITCHIE, JAS., *Florist*, Philadelphia.

RUTTER, DR. J., *Nursery and Gardens*, Westchester.
Principaliy Native Grapes.

SAUNDERS, WM., *Rural Architect*, Germantown.

SCOTT, R. R., *Horticulturist*, Kingsessing.
Fruit and Ornamental Trees, Shrubs, Plants, Seeds, &c.

SEAL, THOS. F., *Nurseryman*, Unionville.

SHERWOOD, JOHN, *College Wharf Nursery*, Bristol.

SHIELDS, T. L. & Co., *Sewickley Nurseries*, Sewickley.

SOUTHWOOD, WM., *Nurseryman and Florist*, Philadelphia.

THOMAS, E. & J. W., *Chester Valley Nursery*, King of Prussia.
9 Acres; Hardy Fruit and Ornamental Trees, Plants, &c. Established 1855.

WARFEL & HERR, *Pequea Valley Nurseries*, Strasburgh.

WARING, R., *Nurseryman*, Tyrone.

WARING, W. G., *Farmers' High School Nursery*, Farm School.

YOUNGKEN, J. G., *Nurseryman*, Richlandtown.

Rhode Island.

DYER, C. & D. P., *Nurserymen*, Providence.
General Nursery Stock.

MOORE, SILAS, *Florist, &c.*, Providence.

South Carolina.

JONES, J. W., *Florist*, Charleston.

MCDONALD, JAS. C. W., *Grape Grower*, Woodward.

PUDIGON, A., *Florist*, Charleston.

SUMMER, WM., *Pomaria Nurseries.*
30 Acres; Southern Fruits, Hardy Evergreens, Shrubs, Roses, Grape Vines, &c. Established 1850.

Tennessee.

DODGE, J. W. & SON, *Pomona Nursery*, Pomona.
General assortment of Fruit Trees.

HOUGHTON, S. W., *Nurseryman*, Winchester.

LANGDON & CHERRY, *Nurserymen*, Nashville.
Fruit Trees, Evergreens, &c.

LISHY, L. C., *Nursery and Fruit Gardens*, Nashville.

McGREDY, D. A., *Linwood Nurseries*, Nashville.

REEDER, D. O., *Madrid Bend Nurseries*, Silver Top.
General assortment of Fruit Trees, Shrubs, &c. Apples and Dwarf Pear, specialities.

TRANSOU, B. F., *Haywood Nursery*, Wellwood.
10 Acres; Fruit Trees, Grape Vines, &c. Established 1849.

WHEATON, S. M., *Bellevue Nursery*, Memphis.

Virginia.

CURTIS, G. D., *Nurseryman*, Moundsville.

DAVIS, FRANKLIN, *Nurseryman*, Staunton.
General Nursery Stock.

GUEST, JAS., *Rose Grower*, Richmond.

HALLIDAY, JOHN, *Nurseryman*, Lynchburg.
20 Acres; Fruit Trees, Shrubs, Evergrens, &c. Established 1852.
4000 sq. ft. of Glass.

PLANK, A., *Nurseryman*, Lynchburgh.
Fruit and Ornamental Trees.

ROBEY, H. R., *Hopewell Nurseries*, Fredericksburgh.
General Nursery Stock.

TAYLOR, Y. & SON, *Nurserymen*, Purcelville.

WEIR, ANDREW, *Florist*, Norfolk.

Wisconsin.

ATWOOD, S., *Rock Lake Nurseries*, Lake Mills.

BAUMBACH, BROS., *Florists, &c.*, Milwaukie.

BOND, JOSIAH, *Nurseryman*, Kenosha.

BRAYTON, J. C., *Nurseryman*, Aztalan.

COLBY & WILLEY, *Rock County Nursery*, Janesville.

DOYLE, L. H., *Nurseryman*, Lodi.

DRAKE, F., *Nurseryman*, Racine

GASTON, N. C., *Nurseryman*, Delavan.

GIFFORD, CHAS., *Spring Street Nursery*, Milwaukie.

Wisconsin—*Continued.*

GOULD, J., *Nurseryman*, Beaver Dam.

HAND, JOHN, *Nurseryman* Madison.

HANFORD, A.G., *Woodside Nurseries*, Waukesha.

Fruit and Ornamental Trees, Shrubs, Rosee, Evergreens, &c.
Established 1850.

HISLOP, THOS., *Florist, &c.*, Milwaukie.

General assortment of Shrubs, Plants, &c.

KELLOG, GEO. J., *Belle Cottage Nursery*, Janesville.

12′ Acres; Apples, Small Fruits, and Ornamentals.
Established 1854.

PEFFER, GEO. P., *Nurseryman*, Pewaukee.

PLUMB, J. C. & Co, *Nurserymen*, Madison.

STICKNEY & LOVELAND, *Nurserymen*, Wauwatosa.

SPAULDING, P. B., *Nurseryman*, Beloit.

EUROPEAN NURSERIES.

The following comprise the principal foreign establishments, doing business in this country.

Belgium.

De Jonghe, J.,	Brussels.
Van Geert, A.,	Ghent.
Van Geert, C.,	Antwerp.
Van Geert, J.,	Ghent.
Van Houtte, L.,	Ghent.
Verschaffelt, A.,	Ghent.

Denmark.

Hansen, Chas.,	Copenhagen.

England.

Backhouse, J. & Son,	York.
Bass & Brown,	Sudbury.
Brundrit, W. & J.,	Stretford.
Chandler & Sons,	Wandsworth road.
Cunningham, G. & Son,	Liverpool.
Dickson, Jas., Sons & Co.,	Manchester.
Donald, R. & Son,	Woking.
Finney, S. & Co.,	Gateshead.
Fisher, Holmes & Co.,	Sheffield.
Garaway, Mayes & Co.,	Bristol.
Henderson, A. & Co.,	Edgeware-road.
Henderson, E. G. & Son,	St. Johnswood.
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Keynes, J.,	Salisbury.
Low, Hugh & Co.,	Clapton.
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Osborn & Sons,	Fulham.
Paul, A. & Son,	Cheshunt.
Rivers, Thos.,	Sawbridgeworth.
Skirving, Wm.,	Liverpool.
Standish, John,	Bagshot.
Turner, Chas.,	Slough.
Veitch, Jas., Jr.,	Chelsea.
Veitch, J. & Son,	Exeter.
Waterer, J.,	Bagshot.
Waterer & Godfrey,	Woking.
Youell & Co.,	Great Yarmouth.

France.

Dauvesse, D.,	Orleans.
Jamin & Durand,	Paris.
Lartey fils,	Bordeaux
Lebigot, P.,	Angers.
Leroy, A.,	Angers.
Leroy, L.,	Angers.
Portemer fils,	Gentilly.
Thibaut & Keteleer,	Paris.
Transon, P. and E.,	Orleans.
Verdier, E. fils ainé,	Paris.

Holland.

Krelage, E. H. and Son,	Haarlem.
Mooy, H. Polman,	"
Vanderschoot, R. and Sons,	"
Van Eeden, A. C. and Co.,	"
Van Waveren and Son,	"
Zocher and Schneevoogt,	"

Prussia.

Appelius, C.,	Erfurt.
Benary, E.,	"
Haage, F. A.,	"
Moschkowitz and Siegling,	"
Villain Bros.,	"

Scotland.

Cardno and Darling,	Aberdeen.
Cunningham, Frazer and Co.,	Edinburgh.
Dickson and Co.,	Edinburgh.
Downie and Laird,	"
Fowler and Son,	Glasgow.
Glendinning, J.,	Annan.
Lawson, P. and Son,	Edinburgh.
Palmer, John,	Annan.
Reid, D. and Son,	Edinburgh.
Samson, W. and T.,	Kilmarnock.
Sang, E. and Son,	Kirkaldy.
Stewart, J. and Sons,	Dundee.
Stuart and Mein,	Kelso.
Urquhart and Son,	Dundee.

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Fruit & Ornamental Trees.

The undersigned beg to announce to Nurserymen, Dealers in Trees, Orchardists, and Planters generally, that they have always on hand, and are prepared to

FURNISH ON THE MOST REASONABLE TERMS,

Standard and Dwarf Fruit Trees of all kinds.

Grapes, new and old, all desirable varieties.

Currants, Gooseberries, Raspberries, and other Small Fruits—all the most valuable sorts known.

Dwarf Trees for Orchard Houses.

Ornamental Deciduous Trees.

Evergreen Trees.

Flowering Shrubs.

Roses, Pæonies, Dahlias, Phloxes, &c.

Bulbous Flower Roots of all sorts.

Stocks of all kinds for Nurserymen, and in short,

EVERYTHING IN THE WAY OF NURSERY STOCK.

The Grounds comprise 500 Acres of Land, all closely planted with Nursery Stock in the highest state of cultivation, and all under the direct supervision of the proprietors.

TREES AND PLANTS packed in the best manner for all parts of the United States and Europe.

THE FOLLOWING CATALOGUES

Will be sent *gratis, prepaid,* to all who apply and enclose one stamp for each.

No. 1—Descriptive Catalogue of Fruits.

No. 2—Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c., &c.

No. 3—Descriptive Catalogue of Dahlias, Green-House and Bedding Plants, &c.

No. 4—Wholesale Catalogue for Nurserymen, Dealers, and others who purchase in large quantities.

ELLWANGER & BARRY,

Mount Hope Nurseries, Rochester, N.Y.