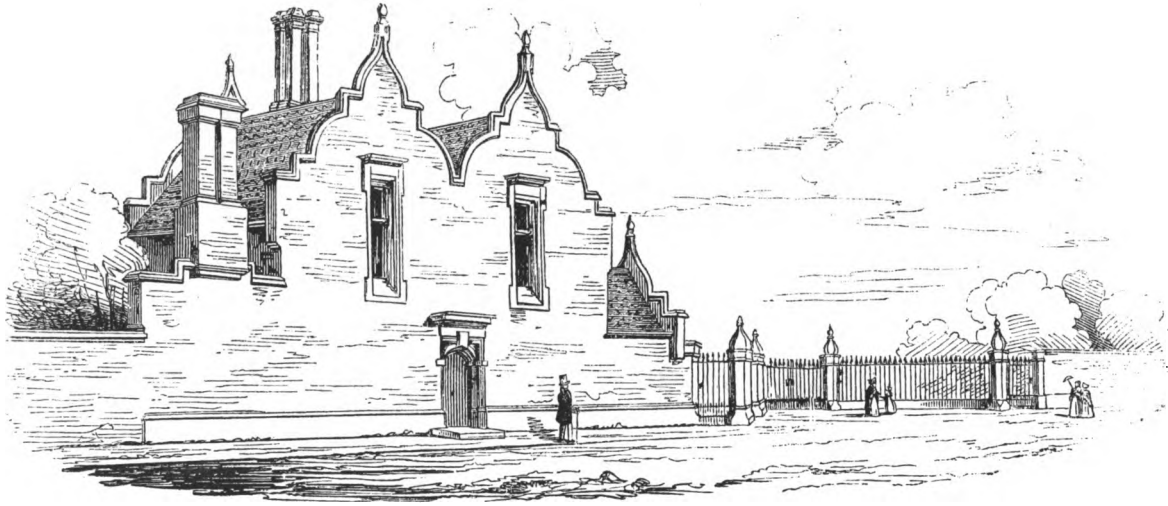


Exterior View of the principal Entrance Lodge and Gates to the Derby Arboretum.
Style Elizabethan.

THE

DERBY ARBORETUM:

CONTAINING

A CATALOGUE OF THE TREES AND SHRUBS

INCLUDED IN IT;

A Description of the Grounds,

AND

DIRECTIONS FOR THEIR MANAGEMENT;

A

COPY OF THE ADDRESS

DELIVERED WHEN IT WAS

PRESENTED TO THE TOWN COUNCIL OF DERBY

BY ITS FOUNDER,

JOSEPH STRUTT, ESQ.

AND

AN ACCOUNT OF THE CEREMONIES

WHICH TOOK PLACE WHEN IT WAS OPENED TO THE PUBLIC,
ON SEPTEMBER 16. 1840.

BY J. C. LOUDON, F.L.S. H.S. &c.
AUTHOR OF THE "ARBORETUM BRITANNICUM," AND CONDUCTOR OF
THE "GARDENER'S MAGAZINE," ETC.

LONDON:
LONGMAN, ORME, BROWN, GREEN, AND LONGMANS.
SOLD, FOR THE BENEFIT OF THE DERBY ARBORETUM,
BY THE CURATOR.
Price One Shilling and Sixpence.
1840.

LONDON:
Printed by A. SPOTTISWOODE,
New-Street-Square.

CONTENTS.

LIST OF ENGRAVINGS.

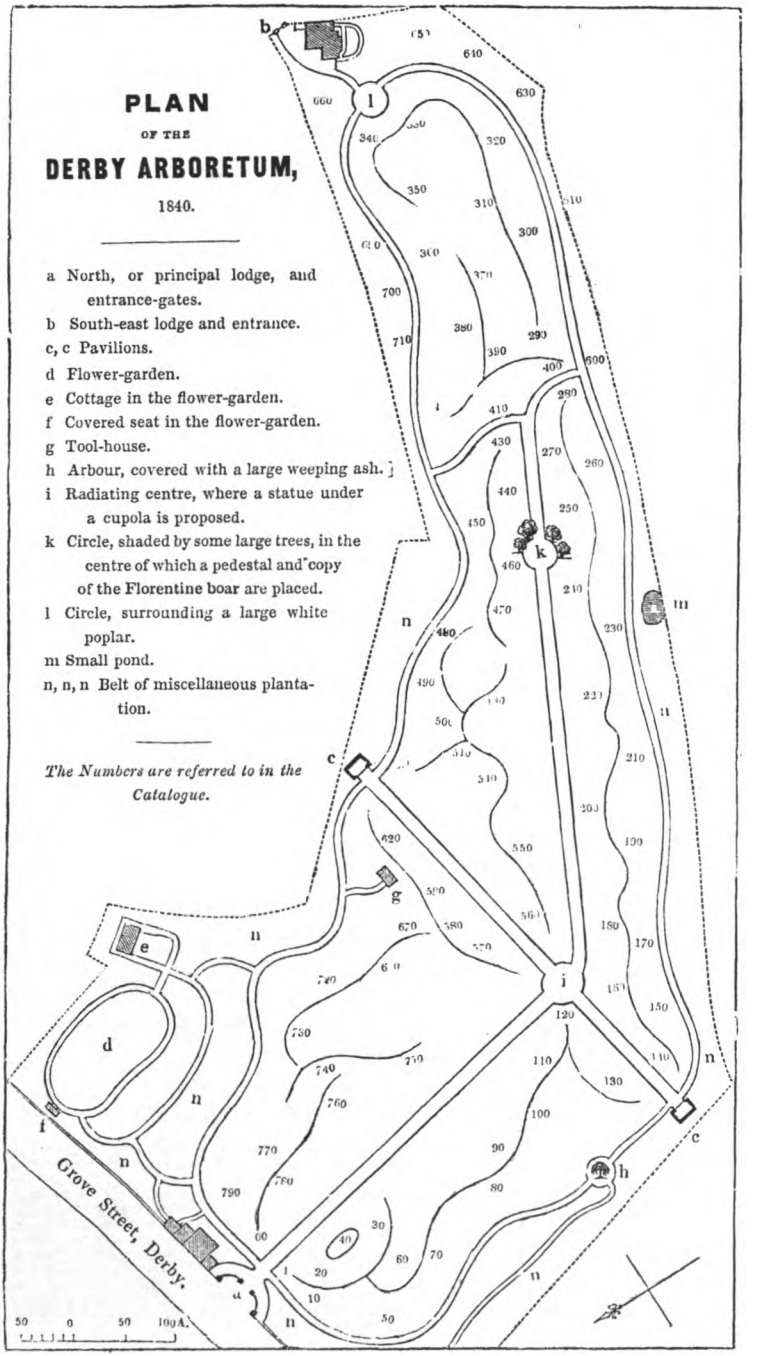
LIST OF AUTHORITIES FOR NAMES, AND OF BOOKS QUOTED

Aiton	*W. T. Aiton*, Esq., F.L.S., H.S., &c. Director of the royal garden at Kew.
Andr.	*Henry Andrews.* A botanical draughtsman, and editor of the "Botanical Repository," &c.
Arb. Brit.	*Loudon's Arboretum Britannicum.* 8 vols. 8vo. 1838.
Audibert.	*Audibert.* A nurseryman at Tarascon, in the South of France.
Banks.	*Sir Joseph Banks*, Bart. An eminent patron of botany.
Barr. } *Barrel.* }	*Barrelier.* A French botanist.
Bartram.	*Bartram.* A nurseryman at Philadelphia, in the end of the last century.
Bauh.	*Bauhin.* Two brothers of this name, professors of medicine in Holland.
Benth.	*George Bentham*, F.L.S., &c. An English botanist, secretary to the London Horticultural Soc.
Bieb.	*Bieberstein.* A distinguished Russian botanist.
Boerh.	*Boerhaave.* A Dutch botanist, professor of botany at Leyden.
Booth.	*Booth.* A nurseryman at Hamburg.
Borr.	*W. Borrer*, F.L.S. An English botanist, distinguished by his description of willows and roses.
Bosc.	*Bosc.* A French botanist, and professor of culture in the Jardin des Plantes.
Camer.	*Camerarius.* A German botanist.
C. A. Meyer.	*C. A. Meyer.* A Russian botanist.
Cass.	*H. Cassini.* A French botanist.
Cav.	*Cavanilles.* A Spanish professor and botanist.
C. Bauh.	*Caspar Bauhin.* One of two brothers, celebrated botanists of the sixteenth century.
Choix.	*Choisy.* A Swiss botanist.
Coll.	*Colladon.* A Genoese botanist.
Dec.	*A. P. DeCandolle*, F.R.S., &c. The most celebrated botanist of the age, a native of France, but resident at Geneva.
Desf.	*Desfontaines.* A French botanical author and traveller.
Desv.	*Desvaux.* A French professor of botany.
Dill.	*L. W. Dilwyn*, F.R.S., L.S., &c. An English botanist.
D. Don.	*David Don*, Esq. Professor of botany in King's College, London.
Donn.	*Donn.* Curator of the botanic garden at Cambridge.
Don of Forfar.	*Don of Forfar.* An eminent Scottish botanist, father of D. Don and G. Don.
Don's Mill.	Don's edition of Miller's Dictionary of Botany and Gardening.
Dougl.	*David Douglas*, F.L.S. A celebrated botanical collector, and martyr to his enthusiasm for the science.
Dumont.	*Dumont de Courset.* A French botanist, author of "Le Botaniste Cultivateur."
Dunal.	*Dunal.* A French botanist.
Ehrh.	*Ehrhart.* A German botanist.
Elliot.	*Elliot.* An American botanist.
Ellis.	*Ellis.* A London botanist, and correspondent of Linnæus.
Fisch.	*Dr. Fischer.* A Russian botanist.
Fllgge.	*Fllgge.* A German botanist.
Forskoel.	*Forskoel.* A Danish botanist.
Gært.	*Gærtner.* A celebrated German botanist.
Gard. Mag.	*The Gardener's Magazine.* A periodical, commenced in 1826, and continued in monthly Numbers, at 1*s.* 6*d.* each.
Gaud.	*Gaudichaud.* A French botanist.
G. Don.	*Geo. Don*, F.L.S. A distinguished botanist and traveller, editor of the last edition of "Miller's Dictionary."
Ham.	*Hamilton*, F.L.S. A botanist and traveller in the East Indies, who has subsequently taken the name of Buchanan.
Haw.	*Haworth*, F.L.S. An English botanist.
Hayne.	*Hayne.* A Prussian botanist.
H. et K.	*Humboldt & Kunth.* German botanists and travellers.
Hoffm.	*Hoffmannsegg.* A botanist of Dresden.
Horn.	*Hornemann.* A Danish botanist.
Hort.	*Hortulanorum.* Signifying that it is the name commonly given to the plant by gardeners.
Hort. Dur.	*Hortus Duroverni:* being a catalogue of plants and seeds cultivated and sold by W. Masters, F.H.S., &c., Canterbury. 3d ed., 1831.
Hort. Par.	*Hortus Parisiensis.* Or a catalogue of the plants cultivated in the Paris garden.
Höss.	*F. Höss.* An Austrian botanist, professor of forest culture in Vienna.
Jacq.	*Jacquin.* An Austrian botanist and traveller.
Juss.	*Jussieu.* A celebrated French systematic botanist.
Ker.	*Ker*, F.L.S. An English botanist, one of the founders of the "Botanical Register."
Kit.	*Kitaibel.* A Hungarian botanist.
Kunth.	*Kunth.* A Prussian botanist.
L.	*Linnæus.* The celebrated reformer of botany and natural history in general.
Labill.	*Labillardière.* A French botanist.
Lam.	*Lamarck.* A French botanical author.
Lamb.	*A. B. Lambert*, F.R.S. Vice-president of the Linnæan Society, author of a "Monograph on the Genus Pinus."
Laxm.	*Laxmann.* A German writer on Siberian plants.
L'Hérit.	*C. L. L'Héritier.* A French botanical author.
Lindl.	*John Lindley*, Ph.D., F.R.S., &c. Professor of botany in the University College, London, and vice-secretary of the London Horticultural Society.
Link.	*H. F. Link.* A celebrated Prussian botanist.
Lodd.	*Messrs. Loddiges.* Celebrated English nurserymen and botanists, at Hackney, near London.
Lodd. Cat.	*Catalogue of Plants* in the collection of Conrad Loddiges and Sons, nurserymen, Hackney. Ed. 1836.
Lois.	*Loiscleur Deslongchamps.* A French botanist.
Lour.	*Loureiro.* A Portuguese traveller in Cochin China.
Mackay.	*J. T. Mackay*, F.L.S., &c. Curator of the Trinity College Botanic Garden, Dublin, author of "Flora Hibernica," &c.

Mag. Nat. Hist.	*The Magazine of Natural History.* Commenced by J. C. Loudon, F.L.S., &c., in 1828; and completed in 12 volumes, by Edward Charlesworth, F.G.S., &c., in 1839.
Mart.	*Dr. Martius.* A Bavarian botanist and traveller.
Masters.	*W. Masters*, F.H.S., &c., of the Canterbury Nursery.
Med.	*Dr. Medicus.* A German botanist of the last century.
Michx.	*The younger Michaux.* Author of "L'Histoire des Arbres de l'Amérique."
Mill.	*Miller.* An English gardener and botanist.
Mill. Dict.	*Miller's Gardener's and Botanist's Dictionary.*
Moc.	*Mocino.* A Mexican botanist.
Moc. et Sesse.	*Mocino & Sesse.* Two Mexican botanists.
Mœnch.	*Mœnch.* A German botanist.
Mühlenb.	*Mühlenberg.* A North American botanist.
Murr.	*Murray.* A German botanist.
Nutt.	*Nuttall.* A North American botanist.
Otto.	*Fr. Otto.* Director of the Royal Botanic Garden, Berlin, author of several botanical and horticultural works.
Pall.	*Pallas.* A Russian botanist and traveller.
Pav.	*Pavon.* A Spanish botanist and traveller.
Pers.	*Persoon.* A French botanical author.
Ph. / *Pursh.*	*Pursh.* A Prussian botanist, and traveller in North America.
Plin.	*Pliny.* A celebrated ancient naturalist.
Poir.	*Poiret.* A French botanical writer.
Pourr.	*Pourret.* A French botanist.
Pursh.	See *Ph.*
R. et P.	*Ruiz & Pavon.* Spanish botanists, travellers in Peru and Chile.
Rafin.	*C. S. Rafinesque.* A botanical author.
R. Br.	*Dr. Robert Brown*, F.R.S., &c., Vice-President of the Linnæan Society. A distinguished English botanist, and traveller in New Holland.
Renault	*Renault.* A French botanical writer.
Rich.	*Richard.* An eminent French botanist.
Rox. / *Roxb.*	*Dr. Roxburgh.* An English botanist, long resident in India.
Sal. / *Salisb.*	*R. A. Salisbury*, F.R.S., L.S., &c. An eminent English botanist.
Schrad.	*Schrader.* A German botanist.
Scop.	*Scopoli.* An Italian botanist.
Scr	*Seringe.* Director of the Royal Botanic Garden, Lyons, and one of the collaborateurs of DeCandolle, in his "Prodromus."
Sims.	*Dr. Sims.* An English botanist, for many years editor of the "Botanical Magazine."
Sm. / *Smith.*	*Sir James E. Smith*, F.R.S., &c. Founder of the Linnæan Society of London, and author of several botanical works.
Spreng.	*Kurt Sprengel.* A celebrated German botanist.
Stev.	*Steven.* Director of the National Garden at Nikitka in the Crimea.
Sweet. / *Swt.*	*R. Sweet*, F.L.S. An English botanist, author of various works.
Swartz.	*Swartz.* A Swedish botanist and traveller in the West Indies.
Ten.	*Tenore.* A Neapolitan botanist.
Thomp.	*Thompson.* A nurseryman at Mile End.
Thouin.	*Thouin.* A French botanist, professor of culture in the Jardin des Plantes.
Thunb.	*Thunberg.* A Swedish botanical traveller.
Torr.	*J. Torrey*, M.D., F.L.S., &c. An American botanist, one of the authors of the "Flora of North America."
Tourn.	*Tournefort.* A celebrated French botanist, who travelled in Greece and Asia Minor.
Vahl.	*Vahl.* A Danish botanist.
Vent.	*Ventenat.* A French botanist.
Vent. et Bosc.	*Ventenat & Bosc.* French botanists.
Vil. / *Vill.*	*Villars.* A French botanist.
Vilmorin.	*The Chevalier Vilmorin*, F.H.S. A French seedsman and botanist, one of the editors of the "Bon Jardinier."
Vis.	*Visiani.* An Italian botanist, who wrote on the plants of Dalmatia.
W. / *Willd.*	*Willdenow.* A German botanist, and editor of an edition of Linnæus's "Species Plantarum."
Wal.	*Waldstein.* A German nobleman, a patron of botany.
Waldst. et Kit.	*Waldstein & Kitaibel.* Authors of the "Flora of Hungary."
Wallich.	*Dr. N. Wallich*, F.L.S. An English botanist, superintendant of the botanical garden at Calcutta, and author of several works.
Walt.	*Walter.* A writer on the "Flora of Carolina."
Wangenheim.	*Wangenheim.* A German botanist.
Wendl.	*Wendland.* A German garden botanist.
Willd.	See *W.*
Wulf.	*Wulfen.* A German botanist.

MODE ADOPTED IN PRINTING THE BOTANICAL NAMES.

THE botanical names are accented. The vowels which are sounded short are marked with an acute accent (ˊ), as *Clématis*; and those which are sounded long with a grave accent (ˋ), as *Pæònia*. In order to impress names on the memory, all those which have been applied to plants by the ancients have the first letter in Italic, as *Clématis*; where it is commemorative of some individual, the letters additional to the name are in Italic, as in *Magnòlia*; and where an aboriginal name has been adopted, or where the name is of uncertain derivation, the whole word is in Italic, as in *Bérberis*. Where a name has been applied to a plant by the ancients, and was by them used as commemorative, the first letter is in Italic, and also the letters additional to the name, as in *Pæònia*. (see p. 9.) When the name would otherwise be in Italic, as in the case of synonymes, headings to paragraphs, &c., these distinctions are of course reversed, as *Clématis*, *Magnòlia*, &c. All the other scientific names of plants, generic and specific, are composed from the Greek or Latin, with the exception of a very few which are taken from places; as Araucària, from the country of the Araucanians; Quércus grammúntia, from the estate of Grammont, &c.



THE

DERBY ARBORETUM,

&c.

I.

CATALOGUE OF THE TREES AND SHRUBS.

The objects of this Catalogue are, partly to serve as a record of the trees and shrubs which have been planted, and partly to indicate particular kinds, and their habits, or the associations connected with them, in order to excite an interest in the subject of trees and shrubs in the minds of general observers.

The order followed, both in this Catalogue and in the Arboretum, is what is called the Natural Method, by which plants are classed or grouped together according to the greatest number of points in which they resemble one another. The largest groups form Classes, those next largest Orders, and these are subdivided into Tribes, Genera, Species, and Varieties. This mode of bringing plants together in groups greatly assists, not only the memory, but the judgment; for, if we recollect any one plant of a group, and its properties, we may conclude that all the others belonging to it bear the same general resemblance externally, and contain more or less the same internal properties. This, any visiter of the garden may convince himself of, by looking at all the plants enumerated under any one Order, and comparing them with one another; and this he may do at any season of the year, though to the greatest advantage when the plant is in flower.

The names of the Orders are not put on the tallies in the grounds, because, as the plants of each Order are scattered about, these tallies would not have indicated the limits of the Orders, which can readily be found by a reference to the present Catalogue, and they would have therefore been of little use.

The numbers which precede the names in this Catalogue are those which precede the names on the brick tallies, and their object is to facilitate the discovery of any species or variety which it may be wished to examine. The place of any plant in the Arboretum may be readily found by looking to the place of the nearest number in the Ground Plan, which forms the engraving *fig.* 1. For example, if it is desired to find the plant marked No. 26. find Nos. 20. and 30. on the plan, and No. 26. will be found between them in the grounds. The numbers and names, which commence with the plants of *Ranunculàceæ*, begin at the right hand on entering the Garden, are continued round it, and end with No. 802. on the left hand. Several plants have numbers followed by letters, as 16*a*., 16*b*., 16*c*., &c.; these merely show additions that were made after the first numeration was completed. These additions were made, partly because some plants were added which were at first thought

too tender, and partly because some were obtained from the Horticultural Society's Garden, which it was thought could not be procured.

On the cards contained on the brick tallies, the native country, year of introduction, and height of the plant in its native country, are always given, and therefore these are not repeated in this enumeration; neither is any reference made to the page in the *Arboretum Britannicum* in which the description and history of each species is given at length, or in the abridged edition of that work, because recourse can easily be had to the indexes of these volumes: for the benefit of those who wish to consult them, a copy of each is deposited in the public room of the North Lodge.

RANUNCULA'CEÆ.

The plants of this order, as the name implies, have, in their foliage and flowers, more or less the appearance of the Ranunculus or Crowfoot; they are chiefly herbaceous plants, but a few of them are somewhat woody. They are mostly natives of Europe and North America, but some of them are from Japan and China. They generally grow in a cold damp soil; and in properties they are acrid, caustic, and poisonous. The bark, leaves, and blossoms of all of them, gathered green, bruised, and applied to the skin, will produce inflammation, and even raise blisters. Some of the species are highly ornamental. The name Ranunculus is formed from *rana*, a frog, in allusion to the wet situations in which the more common species generally grow. The genera are *C*lématis and *A*trágene.

1. to 11. *C*LE'MATIS *L.* (From *klēma*, the small branch of a vine.) The Vine Bower, Virgin's Bower, or Lady's Bower. Very ornamental climbing shrubs, flowering in May and June, with blue, red, white, and yellow flowers, very showy.

1. *C. Flámmula* L. The inflammatory-juiced Clematis, or sweet-scented Virgin's Bower. A native of France, remarkable for its abundance of fragrant white blossoms, which are succeeded by cottony tufts composed of its seeds and their persistent styles, which resemble feathery tails.
2. *C. orientàlis* L. The Oriental Clematis. A native of the Levant, noticeable for the glaucous hue of the foliage, and the yellowish white colour of the flowers, which are not fragrant. By some it is called *C.* glaúca, and by others *C.* flàva.
3. *C. Vitálba* L. The White-Vine Clematis, or Traveller's Joy. Gerard says that he gave this plant the name of the Traveller's Joy, because of its "decking and adorning the ways and hedges where people travel;" it is also called the Old Man's Beard, from the white hairy appearance of the tails of the carpels or seed pods. It is common in hedges on chalky or limestone soils, as far north as Durham. It is very common in France, where the shoots are used for binding faggots, and making baskets, and where their tender points are pickled in vinegar and brought to table. The beggars in France apply the bruised green leaves to make ulcers in their arms and legs, for the purpose of exciting compassion, curing themselves afterwards by the application of the leaves of the beet. The shepherds and schoolboys, in some parts of England and Germany, cut off pieces of the old wood of this plant, which they light at one end, and smoke like a pipe of tobacco. In gardens it is particularly valuable for the rapidity with which it may be made to cover naked walls, roofs, or arbours. A fine example of this may be seen in the garden of the founder of this Arboretum in Derby, in which there is one of the largest plants in England. In May, 1840, its stem measured at the ground nearly 1 ft. in diameter, and the main shoots proceeding from it were upwards of 100 ft. in length; the space covered by the branches could not be less than 3000 sq. ft. The flowers are of a greenish white, scent like almonds, and are much sought after by bees. The seeds have long, feathery, wavy, silky tails, which form beautiful tufts during the months of October and November, and often remain on all the winter

4. *C. virginiàna* L. The Virginian Clematis. Closely resembling the preceding species, but of a more slender habit.
5. *C. triternàta* Dec. The triternate-leaved Clematis. A doubtful species. (See *Arb. Brit.*, p. 2534., and abridged ed. p. 6.)
5*a*. *C. gràta* Wal. The grateful-scented Clematis. A slender-growing somewhat delicate species from the Himalayan Mountains.
6. *C. flórida* Thunb. The florid Clematis. A most beautiful species, with large white flowers, which has the best effect when trained against a wall.
7. *C. flórida flòre-plèno* Hort. The double-flowered florid Clematis.
8. *C. Viticélla cærùlea* Hort. The blue-flowered Virgin's Bower Clematis. A very ornamental plant, and the most generally cultivated of the family. It is admirably adapted for covering bowers, trelliswork, training up the props of verandas, or against a wall. It was named Virgin's Bower in honour of Queen Elizabeth, in whose reign it was introduced from the South of Europe. Cowper says,

> " Why should not the virgin's friend
> Be crown'd with virgin's bower ? "

9. *C. Viticélla purpùrea* Hort. The purple-flowered Virgin's Bower Clematis. Equally beautiful with the preceding species.
10. *C. Viticélla múltiplex* G. Don. The double-flowered Virgin's Bower Clematis. Very ornamental, but more delicate than the preceding kinds.
11. *C. montàna* Ham. The Mountain Clematis. A very vigorous and rapid-growing species, which soon covers a great extent of wall and of trelliswork, and produces abundance of large white flowers in May. Though it is a native of Nepal, it is almost as hardy as the Traveller's Joy.

12. and 13. ATRA'GENE *L.* (From Greek words signifying clasping.) The Atragene. The atragenes are so like the clematises that some botanists include them both in one genus.

12. *A. alpìna* L. The Alpine Atragene. A very beautiful climbing plant, which produces large, showy, blue flowers in May and June. It is best cultivated against a wall.
13. *A. sibírica* L. The Siberian Atragene. Less vigorous than the preceding species, and producing white flowers in June.

PÆONIA'CEÆ.

The fruit or seed pods of the plants of this order so closely resemble those of the ranunculus, that they have been generally included under *Ranunculàceæ*. The woody species, however, differ so much in habit, that we have thought it better to group them by themselves. The genera are *Pæònia* L. and *Xanthorhìza L.*, natives of China and North America.

14. and 15. *PÆO'NIA* L. (From *Pæon*, a physician, who first used the plant in medicine.) The Peony, or Piony. The woody kinds are natives of China. The flowers are rosy or white appearing in May, and the seeds black.

14. P. Moútan *papaveràcea* And. The Poppy-flowered Moutan Peony. The flowers are large, with a dark mark on the lower part of each petal, resembling those on the petals of the garden poppy. The flowers are frequently injured by spring frosts ; for which reason a mat ought to be suspended horizontally over them at the height of 1 ft. above the plant, but so as not to touch it. This will reflect back the heat which is radiated from the ground, and prevent the deposition of dew from above, which might afterwards freeze, on the leaves.
15. P. Moútan *Bánksii And.* Sir Joseph Banks's Moutan Peony. The flowers are large, rosy, and double ; though they frequently ripen seeds, from which, and also from the seeds of the poppy peony, many beautiful varieties have been raised, and may be purchased in the nurseries. Brought from China by Sir Joseph Banks.

16. XANTHORHI'ZA *apiifòlia* L'Hérit. The Parsley-leaved Yellow-Root. A low creeping-rooted shrub with beautifully cut leaves, and very small purple flowers in branched racemes, which appear early in May. The roots and the whole plant abound in a yellow juice, which might be used in dyeing. It is a native of Virginia and Georgia, and is quite hardy in British gardens.

MAGNOLIA'CEÆ.

The most splendid flowering trees in the British arboretum are contained in this order, the plants of which are chiefly natives of North America and Asia. They are mostly deciduous trees, but one is an evergreen tree, and some are shrubs. The greater part of them are somewhat tender, and thrive best against a wall. The bark of all the species is bitter, aromatic, and fragrant, and in America it is used for the same purpose as the Jesuit's bark or quinquina is in Europe. The genera are Magnòlia L. and Liriodéndron *L*

16*a*. to 19*b*. MAGNO'LIA L. (After *Magnol*, professor of botany at Montpelier.) The Magnolia. Flowers for the most part white ; April to August.

16*a*. M. *grandiflòra* L. The large-flowered Magnolia, or, as it is called in America, the Big Laurel. This is a lofty evergreen tree in Carolina ; but in England it generally requires a wall, and few plants are better deserving of that situation. It is not, however, so tender as to be killed in the open garden, but it very seldom thrives there so well as to produce its flowers. When this plant was first introduced into Europe it made a great noise. Sir John Colliton of Exeter, and a gentleman at Maillardière in the neighbourhood of the town of Nantes, each obtained a plant of it about the same time, viz. 1730, or before. By far the greater number of magnolias in Britain have been raised by layers from the Exeter tree, and the greater number of those in France from layers or seeds produced by the tree at Maillardière. Louis XV., having heard of the latter tree, sent two of his gardeners to ascertain if it were possible to transport it to Versailles, and be answerable for its growth there; but, having examined the tree, they were of opinion that it would not survive removal. Had they understood the art of transplanting large trees as well as Mr. Barron, the Earl of Harrington's gardener at Elvaston Castle, their answer would have been different. This tree still exists, though it was greatly injured during the troubles of the civil war of La Vendée, the house near which it is planted having been set on fire. In 1835, it was upwards of 30 ft. high. The tree at Exeter was cut down by mistake about the year 1794, after having made the fortune of several gardeners, who sold the plants at five guineas each.

16*b*. M. *grandiflòra obovàta* Ait. The obovate-leaved large-flowered Magnolia. A very handsome species, with large leaves broadest at the extremity opposite the footstalk.

16*c*. M. *grandiflòra exoniénsis* Hort. The Exmouth large-flowered Magnolia. This variety has much narrower leaves than the two preceding kinds, and it produces its flowers in great abundance, and at an earlier age. It is supposed to be the variety above mentioned, which was cultivated by Sir John Colliton at Exeter.

16*d*. M. *glaúca* L. The glaucous-leaved Magnolia, the Swamp Sassafras or Beaver-wood of the Americans. This is a deciduous low tree, tolerably hardy, which produces its highly fragrant white flowers in the open garden from June to September. The bark, when tasted, will be found to be highly fragrant, and in its native country it is greedily sought after by beavers. It thrives best in peat soil kept moist ; and sometimes it ripens seeds in this country.

16*e*. M. *glaúca Thompsoniàna Thomp*. Thompson's glaucous-leaved Magnolia. Has larger leaves and flowers than the preceding species, and in moist soil retains its leaves great part of the winter, and is, therefore, considered as sub-evergreen.

16*f*. M. *tripétala* L. The three-petaled Magnolia, or Umbrella Tree. The leaves are 18 or 20 inches long, and 7 or 8 inches broad, and form so complete a roof over what is beneath as to give rise to the name of umbrella tree. The flowers are 7 or 8 inches in diameter, with large white flaccid petals, a languid luxurious appearance, and a sweet but a heavy odour. They appear in May and June; and fruit is sometimes ripened, which is conical in shape, and contains seeds of a beautiful rose colour, which escape from the carpels and hang down at the end of long white threads, producing a very singular and beautiful appearance.

17. M. *acuminàta* L. The pointed-leaved Magnolia. This is the hardiest of all the species of Magnòl*ia* yet introduced; sometimes in England attaining the height of 30 or 40 feet. It is deciduous; and though the bark is very fragrant to the taste, yet the flowers, which are sometimes blue, and sometimes greenish yellow, have an unpleasant odour. The Americans call this tree the Cucumber Tree, because its fruit when green resembles a cucumber. It is about 3 in. long, and nearly 1 in. in diameter; and when steeped in whiskey it communicates its bitter to the spirit, which is drank as a preventive of autumnal fevers. The bark, dried and powdered, is also used for the same purpose.

18. M. (*a*.) *cordàta* Michx. The heart-leaved Magnolia. A smaller tree than the preceding kind, with the flowers generally yellow. One of the most hardy and free-flowering of the magnolias, flowering when quite young.

19. M. *conspícua* Salisb. The conspicuous-flowered Magnolia; the Yulan, or Lily-flowered Magnolia, of the Chinese. The flowers are large, of a pure white, and come out in April before the leaves; for which reason, unless protected by a mat, as we have recommended for the tree peony, they are liable to be injured by frost. In other respects, the tree is tolerably hardy; and as it makes but short shoots annually, these are ripened, and flower buds formed. Like most of the other Asiatic magnolias, it produces the finest flowers when planted against a wall.

19*a*. M. *purpùrea* Sims. The purple-flowered Magnolia. This is a shrub, a native of China, somewhat tender, and thriving best against a wall. The leaves are of a very dark purple green, and the flowers large, purplish red without, and white within, and produced in great abundance.

19*b*. M. *grácilis* Hort. The slender-growing Magnolia. Closely resembles the preceding kind.

20. LIRIODE'NDRON *Tulipífera* L. The Tulip-bearing Liriodendron, or Tulip Tree. A large deciduous tree with smooth saddle-shaped leaves, a fine brownish green smooth bark, and large flowers with green yellow and orange petals. In America it grows to the height of 100 ft. or upwards; and in England it attains the height of 60 or 70 feet. It well deserves a place in every collection of trees, for the singularity and beauty of its foliage. In America the bark is considered equal to that of quinquina as an aromatic tonic and antiseptic. In Evelyn's time this tree was called the Virginia poplar. He describes it as a fine tree brought over by Tradescant, and adds, "I wish we had more of them, but they are difficult to elevate at first."

MENISPERMA'CEÆ.

Climbing or twining shrubs, natives of North America, of which only one,

21. MENISPE'RMUM *canadénse* L., the Canadian Moonseed, is common in British gardens. The male and female flowers are on different plants, and consequently it is only the latter which bears fruit. This is a round berry about the size of a pea, of a dark blue black.

BERBERA'CEÆ.

The species are very ornamental shrubs, natives of Europe, Asia, and North and South America. The wood of most of them will dye yellow, and the

fruit is generally edible, though extremely acid. The evergreen species are among the hardiest and handsomest shrubs in British gardens. The flowers are mostly yellow, and appear from May to August. The genera are *Bérberis* L., and Mahòn*ia* Nutt.

22. to 31*a*. *BE'RBERIS* L. The Berberry. The species are readily known from the mahonias by having simple leaves, for the most part deciduous.

22. *B. vulgàris* L. The common Berberry. A native shrub, found chiefly on calcareous soils in Essex. The stamens of the flowers possess a remarkable degree of irritability, and when the filament is touched on the inside with the point of a pin, it bends forward towards the pistil, touches the stigma with the anther, remains curved for a short time, and then partially recovers its erect position. The pollen of the flowers has long been thought, both in France and England, to produce blight or mildew on the corn fields over which it is blown; but botanists allege that this is not the case, and that the fungus which grows on the berberry is quite different from that which grows on the wheat. This is acknowledged, but it is said in reply, that the different nature of the plant on which the fungus grows may be sufficient to produce the appearance of a different species; as is well known to be the case with many plants when growing on soils of very opposite qualities, and in different climates or situations. The fruit of the common berberry is so acid, that birds will seldom touch it; but it makes a good preserve, and an excellent jelly, and, when pickled green, forms a substitute for capers. In Sweden the berries are used instead of lemon, for flavouring punch. The bark dyes yellow, and is so astringent, that in Poland it is used to tan leather and dye it yellow at the same time.

23. *B. vulgàris álba* Hort. The white-fruited common Berberry. There are varieties with yellow, violet, purple, and black fruit, one with the fruit sweet-tasted, and another with the fruit seedless.

23*a*. *B. vulgàris spathulàta* Hort. The spathulate-leaved common Berberry.

24. *B. canadénsis* Mill. The Canadian Berberry.

24*a*. *B. emarginàta* Willd. The emarginate-petaled Berberry.

25. *B. ibérica* Stev. The Iberian Berberry.

26. *B. sinénsis* Desf. The Chinese Berberry.

The five kinds, 23*a*. to 26., all more or less resemble the common berberry; the kinds which follow are truly interesting and beautiful.

27. *B. dúlcis* Swt. The sweet-fruited Berberry. Flowers yellow. March to June. The largest plant in England is at Elvaston Castle.

28. *B. heterophýlla* Juss. The various-leaved Berberry.

29. *B empetrifòlia* Lam. The Empetrum-leaved Berberry. A beautiful little trailing heath-like plant, which produces abundance of yellow flowers from December to March. Quite hardy, and deserving a place in every flower-garden and shrubbery.

30. *B. asiática* Rox. The Asiatic Berberry. Berries purple, with a fine bloom; and, in Nepal, those of this and the two following species are dried as raisins are in Spain.

31. *B. aristàta* Dec. The bristle-toothed-leaved Berberry.

31*a*. *B. Wallichiàna Dec.* Wallich's Berberry.

32. to 33*a*. MAHO'NIA Nutt. The Mahonia, or Ash Berberry. The ash berberries are known from the common berberries by having compound leaves like the common ash, and being for the most part evergreen. They are exceedingly handsome shrubs, and the first species is as hardy as the common holly, and of surpassing beauty. The mahonias, rhododendrons, and Gaulthèria *Shállon*, ought to be universally planted as undergrowths in ornamental woods, especially on peat soil.

32. M. *Aquifòlium* Nutt. The Holly-leaved Mahonia, or Ash Berberry. The most beautiful of all the species. Hedges of it were planted at Elvaston Castle when it was worth a guinea a plant. Plants may now be had in the nurseries for 2*s*. or 2*s*. 6*d*. each.

33. M. *nervòsa* Nutt. The nerved-leaved Mahonia, or Ash Berberry. Rather tender.

33*a*. M. *rèpens* G. Don. The creeping-rooted Mahonia, or Ash Berberry. Quite hardy. This and the first species did not suffer the slightest injury from the winter of 1837-8.

CISTA'CEÆ.

Low shrubs, for the most part rather tender, but having large, showy, delicate, evanescent flowers; natives of Europe. They all thrive best in dry soil, among rocks or stones, and flower freely from June to September. The genera are Cistus and Helianthemum.

33*b*. to 37. *Ci'stus L.* The Rock Rose. Shrubs, deciduous or sub-evergreen, of from 1 ft. to 5 ft. in height, with white, red, and purple flowers, from June to August.

33*b*. *C. villòsus* Lam. The villous Cistus.

34. *C. créticus* L. The Cretan Cistus. From this species and another which grows wild in Greece, the gum labdanum is collected from the leaves by brushing them over with a kind of mop.

34*a*. *C. álbidus* L. The white-leaved Cistus.

34*b*. *C. salviæfòlius* L. The Sage-leaved Cistus.

35. *C. obtusifòlius* Swt. The obtuse-leaved Cistus.

36. *C. corbariénsis* Pourr. The Corbières Cistus.

36*a*. *C. hirsùtus* Lam. The hairy Cistus.

37. *C. oblongifòlius* Swt. The oblong-leaved Cistus.

38. to 49. Helia'nthemum *Tourn.* The Helianthemum, or Sun Rose. Plants small, trailing, seldom higher than 6 in., natives of Europe, and very ornamental when in flower, from June to October. Flowers chiefly yellow, orange red, or white.

38. H. *cànum* Dunal. The hoary Helianthemum.

39. H. *cròceum* Pers. The Saffron-coloured-flowered Helianthemum

40. H. *vulgàre* Gært. The common Helianthemum. Common in English pastures, in dry soils.

41. H. *surrejànum* Mill. The Surrey Helianthemum.

42. H. *macránthum* Swt. The large-flowered Helianthemum.

43. H. *macránthum flòre plèno* Hort. The large-flowered double Helianthemum.

44. H. *rhodánthum* Dunal. The red-flowered Helianthemum.

45. H. *canéscens* Swt. The canescent-leaved Helianthemum.

46. H. *mutábile* Pers. The changeable-coloured-flowered Helianthemum.

47. H. *sulphùreum* Willd. The sulphur-colour-flowered Helianthemum.

48. H. *venústum* Swt. The handsome Helianthemum.

49. H. *Milleri Swt.* Miller's Helianthemum.

MALVA'CEÆ.

Mallow-like plants, of which a few are hardy shrubs; natives of Syria.

50. to 54. *Hibi'scus L.* The Hibiscus. Deciduous shrubs, very ornamental from their large, showy, white, purple, red, or variegated flowers, which are the more valuable, as they appear in August and September, when most other shrubs are out of bloom.

50. *H. syrìacus fòliis variegàtis* Hort. The variegated-leaved Syrian Hibiscus.

51. *H. syrìacus flòre variegàto* Hort. The variegated-flowered Hibiscus.

52. *H. syrìacus flòre purpùreo* Hort. The purple-flowered Syrian Hibiscus.

53. *H. syrìacus flòre rùbro* Hort. The red-flowered Syrian Hibiscus.

54. *H. syrìacus flòre álbo* Hort. The white-flowered Syrian Hibiscus.

TILIA CEÆ.

55. to 61. *Ti'lia L.* The Lime Tree. Large trees, of which there are only two species: the common Lime Tree, a native of Europe, from the inner

bark of which bast mats are made; and the American Lime Tree, remarkable for its large leaves: it is somewhat tender in British gardens.

55. *T. europæa microphýlla* Hort. The small-leaved European Lime Tree. This is the wild form of the species, the wood of which is preferred by pianoforte-makers for sounding-boards.
56. *T. europæ'a platyphýlla* Hort. The broad-leaved European Lime Tree.
57. *T. europæ'a rùbra* Hort. The red-twigged European Lime Tree.
58. *T. europæ'a laciniàta* Hort. The cut-leaved European Lime Tree.
59. *T. europæ'a aúrea* Hort. The golden-twigged European Lime Tree.
59*a*. *T. europæ'a álba* Waldst. et Kit. The white-leaved European Lime, or Hungarian Lime. The wood of the common lime tree is close-grained, soft, light, and smooth, and not much attacked by insects. It is therefore peculiarly fit for carved work; and the well-known magnificent sculptures of Gibbons, at Chatsworth and Windsor Castle, are in the wood of this tree. Holbein used it to engrave on, as box is at the present day. The leaves were given to cattle by the Romans, though Linnæus says they communicate a bad flavour to the milk of cows. The most important use of the lime tree in the North of Europe is that of supplying material which, in the hands of a Russian or Swedish peasant, will make not only ropes and mats, shoes, baskets, and boxes, but threads, which are twisted into ropes, made into nets, and woven into a kind of coarse cloth which may be used for clothing or bedding. The inner bark, properly prepared, answers all these purposes, while the outer bark of the trunks of old trees is used as a substitute for tiles or shingles in roofing houses. The flowers, which are very fragrant, expand in June, are much sought after by bees, and the honey produced from them is whiter, more delicately flavoured, and on the Continent sells at a higher price, than that produced from any other plant. There is an extensive forest of limes near the town of Kowno in Lithuania, the honey of which is in great demand throughout the Continent for making particular kinds of liqueurs, and more especially rosoglio.
60. *T. americàna* L. The American Lime. Leaves large, and the flowers produced in July and August.
61. *T. americàna pubéscens* Hort. The pubescent-leaved American Lime. Flowers in July and August.

TERNSTRÖM*IA'CEÆ*.

American deciduous shrubs with large showy white flowers in August and September. The genera are Malachodéndron, Stuárt*ia*, and Gordòn*ia*.

62. MALACHODE'NDRON *ovàtum* Cav. The ovate-leaved Malachodendron. The leaves have a fine reddish tinge, especially on their first appearance in spring.
62*a*. STUA'RT*IA virgínica* Cav. (*John Stuart*, Marquess of Bute, a great patron of botany.) The Virginian Stuartia.
62*b*. GORDO'N*IA pubéscens* Ph. (After a nurseryman of that name.) The pubescent Gordonia. Flowers large, white, and the plant somewhat tender.

*H*YPERICA'CEÆ.

Low sub-evergreen shrubs, with yellow flowers, from June to August, and the leaves usually full of pellucid dots. The hardy ligneous genera are *Hy*péricum and *A*ndrosæ'mum, natives of Europe and America.

63. to 66. *H*YPE'RICUM *L*. The St John's Wort. Capsule membranous.
63. *H. elàtum* Ait. The tall St. John's Wort. Very prolific in yellow flowers, which appear in July and August.
64. *H. hircìnum* L. The Goat-scented St. John's Wort. Flowers in July.
65. *H. calycìnum* L. The large-calyxed St. John's Wort. A low evergreen shrub, with broad, coriaceous, dark green, shining leaves, and large bright golden flowers from June to September. A very ornamental plant, which thrives under the shade of trees.

66. *H. prolíficum* L. The prolific St. John's Wort. Very prolific in leaves, and also in flowers which appear from June to August.

66a. ANDROSÆ'MUM *Choix.* The Androsæmum, or Tutsan. Capsule a berry.

66a. *A. officinàle* Allioni. The officinal Androsæmum, or common Tutsan. When the capsules are ripe, they are filled with a claret-coloured juice. The leaves when bruised have an aromatic scent, and were formerly applied to fresh wounds. Flowers yellow, 1 in. across; produced in great profusion from July to September.

ACERA'CEÆ.

Deciduous trees or shrubs, with lobed or pinnate leaves, natives of Europe, North America, and Asia; very beautiful at every season of the year, more especially when the leaves are expanding in spring, and changing colour in autumn. The flowers are yellow, and the fruit is called a key. The genera are *A'cer* and *Negúndo.*

67. to 86. *A'CER L.* The Maple. Leaves lobed. Chiefly deciduous trees.

67. *A. tatáricum* L. The Tartarian Maple. Expanding leaves tinged with red. Flowers greenish yellow, in May and June.

68. *A. spicàtum* L. The spike-flowered Maple. Flowers greenish; May and June. Leaves reddish in spring and autumn.

69. *A. striàtum* L. The striped-bark Maple, Snake-barked Maple in America. Very ornamental, from the black and white stripes on its bark. There is a tree of considerable size in the flower-garden of the Arboretum. Flowers yellowish green; May.

70. *A. macrophýllum* Ph. The large-leaved Maple. A vigorous-growing, very handsome tree, with large and beautiful leaves. Introduced by the collector Douglas already mentioned. Flowers yellow, fragrant; May.

71. *A. platanöìdes* L. The Platanus-like, or Norway, Maple. Prolific in flowers, which are of a rich yellow, and appear in April and May. The opening leaves are of a delicate yellow, and they die off of the same colour.

72. *A. platanöìdes Lobèlii Arb. Brit.* Lobel's Platanus-like Maple. A very handsome variety with a delicate bloom on the young wood, which, when older, becomes striped somewhat in the manner of *A.* striàtum.

73. *A. platanöìdes laciniàtum* Dec. The cut-leaved Platanus-like Maple; Eagle's-Claw, or Hawk's-Foot, Maple.

74. *A. saccháriuum* L. The Sugar Maple. Leaves thin and very delicately cut, coming out in spring, and dying off in autumn of a rich yellow. Flowers small, yellowish, on long slender drooping peduncles in April and May. Sugar is produced from the sap in America. The sap is obtained by tapping the tree in spring, and the sugar by boiling and evaporation.

75. *A. Pseùdo-Plátanus* L. The Mock Plane Tree, the Sycamore, or Great Maple. A very hardy tree, with beautiful buds and leaves, and keys often tinged with red. Flowers greenish yellow; May. The tree which overshadows the grave of the poet Cowper, in the churchyard of Dereham, in Norfolk, is of this species.

76. *A. Pseùdo-Plátanus flàvo variegàta* Hort. The yellow-variegated-leaved Sycamore, or Corstorphine Plane. A splendid tree in May, when the leaves first expand.

77. *A. Pseùdo-Plátanus álbo variegàta* Hayne. The white-variegated-leaved Sycamore.

78. *A. Pseùdo-Plátanus purpùrea* Hort. The purple-leaved Sycamore. A remarkable tree, very ornamental in May, especially when the leaves are ruffled by wind.

The varieties 76, 77, 78. are very ornamental in May or June, when the leaves first expand, but they lose much of their beauty in autumn.

79. *A. obtusàtum* Kit. The obtuse-lobed-leaved, or Neapolitan, Maple. A very vigorous-growing handsome species, which no ornamental plantation ought to be without.

79a. *A. (o.) O'palus* Ait. The Opal, or Italian, Maple. A very handsome small

tree, with heart-shaped roundish leaves, and whitish flowers which appear from May to June. The aspect of the entire plant has a fine reddish hue.

80. *A. opulifòlium* Vill. The Guelder-Rose-leaved Maple. Flowers greenish; May. The *A.* Pseùdo-*P*látanus opulifòlia of the abridged edition of *Arboretum Britannicum*, p. 86.

81. *A. circinàtum* Pursh. The round-leaved Maple. A very handsome species, with the leaves plicate, and with the bark of a fine reddish tinge. The flowers purple and white, in April and May. Decaying leaves reddish yellow. Quite hardy, and, though neglected, yet well deserving a place in every shrubbery.

82. *A. eriocárpum* Michx. The hairy-fruited, or white, Maple; or Sir Charles Wager's Maple. The flowers are yellowish purple, and are produced in great abundance in March and April. One of the handsomest species of the genus; of an elegant graceful shape, rapid growth, and very hardy.

83. *A. rùbrum* L. The red-flowering, or scarlet, Maple. Flowers small, dark red, appearing a fortnight before the leaves, in March and April. The leaves die off of an intense red, dark purple, or rich yellow, and at a distance, in a fine autumn, when the sun shines, glow like a blaze of fire. Eminently ornamental, but not of such vigorous growth as the preceding species.

84. *A. monspessulànum* L. The Montpelier Maple. Flowers pale yellow, produced at the extremities of long pendent pedicels, in great abundance, in May. A very handsome species, sometimes nearly evergreen.

85. *A. campéstre* L. The common, or Field, Maple. A well-known low tree, valuable for its curiously veined wood, which is much in demand by cabinet-makers and turners, and was esteemed for the same properties by the ancient Romans. Flowers yellowish green; May. Common in hedges in the Middle and South of England.

86. *A. créticum* L. The Cretan Maple. Sub-evergreen. Flowers greenish yellow; May. The finest tree of this species in England, and probably in the world, is one at Syon, of which a portrait, after a drawing by Lewis, made for His Grace the Duke of Northumberland, is given in the *Arboretum Britannicum*, vol. v.

87. and 88. *Negu'ndo* Mœnch. The Negundo, or Box Elder. Leaves pinnate. Flowers yellow; April. The male and female on different plants.

87. *N. fraxinifòlium* Nutt. The Ash-leaved Negundo. Bark of the young shoots smooth, and of a fine pea green. Decaying leaves deep yellow.

88. *N. fraxinifòlium crispum* G. Don. The curled-leaved Negundo.

ÆSCULA'CEÆ.

Deciduous trees with palmate leaves, and conspicuous highly ornamental flowers which appear in May. Natives of North America and Asia. The genera are *Æ'sculus* and Pàvia; the former characterised by having the fruit rough, and the latter by having it smooth.

89. to 95. *Æ'sculus L.* The Horsechestnut. Fruit and leaves rough. Robust trees, natives of Asia and North America.

89. *Æ. Hippocástanum* L. The common Horsechestnut. When first introduced from Constantinople, the fruit was considered edible, and Parkinson, writing in 1629, included it among his fruit trees, and described the nut as of "a sweet taste, and agreeable to eat when roasted." Very little use has ever been made of the nuts in this country, though in Turkey they are mixed with horse food, and are considered good for horses which are broken-winded. When ground into flour, they are said to add to the strength of bookbinder's paste. Daines Barrington calls a horsechestnut tree in flower a giant's nosegay, and Miss Kent a Brobdignagian lupine. About the beginning of the 18th century, the tree took the place of the lime in forming avenues in parks. The finest horsechestnut avenue in England is that at Bushy Park.

90. *Æ. Hippocástanum varicgàtum* Hort. The variegated-leaved Horsechestnut.

91. *Æ.* (*H.*) *ohioénsis* Mich. The Ohio Horsechestnut, or Ohio Buckeye.

92. *Æ.* (*H.*) *rubicúnda* Lois. The reddish-flowered Horsechestnut. A very ornamental tree of the middle size, with the flowers rosy, flesh-coloured, or scarlet, and produced in great abundance in May.
93. *Æ.* (*H.*) *glàbra* Willd. The smooth-leaved Horsechestnut.
94. *Æ.* (*H.*) *pállida* Willd. The pale-flowered Horsechestnut.
95. *Æ.* (*H.*) *Lyònii Hort.* Lyon's Horsechestnut.
96. to 104. PA'VIA Boerh. (After *Peter Paw*, a Dutch botanist.) The Pavia, or smooth-fruited Horsechestnut. Leaves and fruit smoother and smaller than in the common horsechestnut. All the species are very ornamental middle-sized trees, or large shrubs.
96. P. *rùbra* Lam. The red-flowered Pavia.
97. P. *rùbra hùmilis* Hort. The dwarf red-flowered Pavia.
98. P. *rùbra hùmilis péndula* Hort. The pendulous-branched dwarf red-flowered Pavia. A very singular and ornamental low tree, of which there is a handsome specimen in Messrs. Loddiges's arboretum at Hackney.
99. P. *flàva* Dec. The yellow-flowered Pavia, or large Buckeye.
100. P. *díscolor* Swt. The two-coloured-flowered Pavia. One of the most ornamental species of the genus, of low and slow growth, prolific in flowers, compact in shape, very hardy, and therefore well adapted for small gardens.
101. P. *hýbrida* Dec. The hybrid Pavia.
102. P. *neglécta* G. Don. The neglected Pavia.
103. P. *macrocárpa* Hort. The long-fruited Pavia.
104. P. *macrostàchya* Lois. The long-racemed Pavia. A shrub with long spikes of white flowers having a fringed appearance from the projecting stamens, and valuable not only on account of their beauty, but because they do not appear till July or August. The fruit, in America, is eaten boiled or roasted.

SAPINDA'CEÆ.

105. KÖLREUTE'RIA *paniculàta* Laxm. (After *Kölreuter*, an eminent botanist.) The panicled-flowering Kölreuteria. The leaves are imparipinnate with ovate leaflets, and the flowers yellow in terminal racemes, in July and August. The fruit is a bladdery capsule, and the decaying leaves of a deep rich yellow. A very ornamental low Chinese tree, quite hardy.

VITA'CEÆ.

Climbing tendriled shrubs, natives of Asia and North America, with small obscure flowers, but conspicuous fruit. The genera are *V*itis and Ampelópsis.

106. to 109. *V*ITIS *L.* The Grape Vine. All the species have edible fruit from which wine may be made, and one species has been celebrated on this account from the earliest ages. Flowers small, greenish ; July and August.
106*a*. *V. vinífera apiifólia* Hort. The Parsley-leaved Grape Vine. Ornamental from its finely cut foliage.
107. *V. Labrúsca* L. The wild Vine, or Fox Grape.
108. *V. cordifólia* Michx. The heart-shape-leaved Vine, or Chicken Grape.
109. *V. ripària* Michx. The River-side, or sweet-scented, Vine. Wine is made in America from the above three kinds, or cultivated varieties of them.
110. to 112. AMPELO'PSIS *Michx.* The Ampelopsis. American climbers, not bearing eatable fruit like the vine.
110. A. *hederàcea* Michx. The Ivy-like Ampelopsis, or Five-leaved Ivy. One of the most valuable of climbers from its rapid growth, hardiness, and the intense red, purple, scarlet, or yellow, of the leaves in autumn.
111. A. (h.) *hirsùta* Donn. The hairy-leaved Ampelopsis. Closely resembles the preceding kind ; and, like it, will grow in the heart of cities, and reach

the summit of the highest houses, but it requires to be fastened by nails and shreds, unless the walls are extremely rough.

112. A. *bipinnàta* Michx. The bipinnate-leaved Ampelopsis.

XANTHOXYLA'CEÆ.

Trees or shrubs, natives of America or Asia. The flowers are mostly yellow, and appear in May and June.

113. XANTHO'XYLUM *fraxíneum* Willd. The Ash-leaved Xanthoxylum, or common Toothache, Tree; Prickly Ash, in America. The bark of this species is imported from America in large quantities, and sold by the London herbalists as a cure for the rheumatism.

114. *PTE'LEA trifoliàta* L. The Ptelea, or Shrubby Trefoil. The leaves die off of a more beautiful yellow than those of almost any other tree. Flowers greenish yellow; June. Fruit a winged capsule.

115. *AILA'NTUS glandulòsa* Desf. The glandulous-leaved Ailanto. A tree of rapid growth, with the leaves sometimes 4 or 5 feet in length. When touched by frost, the whole of them drop in the course of a single night, without changing colour.

CORIA'CEÆ.

116. CORIA'RIA *myrtifòlia* L. The Myrtle-leaved Coriaria. The flowers are small and greenish, and appear from May to August; the leaves are handsome and myrtle-like. The whole plant is used in the North of Italy to tan leather and dye it black. The berries are poisonous, and many soldiers of the French army in Catalonia were stupefied by them, and some of them died.

STAPHYLEA'CEÆ.

117. and 118. STAPHYLE'A *L.* The Staphylea, or Bladder-nut Tree. The fruit is a bladdery capsule containing a nut as hard as bone, and the flowers are whitish, appearing in May and June. The nuts in some parts of Europe are strung for beads by the Roman Catholics. The flowers are very attractive to bees. Natives of Europe and North America.

117. S. *trifòlia* L. The three-leafleted-leaved Staphylea.

118. S. *pinnàta* L. The pinnated-leaved Staphylea.

CELASTRA'CEÆ.

Deciduous or evergreen shrubs, natives of Europe and North America, with small bright-coloured fruit and hard white wood. The flowers are small, white or purplish, and appear chiefly in May and June. The genera are Euónymus and Celástrus.

119. to 124*b*. EUO'NYMUS *Tourn.* The Euonymus, or Spindle Tree. Shrubs, chiefly deciduous, but some of them evergreen or sub-evergreen; natives of Europe, America, and Asia; ornamental from the form and colour of their fruit, but all rather subject to the attacks of the caterpillars of moths and Tenthredínidæ.

119. *E. europæ'us* L. The European Euonymus, or Spindle Tree, called Bonnet de Prêtre, "priest's cap," in France, from the appearance of the ripe capsule. The fruit is scarlet, and, being produced in great abundance, makes a fine show on the tree. The wood is white and hard, and was formerly much used by turners, and for making skewers for butchers and cooks.

120. *E. europæ'us nànus* Lodd. The dwarf European Euonymus, or Spindle Tree.

121. *E. europæ'us frúctu álbo* Lodd. The white-fruited European Euonymus, or Spindle Tree.

122. *E. verrucòsus* Scop. The warted-barked Euonymus, or Spindle Tree.

123. *E. latifòlius* C. Bauh. The broad-leaved Euonymus, or Spindle Tree.

A very compact, erect, slow-growing, diminutive tree, with large leaves and large fruit, and decidedly the most ornamental, hardy, deciduous species of the genus. It merits a place in every collection.

124. *E. americànus* L. The American Euonymus, or Spindle Tree.

124*a*. *E. japónicus* Thunb. The Japan Euonymus, or Spindle Tree. Evergreen, and very ornamental, but rather tender.

124*b*. *E. japónicus variegàtus* Hort. The variegated-leaved Japan Euonymus, or Spindle Tree.

125. CELA'STRUS *scándens* L. The climbing Staff Tree. The flowers are small, greenish, and appear in June; and, where the tree thrives, it produces fruit of an orange colour, which is ripe in September.

AQUIFOLIA'CEÆ.

Low trees or shrubs, chiefly evergreen, natives of Europe and North America. The flowers are white, of no great show, and appear in May and June; but they are succeeded by berries, red, scarlet, yellow, or black, of very great beauty.

126. to 137*a*. *I'LEX L.* The Holly. Unquestionably the finest evergreen European shrub. It is at once ornamental in the garden and shrubbery, useful in the field as a hedge, and in woods as a low timber tree; and its wood is in great repute by turners, joiners, and cabinet-makers. From the inner bark macerated in water, and boiled during a long period, birdlime is procured. The use of the holly at Christmas is as old as the days of the Saturnalia. In England, perhaps, the earliest record of this custom is in a carol in praise of the holly, written in the reign of Henry VI.; in illustration of which, it must be observed that the ivy, being dedicated to Bacchus, was used as a vintner's sign in winter, and hung outside the door.

"Nay, Ivy, nay, it shall not be I wys;
Let Holy hafe the maystry, as the maner ys.
Holy stond *in the halle*, fayre to behold;
Ivy stond *without the dore;* she ys full sore a cold.

"Holy hys mery men they dawnsyn and they syng,
Ivy and hur maydenys they wepyn and they wryng.
Ivy hath a lybe, she laghtit with the cold;
So not they all hafe that wyth Ivy hold.

"Holy hath berys as red as any Rose,
They foster the hunters, kepe hem from the doo.
Ivy hath berys as black as any slo;
Ther com the oule and cte hym as she goo.

"Holy hath byrdys, a ful fayre flok,
The Nyghtyngale, the Poppyngy, the gayntyl Lavyrok.
Good Ivy! what byrdys ast thou?
Non but the Howlet that crieth 'How! How!'"

126. *I. Aquifòlium heterophýllum* Hort. The variable-leaved Holly.

126*a*. *I. Aquifòlium marginàtum* Hort. The marginate-leaved Holly.

126*b*. *I. Aquifòlium laurifòlium* Hort. The Laurel-leaved Holly.

126*c*. *I. Aquifòlium ciliàtum* Hort. The ciliate-leaved Holly.

126*d*. *I. Aquifòlium ciliàtum mìnus* Hort. The lesser ciliate-leaved Holly.

126*e*. *I. Aquifòlium recúrvum* Hort. The recurved-leaved Holly.

127. *I. Aquifòlium crìspum* Hort. The curled-leaved Holly.

128. *I. Aquifòlium fèrox* Hort. The fierce prickly-leaved Holly, or the Hedgehog Holly.

128*a*. *I. Aquifòlium crassifòlium* Hort. The thick-leaved Holly.

129. *I. Aquifòlium senéscens* Sweet. The Old-man Holly.

130. *I. Aquifòlium álbo-marginàtum* Hort. The white-margined Holly.
131. *I. Aquifòlium aúreo-marginàtum* Hort. The yellow-margined Holly.
132. *I. Aquifòlium aúreo-pictum* Hort. The yellow-painted Holly.
133. *I. Aquifòlium fèrox argénteum* Hort. The silvery Hedgehog Holly.
134. *I. Aquifòlium fèrox aúreum* Hort. The golden Hedgehog Holly.
135. *I. Aquifòlium fructu lùteo* Hort. The yellow-fruited Holly.
136. *I. baleárica* Desf. The Minorca Holly. A very distinct kind with thick pale green leaves, and but few prickles.
137. *I. opàca* Ait. The opaque-leaved Holly. Leaves of a very dark green. A very ornamental evergreen, as hardy as the common holly.
137*a*. *I.* Cassine *Ait.* The Cassine-like Holly.
138. and 139. *Pri'nos L.* The Winter Berry. Deciduous and evergreen shrubs, natives of North America, with small white flowers which appear in June and July, succeeded by crimson fruit ripe in November.
138. *P. decíduus* Dec. The deciduous Winter Berry.
139. *P. verticillàtus* L. The whorled Winter Berry.

*R*HAMNA'CEÆ.

Trees or shrubs, often spiny, and generally deciduous; natives of Europe, Asia, and America. The flowers are small, greenish or whitish, appearing in June and July; and they are succeeded by berries, black, red, yellow, or white. The genera are *Z*izyphus, *P*aliùrus, *R*hámnus, and *C*eanòthus.

139*a*. *Zi'zyphus vulgàris* Lam. The common Jujube. Rather tender, and seldom flowering in England except when planted against a wall. The jujube lozenges, sold for coughs, are made from the fruit, and the trees are grown in Italy for that purpose.

140. *Paliu'rus aculeàtus* Lam. The prickly Christ's Thorn. The fruit is of a very remarkable shape, somewhat like a buckler or a bonnet, and hence the French name of *porte-chapeau*. The whole plant dyes yellow. In the North of Italy it is the common hedge plant. In British gardens it is valuable because it flowers late in the season, and retains its singular yellow fruit till November or December.

141. to 149. *Rha'mnus Lam.* The Buckthorn. Deciduous or evergreen shrubs, remarkable for their upright stiff mode of growth, and for being covered with numerous strong thorns in their wild state, whence the name of ram, or buckthorn. The flowers are small, and greenish. The fruit is generally black or red. Both the bark and fruit contain a yellow dye, and the juice of the fruit is in most species purgative.

141. *R. Alatérnus* L. The Alaternus. One of the most common, and one of the hardiest of garden evergreens, of which there are several varieties. Few shrubs are more generally cultivated, or of older standing in British gardens.
142. *R. Alatérnus fòliis aúreis.* The golden-leaved Alaternus.
143. *R. hýbridus* L'Hérit. The hybrid Alaternus.
144. *R. cathárticus* L. The purging Buckthorn. The juice of the unripe berries is of the colour of saffron, and it is used for staining maps or paper. The juice of the ripe berries mixed with alum forms the sap green of painters; and the berries gathered late in autumn have the juice of a dark purple. The berries are often sold under the name of French berries, for dyeing yellow; but the true French berries are those of *R.* infectòrius.
145. *R. saxátilis* L. The Stone Buckthorn.
146. *R. Erythróxylon* Pall. The red-wooded Buckthorn.
147. *R. alpìnus* L. The Alpine Buckthorn. A very remarkable species, of which there is a variety with leaves nearly 1 ft. in length. (See *Arboretum Britannicum*, abridged edit. p. 176.)
148. *R. Frángula* L. The brittle-branched Buckthorn.
149. *R. latifòlius* L'Hérit. The broad-leaved Buckthorn.

150. CEANO'THUS *americànus* L. The American Red Root, or New Jersey Tea. The leaves of this plant, dried, were used by the Americans as a substitute for Chinese tea, during the war of independence. The root and the whole plant have a tinge of red.

HOMALINA'CEÆ.

Trees and shrubs, natives of South America, rather tender in British gardens. The flowers are small, and produced in June. The berries are black, eatable, but seldom ripened in England.

150*a*. ARISTOTE'LIA Mácqui *L'Hérit.* (After the celebrated naturalist, *Aristotle*) The Macqui Aristotelia. Though this plant flowers and fruits freely in fine seasons, yet it is frequently killed down to the ground by severe winters.

150*b*. A. Mácqui *fòlìis variegàtis* Hort. The variegated-leaved Aristotelia.

ANACARDIA'CEÆ.

Low, deciduous, or evergreen trees; natives of North America, Asia, and Africa; with simple or compound leaves, and small flowers which appear in June. The genera are *P*istàcia and *R*hús.

150*c*. and 150*d*. PISTA'CIA *L.* The Pistacia Tree. Very ornamental low trees, but liable to be injured by severe winters. Flowers small, brownish; April and May.

150*c*. *P. Lentíscus* L. The Mastich Tree. Flowers green; April and May. Fruit brownish, seldom produced in England.

150*d*. *P. Terebínthus* L. The Turpentine Pistacia, or Venetian or Chian Turpentine Tree. The flowers are dull yellow and crimson; fruit dark blue, about the size of a large pea.

151. to 158. *R*HU's *L.* The Sumach. Shrubs, chiefly natives of North America; remarkable for the beauty of their foliage in autumn, which, in some species, dies off of a dark red or purple; in others, of a bright scarlet; and in some, of a rich yellow. All the species are poisonous, and neither the leaves nor the shoots should be handled by children.

151. *R. Cótinus* L. The Cotinus Rhus, or Venetian Sumach. The French and Germans call this the Periwig Tree, from the appearance of the seeds. Decaying leaves rich yellow. When this shrub has attained a large size, and is covered with its ripe seeds, it has a very singular appearance, from the large loose panicles of elongated hairy pedicels, which are attached to the seeds.

152. *R. typhìna* L. The Fever Rhus, or Stag's Horn Sumach. Decaying leaves deep red, or dark purple.

153. *R. glàbra* L. The glabrous Sumach. Decaying leaves of a rich scarlet.

154. *R. glàbra coccínea.* The scarlet-flowered glabrous Sumach.

155. *R. venenàta* Dec. The poisonous Sumach. The mere handling of the leaves raises blisters on the skin in some persons, but not in others.

156. *R. radìcans* L. The rooting-branched Sumach. A very poisonous species.

157. *R. Toxicodéndron* L. The Poison-tree Sumach. Very poisonous. We have known a gardener laid up for several days, in consequence of having pruned and nailed a plant of this species in the Chelsea Botanic Garden. Kalm relates that the plant is poisonous to some persons, but less so to others. Two sisters, he says, were very differently affected by its venom; for, while one could handle it without the slightest inconvenience, the other felt its exhalations as soon as she came within a yard of it, or even when she stood to windward of it, at a still greater distance. He adds that the poison had not the least effect upon himself, though he tried it in various ways, and once squirted the juice into his eye; but that on another person's hand, which he had covered very thickly with it, the skin, a few hours afterwards, became as hard as a piece of tanned leather, and subsequently peeled off in scales. (See *Arb. Brit.*, p. 556.)

158. *R. suavèolens* Ait. The sweet-scented Sumach. Aromatic, but very poisonous.

LEGUMINA'CEÆ.

The term Leguminàceæ is applied to this order, because the seeds of all the species are produced in leguminous pods, bearing more or less resemblance to those of the common pea or bean. The order contains a great many trees and shrubs, which are, for the most part, deciduous, and are dispersed through every part of the world. Their flowers are mostly yellow, or white, and the leaves of almost all of them are large and compound.

159. and 160. *Sopho'ra* R. Br. The Sophora. A tree remarkable for the fine deep green of its young wood, and the glossy green of its smooth, shining, pinnate foliage. Flowers white; June and July.

159. *S. japónica* L. The Japan Sophora.

160. *S. japónica péndula* Hort. The pendulous Japan Sophora. This is a very singular, and yet beautiful, drooping tree. If grafted at 15 or 20 feet from the ground, the shoots will grow almost perpendicularly downwards; and, when they reach the surface of the ground, they will creep along it for several yards without rooting into it.

161. Virgi'lia *lùtea* Michx. The yellow-wooded Virgilia, or Yellow Wood. A very interesting tree, as being named after the poet Virgil. The flowers are yellowish white, and appear from June till August; the leaves are of a yellowish green, and die off of a fine yellow; and the wood is yellow.

162. to 164. *U'lex L.* The Furze. Useful evergreen shrubs for hedges, and also very ornamental, when in bloom. The flowers are yellow, and appear in some kinds late in autumn, and in others early in spring. Cattle may be fed with the young shoots of all the kinds.

162. *U. europæ'a* L. The European Furze. The best species for hedges, fuel, and shelter for game; the ashes abound in alkali.

163. *U. europæ'a flòre plèno.* The double-flowered European Furze. A very ornamental plant, forming one fine mass of yellow, when in flower, and of deep green at all other seasons.

163*a*. *U. europæ'a nàna* Hort. The dwarf European Furze. Differs from the species in being much smaller in all its parts, and in flowering in the autumn, whereas the species flowers in the spring. In rich deep soil, it changes to the common furze, and flowers like it in spring.

164. *U. stricta* Mackay. The upright-growing Furze. Makes excellent garden hedges, and is also grown in Wales as food for horses and cattle, being almost without prickles. It rarely flowers or seeds, but is readily propagated by cuttings.

165. Spa'rtium *júnceum* L. The Rush-like Spanish Broom. Very ornamental, from the green colour of the shoots, and from its large yellow flowers which appear from July to September, and in some varieties are fragrant.

166. *S. júnceum flòre plèno.* The double-flowered Spanish Broom.

166. to 169. Geni'sta *L.* The Genista. Showy plants, with yellow flowers, appearing from May to August, but not of long duration.

166*b*. *G. triquetra* Ait. The triangular-stemmed Genista.

167. *G. lusitánica radiàta* Scop. The rayed-branched Portuguese Genista. Shoots with few leaves, and rush-like.

167*a*. *G. tinctòria* L. Dyer's Broom, or Green Weed. A creeping low shrub, common in Europe, in dry gravelly soils.

167*b*. *G. tinctòria flòre plèno* Hort. The double-flowered Dyer's Broom. The whole plant is used in some parts of the country for dyeing yellow. Common in pastures.

167*c*. *G. sibírica* L. The Siberian Genista.

168. *G. prostràta* Lam. The prostrate Genista.

169. *G. procúmbens* Waldst. et Kit. The procumbent Genista. This and the preceding species are well adapted for rockwork, and they will also dye yellow as readily as the British species.

170. to 184. *Cy'tisus Dec.* The Cytisus. Shrubs or low trees; very ornamental; and producing their yellow, and sometimes white and purple, flowers, from June to August.

170. *C. álbus* Link. The white Cytisus, or Portugal Broom. Large and showy.

171. *C. álbus incarnàtus* Hort. The flesh-coloured Cytisus, or pink Portugal Broom.

172. *C. Labúrnum* L. The common Laburnum. A well-known tree, of great beauty, the seeds of which are poisonous. The flowers are very beautiful, and sometimes odoriferous.

——— "Laburnum, rich
In streaming gold." COWPER.

The word Laburnum is from *l'arbois*, a corruption of *l'arc-bois*; the wood of this tree having been used by the ancient Gauls to make their bows.

173. *C. Labúrnum quercifòlium* Hort. The Oak-leaved common Laburnum.

174. *C. Labúrnum purpuráscens* Hort. The purplish-flowered common Laburnum. A very remarkable hybrid, between *C. Labúrnum* and *C. purpuráscens*, exemplifying one of the rare cases in which both the parents of a hybrid show themselves separately on the same tree; the purple laburnum having frequently some shoots with pinkish blossoms, some yellow like the common laburnum, and others consisting solely of *Cytisus purpùreus*, as true to the species as if it had been raised from seed.

175. *C.* (L.) *alpinus* Mill. The Alpine, or Scotch, Laburnum. A more vigorous-growing plant than the common, or English, laburnum, with longer racemes and larger flowers, which appear rather later. The heart wood of this and the preceding species is dark-coloured like ebony, and is called false ebony by the French. It is much in demand by turners and cabinet-makers.

176. *C.* (L.) *alpìnus péndulus*. The pendulous-branched Scotch Laburnum.

176*a*. *C. Wéldeni Vis.* Baron Welden's Cytisus. An erect woody shrub, resembling a laburnum, producing its upright racemes of yellow fragrant flowers in June and July.

177. *C. nígricans* L. The black Cytisus. The whole plant turns black when drying, whence the specific name. Very handsome when grafted standard high.

178. *C. sessilifòlius* L. The sessile-leaved Cytisus.

178*a*. *C. scopàrius* Link. The common Broom. This plant was much in use in former times as a substitute for hay and straw, in feeding cattle and sheep during winter, and in thatching ricks and houses. The young shoots were used as a substitute for hops, in brewing beer; and the flower-buds, before they became yellow, were pickled, as a substitute for capers.

178*b*. *C. triflòrus* L'Hérit. The three-flowered Cytisus.

178*c*. *C. scopàrius fòlüs variegàtis* The variegated-leaved common Broom.

179. *C. scopàrius álbus* Hort. The white-flowered common Broom.

179*a*. *C. leucánthus* Waldst. et Kit. The white-flowered Cytisus.

179*b*. *C. spinòsus* Lam. The spinous Cytisus.

180. *C. purpùreus* Scop. The purple-flowered Cytisus.

180*a*. *C. austriacus* L. The Austrian Cytisus.

181. *C. supìnus* Jacq. The supine Cytisus.

182. *C. capitàtus* Jacq. The headed-flowered Cytisus.

183. *C polýtrichus* Bieb. The many-haired Cytisus.

184. *C. bifiòrus* L'Hérit. The two-flowered Cytisus. All these species are very ornamental, either as bushes, or when grafted standard high on the laburnum.

185. ADENOCA'RPUS *intermèdius* Dec. The intermediate Adenocarpus. Distinguished from *Cýtisus* by the pods being covered with glandular hairs.
186. *ONO'NIS fruticòsa* L. The shrubby Restharrow. Very ornamental, with pink flowers which appear in May and June.
187. to 189. AMO'RPHA *L.* The Amorpha, or Bastard Indigo. Shrubs, natives of North America, with the leaflets dotted with transparent glands, and flowers of a blue violet which appear in June and July.
187. A. *fruticòsa* L. The shrubby Amorpha.
188. A. *fruticòsa Lewisii Lodd. Cat.* Lewis's shrubby Amorpha. Very showy, from the purple and gold colour of the flowers.
189. A. (*f.*) *glàbra* Desf. The glabrous Amorpha.
190. to 199. ROBI'NIA L. The Robinia, or Locust Tree. Very ornamental trees, from their light pinnate foliage, and white or pink flowers. The plants are of rapid growth, and the wood, when old, is very durable. The flowers appear in June, and some of the species ripen seeds in England. The foliage and young shoots are greedily eaten by cattle.
190. R. *Pseùd-Acàcia* L. The common Robinia, or False Acacia. A well-known tree, which has been in England since 1640, though Cobbett introduced it about 1820 as something new, under its American name of Locust, being convinced, as he says, that "nothing in the timber way could be so great a benefit to his country as the general cultivation of this tree." The time, he adds, "will not be distant, when the locust tree will be more common in England than the oak; when a man will be thought mad if he used any thing but locust in the making of sills, posts, gates, joists, feet for rick-stands, and axletrees for wheels, hop-poles, or for any thing where there is liability to rot. The next race of children but one, that is to say, those who will be born 60 years hence, will think that locust trees have always been the most numerous trees in England; and some curious writer of a century or two hence will tell his readers that, wonderful as it may seem, 'the locust was hardly known in England till the year 1823, when the nation was introduced to a knowledge of it by William Cobbett!' What he will say of me besides I do not know; but I know that he will say this of me." (*Arb. Brit.*, vol. i. p. 622.) Notwithstanding this extravagant praise, the wood is found to be practically of little value; and, after creating a prodigious sensation for a few years, the locust mania entirely subsided, and the tree is now, as it was before Cobbett's time, planted only, or chiefly, for ornament. It was introduced into Europe by Robin, gardener to Henry IV. of France, and was named in remembrance of him by Linnæus many years afterwards.
191. R. *Pseùd-Acàcia umbraculífera* Dec. The umbrella-headed Robinia, or False Acacia. A very ornamental tree, with a dense, umbrageous, domical head, and few large branches.
192. R. *Pseùd-Acàcia tortuòsa* Dec. The tortuose-branched Robinia.
193. R. *Pseùd-Acàcia sophoræfòlia* Lodd. Cat. The Sophora-leaved Robinia, or False Acacia.
194. R. *Pseùd-Acàcia macrophýlla* Lodd. Cat. The large-leaved False Acacia.
195. R. *Pseùd-Acàcia microphylla* Lodd. Cat. The small-leaved False Acacia.
196. R. (*P.*) *viscòsa* Vent. The clammy-barked Robinia. The young shoots have a purple-coloured bark, and the flowers are pale pink, purple, or violet, mixed with white. Most botanists consider this as a decided species; yet seedlings from it have come up without any appearance of viscosity on the branches, and in no respect different from *R.* Pseùd-*Acàcia*.
197. R. *hìspida* L. The hispid Robinia, or Rose Acacia. A very showy shrub or low tree, with large rose-coloured flowers in August. The branches are apt to be broken by high winds, and should therefore be supported by stakes.
198. R. *hìspida ròsea* Pursh. The rose-coloured-flowered hispid Robinia.
199. R. *hìspida macrophýlla* Dec. The large-leaved hispid Robinia.

200. to 206. *Caraga'na* Lam. The Caragana, or Siberian Pea Tree. Stiff-looking erect shrubs, natives of Siberia; chiefly with yellow flowers, which appear in April and May.
200. *C. arboréscens* Lam. The arborescent Caragana.
201. *C.* (*a.*) Altagàna *Poir.* The Altagana Caragana.
202. *C. frutéscens* Dec. The shrubby Caragana.
203. *C. pygmæ'a* Dec. The pygmy Caragana. Very singular and ornamental when grafted standard high on *C.* arboréscens. The same may be said of the three following species.
204. *C. spinòsa* Dec. The spiny Caragana.
205. *C. tragacanthöides* Poir. The Goat's-thorn-like Caragana.
206. *C.* Chamlàgu *Lam.* The Chamlagu, or Chinese Caragana.
207. Halimode'ndron *argénteum* Dec. The silvery-leaved Halimodendron, or Salt Tree. An elegant plant when grafted standard high. The flowers are bluish pink and fragrant, and appear from May to July; and the leaves have a fine silvery tinge.
208. Calo'phaca *wolgárica* Fisch. The Wolga Calophaca. A shrub from Siberia, with yellow flowers in June, very ornamental when grafted on *Caragàna* arboréscens.
209. and 210. *Colu'tea R. Br.* The Colutea, or Bladder Senna. Rapid-growing shrubs, with yellow flowers tinged with red, saffron, or white, which appear in great profusion from June to August, and are succeeded by large bladdery capsules. Quite hardy.
209. *C. arboréscens* L. The arborescent Colutea.
210. *C.* (*a.*) *cruénta* Ait. The bloody-flowered Colutea, or Oriental Bladder Senna.
211. Coroni'lla *E'merus* L. The Scorpion-Senna Coronilla. A very handsome little shrub, with yellow flowers tinged with red, which appear from April to June. The pinnate foliage is particularly elegant.
212. and 213. Wista'ria Nutt. The Wistaria. Climbing shrubs, producing large bunches of bluish purple sweet-scented flowers in May and June.
212. W. *frutéscens* Dec. The shrubby Wistaria.
213. W. *chinénsis* Dec. The Chinese Wistaria. A splendid plant of vigorous growth. A specimen in the Horticultural Society's Garden extends its branches above 90 ft. on each side of the main stem, and thus covers about 1800 square feet of wall. In 1840 it produced 9000 bunches of flowers averaging 75 flowers on each bunch. (See *Bot. Reg.*, 1840.)
214. to 218. Gledi'tschia L. The Gleditschia. Prickly trees, remarkable for the beauty of their foliage, and the size and number of the thorns which are produced from their branches.
214. G. *triacánthos* L. The three-thorned Gleditschia, or Honey Locust.
215. G. *sinénsis* Lam. The Chinese Gleditschia.
216. G. *sinénsis purpùrea* Hort. The purple Chinese Gleditschia.
216*a*. G. *inérmis* Audibert. The unarmed Gleditschia.
217. G. (*s.*) *fèrox* Desf. The ferocious-prickled Gleditschia.
218. G. *cáspica* Desf. The Caspian Gleditschia.
219. Gymno'cladus *canadénsis* Lam. The Canada Gymnocladus, Kentucky Coffee Tree, or Stump Tree. A remarkable tree, having the buds concealed under the bark, with short, stiff, upright, stump-like shoots, and very large pinnate leaves, often 3 ft. long. The seeds were at one time roasted and ground as a substitute for coffee, in Kentucky.
220. Ce'rcis *Siliquástrum* L. The common Judas Tree. This, says Gerard, " is the tree on which Judas hanged himself, and not the elder tree, as it is vulgarly said." The flowers are numerous, and of a bright purplish pink, appearing before the leaves, in May. Both flowers and leaves are mixed with salads by the French, and the flower-buds are pickled in vinegar. The leaves are cordate, reniform, and remarkably beautiful

having, as well as the young shoots, a fine purple tinge on their veins and petioles.

ROSA'CEÆ.

This is a very numerous order, all the species of which have flowers more or less resembling a single rose. Many of the species are trees bearing edible fruit, and almost all are very ornamental, and have been long cultivated in gardens throughout the world. They are natives of Europe, Asia, America, and a few of them of Africa, but scarcely any of Australia. They are all peculiarly well adapted for suburban gardens, either as producing useful fruit, or as being of small size, picturesque shapes, never growing out of bounds, and very ornamental from their blossoms.

221. to 225. *AMY'GDALUS Tourn.* The Almond Tree. Trees and shrubs with showy flowers, pink or white, appearing from March to May; and two species bear edible fruit.

221. *A. nàna* L. The dwarf, or shrubby, Almond. Flowers rose-coloured, appearing in March and April.

222. *A. communis amàra* Dec. The bitter-kerneled common Almond Tree. There is a large plant in the flower-garden of the Arboretum which occasionally ripens fruit, a proof of the mildness of the climate of Derby.

223. *A. communis dúlcis* Dec. The sweet-kerneled common Almond Tree. This and the preceding species are extensively cultivated in the South of Europe and West of Asia for the kernels, which are used in medicine and in the dessert.

224. *A. communis macrocárpa* Ser. The long-fruited common Almond Tree. The blossoms are large, white, tinged with pink; in March and April.

225. *A. orientàlis* Ait. The Eastern Almond Tree. Leaves of a silvery whiteness.

226. *PE'RSICA vulgàris flòre plèno* Hort. The double-flowering common Peach. Very ornamental, appearing, when in full bloom, like one mass of intense pink.

227. to 227*a*. *ARMENI'ACA Tourn.* The Apricot. The foliage is heart-shaped, and very handsome; the flowers white, and produced in March.

227. *A. dasycárpa* Pers. The thick-fruited Apricot Tree. The flowers are white, and appear in March; the fruit is small, and of a purple colour.

227*a*. *A.* (*v.*) *sibírica* Pers. The Siberian Apricot Tree. One of the earliest flowering trees in British gardens.

228. to 230. *PRU'NUS Tourn.* The Plum. Very prolific in white blossoms, and some of the species producing useful fruit.

228. *P. spinòsa flòre plèno.* The double-flowered Sloe Thorn.

229. *P. doméstica myrobálana* L. The Myrobalan, or Cherry Plum.

230. *P. marítima* Wangenheim. The sea-side-inhabiting Plum Tree.

231. to 249. *CE'RASUS Juss.* The Cherry. Showy trees, very hardy, of rapid growth, and producing abundance of white blossoms, and red or black fruit.

231. *C. vulgàris flòre plèno* Hort. The double-flowered common Cherry. Very ornamental.

232. *C. vulgàris fòliis variegàtis* Hort. The variegated-leaved common Cherry.

232*a*. *C. vulgàris* Maráscha. The Maraschino Cherry. The liqueur maraschino is made from the fruit of this variety.

233. *C.* (*v.*) *semperflòrens* Dec. The ever-flowering, or All Saint's, Cherry Tree. A beautiful weeping tree, producing flowers and fruit great part of the summer.

234. *C. serrulàta* G. Don. The serrulated-leaved Cherry Tree. Very handsome foliage, and abundance of fine white flowers.

235. *C. Pseùdo-Cérasus* Lindl. The False-Cherry Tree.

236. *C. Chamæcérasus* Lois. The Ground-Cherry Tree, or Siberian Cherry.

237. *C. prostràta* Ser. The prostrate Cherry Tree.

238. *C. deprèssa* Ph. The depressed, or prostrate, Cherry Tree.
239. *C. pygmæ'a* Lois. The pygmy Cherry Tree.
240. *C. nìgra* Lois. The black Cherry Tree.
241. *C. japónica* Lois. The Japan Cherry Tree.
242. *C. japónica múltiplex* Ser. The double-flowered Japan Cherry. Very handsome.
243. *C.* Mahàleb *Mill.* The Mahaleb, or perfumed, Cherry Tree. A handsome small tree, very common in France, where the wood is much sought after by cabinet-makers on account of its fragrance, hardness, and the fine polish which it receives. It is also greatly in demand as fuel by the higher classes, as it exhales a fine odour when burning in open fireplaces. The scent of the flowers is so powerful as not to be supportable in a room. The fruit is small and black, and much sought after by birds. In Austria, the shoots of two or three years' growth are used for forming the tubes of tobacco pipes. The French name of this tree is Bois de St. Lucie, from its abundance near the city of that name in the Vosges.
244. *C. Pàdus* Dec. The Bird-Cherry Tree. Very ornamental when in blossom, and the leaves are very subject to be eaten by caterpillars. Birds eagerly devour the fruit. The wood, when green, has a disagreeable smell, though, being finely veined, it is much used by cabinet-makers on the Continent.
245. *C. Pàdus bracteòsa* Ser. The bracted-flowered Bird-Cherry.
246. *C. virginiàna* Michx. The Virginian Bird-Cherry Tree. A very handsome tree, prolific in flowers, and ripening its fruit so freely as to be self-sown in several parts of the country. The largest trees in England are at Whitton, near Hounslow, where they are 50 ft. high.
247. *C. lusitánica* Lois. The Portugal Laurel. A well-known evergreen shrub, or low tree; in England, at Chatsworth, Trentham Hall, and other places, sometimes trained to a single stem, and the head pruned so as to resemble a ball, in imitation of the orange trees of France.
248. *C. Laurocérasus* Lois. The Laurel-Cherry, or common Laurel. This shrub, now so common in gardens, was introduced from Trebisond, in Asia Minor, to Vienna, in 1576, and it was then called the Date of Trebisond. It was nearly lost for several years; but, in 1629, a plant of it found its way to England, and was preserved in the garden of James Cole, at Highgate, a great lover of all rarities, who preserved it during the winter by covering it with a blanket. From the plant so preserved, all the millions in British gardens have descended. In France, the common laurel is sometimes grafted standard high on the common cherry, and the head pruned so as to resemble an orange tree, which it does more effectually than the Portugal laurel, from the yellow green of its leaves. The stock being deciduous, however, renders such trees but of short duration, and the Portugal laurel would form a much better one.
249. *C. Laurocérasus angustifòlia* Hort. The narrow-leaved common Laurel. A very curious dwarf variety.
250. and 251. KE'RRIA *japónica* Dec. The Japan Kerria. Named in honour of *W. Ker*, a collector of plants for the Kew Gardens.
251. K. *japónica flòre plèno*. Double-flowered Japan Kerria. A very ornamental shrub, producing a profusion of yellow flowers from March to June, and often all the summer.
252. to 264*a*. SPIRÆ'A *L.* The Spiræa. Low deciduous shrubs, with conspicuous flowers of considerable elegance and beauty; natives of Europe, Asia, and America. The word *spiræa* means a wreath, in allusion to the fitness of the flowers for garlands.
252. *S. opulifòlia* L. The Guelder-Rose-leaved Spiræa, or Virginian Guelder Rose.
253. *S. chamædrifòlia* L. The Germander-leaved Spiræa.
254. *S.* (c.) *ulmifòlia* Scop. The Elm-leaved Spiræa.

255. *S. trilobàta* L. The three-lobed-leaved Spiræa.
256. *S. hypericifòlia* Dec. The Hypericum-leaved Spiræa.
257. *S. corymbòsa* Raf. The corymbose-flowering Spiræa.
258. *S. bélla* Sims. The beautiful Spiræa. A very beautiful species, which every cottager ought to have in his garden.
259. *S. salicifòlia* L. The Willow-leaved Spiræa.
260. *S. salicifòlia paniculàta* Willd. The panicle-flowered Willow-leaved Spiræa.
261. *S. tomentòsa* L. The downy Spiræa.
262. *S. ariæfòlia* Smith. The White-Beam-tree-leaved Spiræa. A rapid-growing most elegant species, soon forming a bush 10 or 12 feet in diameter and 6 or 8 feet high, and producing a profusion of white flowers in July and August. A better plant for standing singly on a lawn can hardly be found.
263. *S. sorbifòlia* L. The Sorbus-leaved Spiræa.
264. *S. cuneifòlia* Wall. The wedge-shaped-leaved Spiræa.
265. to 271. *Rù'bus L.* The Bramble. The species can hardly be called woody, as the shoots die at the end of the second year. Most of them may be considered as gigantic strawberry plants, as their shoots like the runners of strawberries, root at the points where they touch the ground, and, sending out fresh shoots, soon cover a great extent of surface. Some of the species are more shrubby, such as the common raspberry. Their flowers are whitish or pinkish, May to August.
265. *R. laciniàtus* W. The cut-leaved Bramble.
266. *R. spectábilis* Ph. The showy-flowered Bramble. Flowers pink, June.
267. *R. fruticòsus* pompònius *Ser.* The double-flowered shrubby Bramble. This is a variety of the common bramble of the hedges, the shoots of which are used by thatchers, makers of beehives, straw mats, &c.
268. *R. fruticòsus fòliis variegàtis.* The variegated-leaved Bramble.
269. *R. fruticòsus leucocárpus* Ser. The white-fruited shrubby Bramble.
270. *R. odoràtus* L. The sweet-scented-leaved Bramble. The flowers are large and red, and appear in June and July.
271. *R. nutkànus* Moc. The Nootka Sound Bramble. The fruit, which is large and yellow, makes excellent tarts.
272. Potenti'lla *fruticòsa* L. The shrubby Potentilla, or Cinquefoil. A neat little bush, native of Europe, and producing its yellow flowers in July and August.
273. to 284. *Ro'sa Tourn.* The Rose Tree. Shrubs, for the most part deciduous; natives of the temperate regions of Europe, Asia, Africa, and America, but not of Australia; which have been in cultivation in the Old World, for the beauty and fragrance of their flowers, from time immemorial. The kinds in cultivation amount to several thousand, but in the Derby Arboretum only the types of some of the tribes are given. In the belt surrounding the Arboretum properly so called, 100 of the most choice varieties are planted and named.
273. *R. fèrox* Lawr. The fiercely-prickled Rose.
274. *R. bracteàta* Wendl. The large-bracted Rose. Evergreen.
275. *R. cinnamòmea* Besl. The Cinnamon-scented Rose, or Rose of Sharon. In Solomon's garden, "the Rose of Sharon and the Lily of the Valley" appear to have been plants thought worth mentioning, but what plants they were is doubtful.
276. *R. sulphùrea* Ait. The sulphur-coloured-flowered Rose.
277. *R. spinosíssima* L. The most spiny, or Scotch, Rose. A great many beautiful varieties and hybrids have been raised from this species, with red, white, purple, and yellow flowers. They are known in the nurseries as Scotch Roses.
278. *R. damascèna* Mill. The Damascus, or Damask, Rose. The otto, or attar, of roses is made from the flowers of this rose, by distillation, and

skimming off the oil that comes over with the spirit. It may, however, be made from the flowers of any rose. Rose water is simply water distilled from an infusion of rose flowers.

279. *R. centifòlia* Lin. The hundred-petaled, Provence, or Cabbage, Rose. This is a different rose from what the French call Rose de Provins, which is named after a small village in the neighbourhood of Paris, and is the *Ròsa gállica* of Linnæus.
280. *R. villòsa* L. The villous-leaved Rose.
281. *R. rubiginòsa* L. The rusty-leaved Rose, Sweet Briar, or Eglantine.
282. *R. canìna* L. The common Dog Rose.
283. *R. índica* L. The Indian, or common China, Rose. One of the most beautiful of roses, flowering, when properly treated, all the summer.
284. *R. arvénsis sempervìrens* L. The evergreen Rose. This is the rose that grows wild at Pæstum, in the South of Italy, mentioned by Virgil, and more recently by Rogers.

> ——— "For Pæstum!
> And now a Virgil, now an Ovid sung
> Pæstum's twice-blowing roses."

284*a*. *R. rubifòlia* R. Br. The Bramble-leaved Rose.

285. to 339*a*. CRATÆ'GUS *Lindl.* The Thorn. Low trees or shrubs, mostly deciduous; natives of Europe and North America, and some of them of Asia and the North of Africa. The species all flower and fruit freely, and they are all ornamental in every stage of their growth. The flowers are for the most part white, and the fruit, or haws, red; but some have scarlet flowers, and yellow, purple, black, or green fruit, which hangs long on the trees, and is very ornamental in autumn. All the species are peculiarly well adapted for small gardens, and for planting suburban residences, because they soon come to perfection, do not grow large, and have an old matured appearance even when young. The flowers are produced in May and June, and the fruit is ripe in September and October.
285. *C. coccínea* L. The scarlet-fruited Thorn. Both leaves and fruit are larger than in most of the species.
286. *C. coccínea corállina*. The Coral-fruited Thorn.
287. *C. coccínea indentàta*. The indented-leaved scarlet-fruited Thorn.
288. *C. coccínea máxima* Lodd. The largest-leaved scarlet-fruited Thorn.
289. *C. glandulòsa* W. The glandular-calyxed Thorn.
290. *C. glandulòsa subvillòsa*. The subvillous glandular-calyxed Thorn.
291. *C. punctàta rùbra* Pursh. The red-fruited dotted Thorn.
292. *C. punctàta rùbra stricta* Hort. The upright red-fruited dotted Thorn.
293. *C. punctàta aúrea* Pursh. The golden-fruited dotted Thorn.
294. *C. pyrifòlia* Ait. The Pear-tree-leaved Thorn. The fruit of this species is small and orange-coloured, ripens early in September, and is more greedily devoured by birds than that of any other species. When not eaten, it shrivels, turns black, and remains on the tree throughout the winter.
295. *C. macracántha* Lodd. The long-spined Thorn.
296. *C. Crús-gálli spléndens* Dec. The splendid Cock's-spur Thorn. The word cock's-spur refers to the form of the spines. All the varieties of this species are extremely beautiful.
297. *C. Crús-gálli pyracanthifòlia* Dec. The Pyracantha-leaved Cock's-spur Thorn.
298. *C. Crús-gálli salicifòlia* Dec. The Willow-leaved Cock's-spur Thorn. There is a beautiful row of trees of this species in the Jardin des Plantes at Paris.
299. *C.* (*C.*) *ovalifòlia* Horn. The oval-leaved Thorn.
300. *C.* (*C.*) *prunifòlia* Bosc. The Plum-leaved Thorn.
301. *C. nìgra* Waldst. et Kit. The black-fruited Thorn. This is a very handsome vigorous-growing species, putting forth its leaves, in mild seasons, in February or March, flowering in April and May, and ripening

its black fruit in July and August. It is liable to be eaten by caterpillars early in the season, which is probably the reason why this species is said to attract the nightingale. The same thing is said by old French writers of the common hawthorn, *C. Oxyacántha.*

302. *C. purpùrea* Bosc. The purple-branched Thorn. The flowers are white, and produced early in April; and the fruit is dark red, or purple, sometimes yellow, and ripe in July.
303. *C. purpùrea altàica* Arb. Brit. The Altai purple-branched Thorn.
304. *C. Douglàsii Lindl.* Douglas's Thorn. The fruit is black, and the tree very handsome. It is named in memory of the botanical collector, Douglas, who, after sending home a greater number of hardy ornamental plants than were before sent home by any other individual, at last met a horrible death in the Sandwich Islands, by falling into a pit formed for ensnaring wild bulls, by one of which he was gored to death. (See *Gard. Mag.*, vol. ii. p. 602.)
305. *C. flàva* Ait. The yellow-fruited Thorn. The leaves die off of a very rich yellow, tinged with red.
306. *C.* (*f.*) *lobàta* Bosc. The lobed-leaved Thorn. The leaves die off of an intense scarlet.
307. *C. trilobàta* Lodd. The three-lobed-leaved Thorn. Decaying leaves purple, dark red, scarlet, or yellow; more ornamental in autumn than the leaves of any other species.
308. *C. apiifòlia.* Michx. The Parsley-leaved Thorn.
309. *C. apiifòlia mìnor* Hort. The smaller Parsley-leaved Thorn.
310. *C. cordàta* Mill. The heart-shaped-leaved Thorn. This is one of the latest-flowering thorns, and the fruit, which is red, is remarkably small.
311. *C. spathulàta* Elliot. The Spathula-shaped-leaved Thorn. A remarkably neat little plant, with shining deep green leaves, white flowers which appear in May, and small bright red berries.
312. *C.* Azaròlus *maroccàna* Pers. The Morocco Azarole Thorn. A large conical tree, which comes into leaf, in mild winters, at the end of January.
313. *C. Aròmia* Bosc. The Aronia Thorn. Fruit large, yellow, and the tree of a regular conical shape.
314. *C. orientàlis* Bosc. The Eastern Thorn. Fruit brick-coloured, and the tree spreading, with rather pendent branches.
315. *C. orientàlis sanguínea* Hort. The blood-coloured-fruited Eastern Thorn. When in fruit, this is, perhaps, the handsomest species of the genus.
316. *C. tanacetifòlia* Pers. The Tansy-leaved Thorn. Fruit large, yellow. Tree fastigiate.
317. *C. tanacetifòlia glàbra* Lodd. The glabrous-leaved Tansy-leaved Thorn.
318. *C. tanacetifòlia Celsiàna Dum.* Cels's Tansy-leaved Thorn. The leaves are large and very deeply cut, and the shoots very thick and vigorous. This is the *C.* t. Leeàna of the *Arb. Brit.*, 1st edit.
319. *C. heterophýlla* Flugge. The various-leaved, or Neapolitan, Thorn. Eminently ornamental, whether when covered with its white blossoms in May or June, or its bright scarlet fruit in September and October.
320. *C. Oxyacántha obtusàta* Dec. The obtuse-leaved common Hawthorn.
320*a*. *C. Oxyacántha quercifòlia* Booth. The Oak-leaved common Hawthorn.
321. *C. Oxyacántha laciniàta* Hort. The cut-leaved common Hawthorn.
322. *C. Oxyacántha eriocárpa* Lindl. The woolly-fruited common Hawthorn.
323. *C. Oxyacántha Oliveriàna.* Oliver's common Hawthorn. Fruit black.
324. *C. Oxyacántha melanocárpa.* The black-fruited common Hawthorn.
325. *C. Oxyacántha aúrea* Hort. The golden-fruited common Hawthorn.
326. *C. Oxyacántha múltiplex* Hort. The double-flowered common Hawthorn. The flowers are white, but become red before they die off. They are produced in great abundance every year, because the flowers, being double, are not succeeded by fruit, and the plant is, consequently, not weakened; whereas, when an abundant show of flowers on any plant is succeeded by a proportionate display of fruit, the plant is generally so

much weakened that it produces but few flowers the following year. Hence, to insure an equal display of flowers every year on the same plant, a double-flowered variety ought to be chosen.

327. *C. Oxyacántha rósea* Hort. The rosy-flowered common Hawthorn.

328. *C. Oxyacántha punícea* Lodd. The scarlet-flowered common Hawthorn.

329. *C. Oxyacántha punícea flóre plèno* Hort. The double scarlet-flowered common Hawthorn.

330. *C. Oxyacántha fóliis argénteis* Hort. The silvery-leaved common Hawthorn.

331. *C. Oxyacántha stricta* Lodd. The upright-growing common Hawthorn. A very striking variety, found in a bed of seedlings in the Brentford Nursery.

332. *C. Oxyacántha regìnæ* Hort. Queen Mary's Thorn. The parent tree stands in a garden near Edinburgh, which once belonged to the Regent Murray, and is now, 1840, in the possession of Mr. Cowan, a paper manufacturer. If it be true that Queen Mary often sat with the Regent, the Lord Melbourne of his time, under its shade, the tree must be now nearly 300 years old.

333. *C. Oxyacántha præ'cox* Hort. The early-flowering, or Glastonbury, Thorn. This variety comes into leaf in January or February, and sometimes even in autumn; so that occasionally, in mild seasons, it may be in flower on Christmas day. The original tree stood in the burying ground of Glastonbury Abbey. It is said to have sprung from the staff of Joseph of Arimathea, who is suppposed to have introduced Christianity into that part of England. As the thorn will root from cuttings of the old wood, on the supposition that Joseph's staff was a green cudgel, perhaps cut from the first bush he met with after setting his foot on shore, to defend himself from the savage inhabitants, the fact of its rooting and becoming a tree may be literally true.

334. *C. Oxyacántha monógyna* Hort. The one-styled common Hawthorn.

335. *C. Oxyacántha apétala* Lodd. The apetalous common Hawthorn.

The seventeen preceding sorts are all varieties of the common hawthorn, a well-known hedge plant, on which may be grafted not only all the different species and varieties of *Crataegus*, but those of *Mespilus*, *Sorbus*, *Pyrus*, *Malus*, *Cydonia*, *Amelánchier*, and various others; and in this way our common field hedges might be rendered highly ornamental, and even productive of useful fruits. Sloe, or blackthorn, hedges might be grafted with all the different sorts of plum, apricot, and peach, and hedges of wild cherries with all the cultivated cherries.

336. *C. parvifólia* Ait. The small-leaved Thorn.

337. *C. fúsca* Jacq. The fuscous-leaved Thorn.

338. *C. mexicàna* Moc. et Sesse. The Mexican Thorn. Fruit green, almost as large as a small pippin.

339. *C. Pyracántha* Pers. The fiery Thorn, Pyracantha, or Burning Bush. No plant has a more showy appearance in winter, when it is covered with its brilliant scarlet berries, which has given rise to the Canadian name of Burning Bush.

339*a*. *C. Pyracántha crenulàta* Hort. The notch-leaved fiery Thorn.

340. to 348. COTONEA'STER *Med.* Spineless shrubs, with whitish flowers and black or red fruit; natives of Europe, Asia, and America; and very ornamental in British gardens, during spring and the beginning of summer, and in autumn.

340. C. *vulgàris* Lindl. The common Cotoneaster.

341. C. (*v.*) *tomentòsa* Lindl. The tomentose, or woolly, Cotoneaster.

342. C. (*v.*) *laxiflòra* Jacq. The loose-flowered Cotoneaster.

343. C. *frígida* Wall. The frigid Cotoneaster. A splendid bush in the autumn, when it is covered with its scarlet fruit, and also very beautiful in May when in flower.

344. C. (*f.*) *affìnis* Lindl. The related (to C. frígida) Cotoneaster. Equally splendid with the preceding sort.

345. C. *acuminàta* Lindl. The acuminated-leaved Cotoneaster.
346. C. *Nummulària* Lindl. The Money-wort-like-leaved Cotoneaster.
347. C. *rotundifòlia* Wall. The round-leaved Cotoneaster. This and the following sort are evergreen, and well adapted for covering rockwork, or for grafting standard high on C. acuminàta.
348. C. (*r.*) *microphýlla* Wall. The small-leaved Cotoneaster.
349. to 353. *AMELA'NCHIER* Med. The Amelanchier. Showy trees, profusely covered with white flowers in March and April, which are succeeded by fruit, ripe in the beginning of July, and eagerly sought after by birds.
349. *A.* (*vul.*) *Botryàpium* Dec. The Grape Pear, snowy-blossomed Amelanchier, or snowy Mespilus.
350. *A.* (*v.*) *sanguínea* Dec. The blood-coloured-fruited Amelanchier.
351. *A.* (*v.*) *ovàlis* Dec. The oval-leaved Amelanchier.
352. *A.* (*v.*) *flórida* Lindl. The flowery Amelanchier.
353. *A.* (*v.*) *flórida parvifòlia* Hort. The small-leaved flowery Amelanchier.
354, 355. *ME'SPILUS Lindl.* The Medlar. Crooked-branched trees, with large white flowers.
354. *M. germánica* L. The German, or common, Medlar. The fruit is brown when ripe, and not good to eat till it has begun to decay.
355. *M. Smithii Dec.* Smith's Medlar. A magnificent plant when covered with its large white flowers, but its fruit is not fit to eat.
356. to 386. *PY'RUS Lindl.* The Pear Tree. Low trees, and some shrubs; almost all deciduous; and natives of, or cultivated in, Europe, Asia, and North America. Some of them are in great estimation throughout the world for their fruit; and all are particularly well adapted, from their small size, picturesque shapes, their not growing out of bounds, their great durability, and their showy flowers, for small gardens.
356. *P. communis fòliis variegàtis* Hort. The variegated-leaved common Pear. The species of which this is a variety is much prized for its fruit in the temperate regions of both hemispheres. A great many new and excellent varieties have been raised in Belgium within the last 30 years, and ought now to take the place of many of the old sorts, which are grown in orchards throughout the country by those who do not know better.
357. *P. nivàlis* L. The snowy-leaved Pear Tree.
358. *P.* (*c.*) *salicifòlia* L. The Willow-leaved Pear Tree.
359. *P.* (*c.*) *amygdaliformis* Vil. The Almond-shaped Pear Tree.
360. *P. sinénsis* Lindl. The Chinese Pear Tree. A very distinct species, but chiefly valuable for its foliage and flowers.
361. *P. bollwylleriàna* Dec. The Bollwyller Pear Tree.
362. *P. variolòsa* Wall. The variable-leaved Pear Tree.
363. *P.* (M.) *prunifòlia* W. The Plum-tree-leaved Apple Tree, or Siberian Crab. Very prolific in blossoms and fruit, and the latter makes an excellent preserve.
364. *P.* (M.) *baccàta* L. The Berry-like-fruited Apple Tree, or Siberian Crab. Resembles the preceding kind, and the fruit is used for the same purposes.
365. *P. coronària* L. The Garland-flowering Apple Tree. A very handsome species with odoriferous flowers, and green fruit not fit to eat.
366. *P. spectábilis* Ait. The showy-flowering wild Apple Tree, or Chinese Crab Tree. The most showy species of the genus when in flower, but the fruit is small, green, and worthless.
367. *P. A'ria* Ehrh. The White Beam Tree. Remarkably hardy, of a stiff formal shape, which does not harmonise well with loose free-growing trees, without some intermediate forms.
368. *P.* (A.) *intermèdia* Ehrh. The intermediate White Beam Tree.
369. *P.* (A.) *intermèdia latifòlia* Dec. The broad-leaved intermediate White Beam Tree.
370. *P.* (A.) *vestìta* Wall. The clothed White Beam Tree. The latest-leafing

tree at present in cultivation in Britain, seldom opening its buds till the middle of May, and sometimes not till the beginning of June. The leaves are densely clothed with cottony down, whence the name.

371. *P. torminàlis* Ehrh. The griping-fruited Service Tree. Common in Sussex, whence the fruit is sent to London in the autumn, and eaten when it begins to decay.
372. *P. rivulàris* Doug. The River-side-inhabiting Pyrus.
373. *P. pinnatifida* Ehrh. The pinnatifid-leaved Service Tree.
374. *P. aucupària* Gærtn. The Fowler's Service Tree, Mountain Ash, or Rowan Tree. Evelyn tells us that this tree was planted in churchyards, as a preservative against fascination and evil spirits. In the tragedy of Macbeth, the sailor's wife, on the witches requesting some chestnuts, hastily answers "A rown tree, witch," though, in most of the editions, this is printed "Aroint thee, witch;" which is evidently a corruption. Bishop Heber informs us that the same superstition which in Britain attaches to the rowan tree, in Upper India attaches to a species of Mimòsa. According to Mr. Waterton, the celebrated author of *Wanderings in South America*, the rowan-tree superstition is still in full force in the village of Walton, near Wakefield. A woman there, who owed a man a grudge, turned his cow sick by merely looking in at the door of the cow-house. "The cow grew worse and worse," said the man, "and so I went and cut a bit of wiggin (mountain ash), and I nailed the branches all up and down the cow-house. I am a match for old Sally, now; she can't do me any more harm, and my cow will get better in spite of her." (*Arb. Brit.*, vol. ii. p. 919.)
375. *P. americàna* Dec. The American Service.
376. *P. Sórbus* Gærtn. The true Service. Rather a scarce tree, though it has been for centuries more or less cultivated for its fruit, which is eaten when in a state of incipient decay.
377. *P. lanuginòsa* Dec. The woolly-leaved Service Tree.
378. *P. spùria* Dec. The spurious Service Tree. The leaves resemble those of the elder; the young branches are purple, spotted with white; and the fruit is black. Decaying leaves of every shade of brown, red, and purple.
379. *P. spùria péndula* Hort. The pendulous-branched spurious Service Tree. A most elegant tree when grafted standard high on the common mountain ash.
380. *P. arbutifòlia* L. The Arbutus-leaved Aronia. Decaying leaves red, brown, and dark purple.
381. *P. arbutifòlia scrótina* Lindl. The late Arbutus-leaved Aronia.
382. *P.* (a.) *floribúnda* Lindl. The abundant-flowered Aronia.
383. *P.* (a.) *deprèssa* Lindl. The depressed Aronia.
384. *P. pùbens* Lindl. The downy-branched Aronia.
385. *P. grandifòlia* Lindl. The large-leaved Aronia. The leaves of this and the five preceding sorts die off of a rich brown purple or red, and the fruit is black.
386. *P. Chamæméspilus* Lindl. The dwarf Medlar.
387. to 390. CYDO'NIA *Tourn.* The Quince Tree. Low deciduous shrubs, natives of Europe and Asia, with red or white flowers tinged with pink in May and June, and fruit which in some of the species is large and showy.
387. *C. vulgàris pyriformis* Hort. The Pear-shaped Quince. Very showy when in fruit, which attains to a large size in moist soil, and is valuable for its fragrance in apple tarts, pies, and puddings.
388. *C. sinénsis* Thouin. The China Quince Tree. Chiefly cultivated on account of its foliage and flowers.
389. *C. japónica* Pers. The Japan Quince Tree, or *Pyrus* japónica. A well-known ornamental shrub, which, in mild situations, produces its red flowers all the winter, and is singularly ornamental in March, April, and May. The fruit is green and fragrant, but not eatable.

390. *C. japónica flòre álbo* Hort. The white-flowered Japan Quince Tree.

CALYCANTHA'CEÆ.

Low deciduous shrubs, natives of America and China, with aromatic bark and flowers, some species of which are eminently fragrant and valuable during the winter season.

391. CALYCA'NTHUS *flóridus* L. The flowery Calycanthus, or Carolina Allspice. The flowers are of a dark purple colour, and appear from June to August. The shoots are of a dark purplish brown, and very aromatic.

392. and 393. CHIMONA'NTHUS *frágrans* Lindl. The fragrant-flowered Chimonanthus. The flowers are yellowish and purple within, extremely odorous, and against a wall are produced in abundance from November till March, during which period a few of them are brought daily to the tables of the higher classes to scent the breakfast room.

393. C. *frágrans luteus* Hort. The yellow-flowered fragrant Chimonanthus.

TAMARICA'CEÆ.

Slender-growing shrubs, with small heath-like leaves, and pinkish and white flowers, which appear from June to August. Natives of Europe and Asia, and valuable as growing in situations exposed to the sea breeze.

394. TA'MARIX *gállica* L. The French Tamarisk. The young twigs are used by the Tartars in cases of rheumatism and bruises, and whip handles are made of the stronger shoots. At Whitstable, in Kent, close to the sea shore, there is a plant of this species with a clear stem 7 ft. high and 4 ft. in circumference at the ground, and with a bushy head like a pollard willow, 10 or 12 feet high.

395. MYRICA'RIA *germánica* Desv. The German Myricaria, or German Tamarisk. Resembles the preceding genus, and differs from it, in a general view, in being a less woody plant.

PHILADELPHA'CEÆ.

Rambling shrubs; natives of Europe, Asia, and America; with large showy white flowers, which appear in June and July, and have a heavy scent somewhat like that of orange flowers.

396. to 403*a*. PHILADE'LPHUS *L.* The Philadelphus, or Mock Orange. Rambling shrubs, very showy from their white flowers, which are produced in great abundance. "Syringa ivory pure."

396. *P. coronàrius* L. The Garland Mock Orange. One of the oldest shrubs in cultivation. It is to be found in almost every garden from Lisbon to Naples, and from the Mediterranean to Stockholm and St. Petersburg. Gerard describes it as decorating gardens in cities; he had it in his garden "in the suburbs of Holborne, in verie great plentie;" and the flowers were in his time used to give their perfume to pomatum. The flowers smell like those of the orange, and the leaves taste like the fruit of the cucumber.

397. *P. coronàrius flòre plèno* Lodd. The double-flowered Garland Mock Orange.

398. *P. coronàrius variegàtus* Lodd. The variegated-leaved Garland Mock Orange.

399. *P. verrucòsus* Schrad. The warted Philadelphus.

400. *P.* (*v.*) *latifòlius* Schrad. The broad-leaved Philadelphus.

401. *P. láxus* Schrad. The loose-growing Philadelphus.

402. *P.* (*l.*) *grandiflòrus* Willd. The large-flowered Philadelphus. A very showy species, profusely covered with flowers in the end of June and beginning of July.

403. *P. hirsùtus* Nutt. The hairy-leaved Philadelphus.

403*a*. *P. Gordoniànus Lindl.* Gordon's Philadelphus. Named by Dr. Lindley in honour of Mr. Gordon, now the foreman of the arboretum in the

Horticultural Society's Garden, and lineally descended from a brother of the nurseryman of that name who corresponded with Linnæus.

403*b*. *P. speciòsus* Wall. The showy-flowered Philadelphus. Flowers very large and showy.

404. DEU'TZIA *scàbra* Thunb. The rough Deutzia. The flowers resemble those of philadelphus, but are disposed in compound panicles.

GROSSULA'CEÆ.

Low deciduous shrubs; natives of Europe, Asia, and North America; not in general remarkable for their flowers, but some of which produce fruit in great esteem throughout the colder parts of Europe, for the kitchen and the dessert. Some of the species have red or pink flowers of very great beauty.

405. to 430. *RI'BES* L. The Ribes. The species include the gooseberry and currant of the gardens, and some others curious or highly ornamental.

405. *R. setòsum* Lindl. The bristly Gooseberry.

406. *R. triflòrum* W. The three-flowered Gooseberry.

407. *R.* (*t.*) *níveum* Lindl. The snowy-flowered Currant-like Gooseberry.

408. *R.* (*t.*) *Cynósbati* L. The Dog-Bramble Gooseberry.

409. *R.* (*t.*) *divaricàtum* Dougl. The spreading-branched Gooseberry. The berries are glabrous and black, and pleasant to the taste.

410. *R. speciòsum* Pursh. The showy-flowered Gooseberry. The flowers are crimson, and bear a general resemblance to those of the fuchsia.

411. *R. Diacántha* L. fil. The twin-prickled Currant-like Gooseberry.

412. *R. lacústre* Poir. The Lake-side Currant-like Gooseberry.

413. *R. rùbrum variegàtum* Dec. The variegated-leaved Red Currant.

414. *R.* (*r.*) *alpìnum* L. The alpine Red Currant.

415. *R.* (*r.*) *petræ'um* Wulf. The Rock Red Currant.

416. *R.* (*r.*) *multiflòrum* Kit. The many-flowered Red Currant. The flowers are in long racemes, and very ornamental.

417. *R. punctàtum* R. et P. The dotted-leaved Red Currant. In some situations sub-evergreen, and one of the few species that throw up suckers.

417*a*. *R. nìgrum bácca víride* Hort. The green-berried Black Currant.

418. *R. nìgrum fòliis variegàtis* Vilmorin. The variegated-leaved Black Currant. The species is common in woods in Russia. One of the finest varieties in cultivation in gardens, for its fruit, is the Naples Black Currant.

419. *R.* (*n.*) *tríste* Pall. The sad-coloured, or dark-blossomed, Black Currant. Sombre in appearance, especially when covered with its dingy greenish flowers.

420. *R.* (*n.*) *flóridum* L'Hérit. The flowery Black Currant.

421. *R.* (*n.*) *flóridum grandiflòrum* Hort. The large-flowered flowery Black Currant.

422. *R. cèreum* Dougl. The waxy-leaved Black Currant. The leaves appear as if covered with a white waxy substance; in beds of seedlings they vary greatly in size.

423. *R. sanguíneum* Pursh. The bloody, or red-flowered, Currant. The flowers are red and produced in great abundance in April, and the plant is of vigorous growth in almost any situation. This is one of the most ornamental species of the genus.

424. *R. sanguíneum glutinòsum* Benth. The glutinous bloody, or red-flowered, Currant.

425. *R. sanguíneum malvàceum* Benth. The Mallow-like bloody, or red-flowered, Currant.

426. *R. sanguíneum àtro-rùbens* Hort. The deep-red-flowered Currant.

427. *R. aúreum præ'cox* Lindl. The early golden-flowered Currant. A very ornamental species, of vigorous growth.

428. *R. aúreum serótinum* Lindl. The late golden-flowered Currant.

429. *R.* (*a.*) *tenuiflòrum* Lindl. The slender golden-flowered Currant.

430. *R.* (*a.*) *flàvum* Coll. The yellow-flowered Currant.

ESCALLONIA'CEÆ.

431. *Itea virgínica* L. The Virginian Itea. A deciduous erect shrub, producing its white flowers from June to August.

SAXIFRA'GEÆ.

Low suffruticose shrubs, natives of America and Asia.

432. to 433*a*. HYDRA'NGEA *L.* The Hydrangea. Suffruticose plants, producing their pink or white flowers from July to September.
432. H. *arboréscens* L. The arborescent Hydrangea.
433. H. *nívea* Michx. The snowy-leaved Hydrangea.
433*a*. H. *quercifólia* Bartram. The Oak-leaved Hydrangea. Very ornamental, both in flowers and leaves.

ARALIA'CEÆ.

Suffruticose and climbing shrubs; natives of Europe, Asia, and North America.

434. and 434*a*. ARA'LIA *L.* The Aralia, or Angelica Tree. Erect stems, with large compound leaves, and large racemes of inconspicuous flowers.
434. A. *spinósa* L. The spiny Aralia. Stem very prickly.
434*a*. A. *japónica*. The Japan Aralia.

435. to 437. *He'dera Swartz.* The Ivy. A well-known evergreen shrub, climbing by its rootlets, or trailing when it has nothing to climb on.
435. *H. Hèlix vulgàris* Dec. The common Ivy. The berries, which are black, and ripe in December, remain on the plants during the winter, when not eaten by birds. The flowers form a valuable autumnal supply of honey for bees. Cato and Pliny attribute a singular property to the wood of the ivy, and say that by its filtrating powers it can separate wine from water. A decoction of the leaves dyes hair black; and it is said to form a principal ingredient in the composition sold to prevent hair from turning grey. In close shrubberies, or anywhere under trees and shrubs where grass will not grow, ivy forms a clothing of perpetual verdure. Trained against latticework or wire-frames, it forms beautiful evergreen walls or hedges; or it will cover any artificial frames that may be constructed of latticework. In towns it may be used to form external framing to the windows instead of architraves. In the interminable line of naked windows in the monotonous brick houses built about 50 years ago, which form the majority of the London streets at the west end of the town, the ivy forms a ready source of ornament. The ivy is erroneosuly supposed, when growing on trees, to derive its nourishment from the trunk. Shakspere roundly asserts this: —

> ——— "He was
> The Ivy, which had hid my princely trunk,
> And suck'd my verdure out."

The ivy, however, is only injurious to trees by the clasping property of its stems, which impedes the return of the sap through the bark; and hence, if the stems are allowed to twine round the trunk, it ultimately destroys them, but not so when it grows up in straight lines. To walls and roofs of every kind it is a great protection.
436. *H. Hèlix canariénsis* Dec. The Giant, or Irish, Ivy.
437. *H. Hèlix fòliis argénteis* Lodd. The silver-striped Ivy. Remarkable for its very slow growth.

HAMAMELIDA'CEÆ.

Deciduous shrubs, natives of North America.

438. *Hamame'lis virgínica* L. The Virginian Hamamelis. Valuable as producing its fine yellow flowers in December, which continue on the tree till March or April.
439. FOTHERGI'LLA *alnifólia* L. The Alder-leaved Fothergilla. (Named in

honour of Dr. *Fothergill*, an eminent physician and patron of botany, and one of the most benevolent of men.) An humble shrub, with white flowers in April and May.

CORNA'CEÆ.

Deciduous shrubs; natives of Europe, Asia, and North America; with white flowers in June and July.

440. to 447. *Co'rnus L.* The Dogwood. (From *cornu*, a horn, the wood being thought to be remarkably durable.) The name of Dogwood is applied to this genus, because, according to Parkinson, the fruit of most of the species is not fit even for dogs. Perhaps, however, it may have been given for another reason, as a decoction of the bark and leaves was formerly given to cure dogs of the mange.

440. *C. alternifólia* L. The alternate-leaved Dogwood.

441. *C. sanguínea* L. The blood-red-leaved, or common, Dogwood. Branches green.

442. *C. sanguínea fóliis variegátis.* The variegated-leaved common Dogwood.

443. *C. álba* L. The white-fruited Dogwood. Branches red.

444. *C. álba sibírica* Lodd. The Siberian white-fruited Dog Tree. Branches coral-coloured, with a fine bloom.

445. *C. (a.) stricta* Lam. The straight-branched Dogwood.

446. *C. circinàta* L'Hérit. The round-leaved Dogwood.

447. *C. más* L. The male Dogwood, the Cornel, or Cornelian Cherry tree. The fruit, which is coral-coloured, was formerly used in preserves, marmalades, robs, and liqueurs; and the wood has been in all ages celebrated for its hardness and durability. In the gardens of some of the oldest convents, the cornel holds a conspicuous place as a fruit tree.

LORANTHA'CEÆ.

Evergreen shrubs with dichotomous or verticillate branches, natives of Europe and Asia.

448. *Vi'scum álbum* L. The white-fruited, or common, Mistletoe. A native of England, but not of Scotland or Ireland. The berries are used as birdlime; and the branches are hung up in kitchens at Christmas. The plant, when grown on the oak, was held in great veneration by the druids; and many mythological, poetical, and legendary allusions respecting it will be found in the *Arboretum Britannicum*.

> " On Christmas eve the bells were rung;
> On Christmas eve the mass was sung:
> That only night in all the year
> Saw the stoled priest the chalice rear.
> The damsel donned her kirtle sheen;
> The hall was dressed with holly green:
> Forth to the woods did merry men go,
> To gather in the misseltoe.
> Then opened wide the Baron's hall
> To vassal, tenant, serf, and all."

In England, in the present day, it is found chiefly on the apple, pear, and thorn, but also more or less on various other indigenous trees, such as the black poplar, willow, lime, sycamore; and in the neighbourhood of Eastnor Castle near Hereford, and at Ledbury, it is found on the oak. (See *Arb. Brit.*, vol. iv. p. 2571.; and *Gard. Mag.*, vol. xiii. p. 206. and 285.) In the neighbourhood of Paris the mistletoe is common on the poplar, and in the neighbourhood of Magdeburg it abounds on the Scotch pine.

449. *Au'cuba japónica* Thunb. The Japan Aucuba. An evergreen shrub, with laurel-like leaves mottled with yellow, and small lurid purple flowers. When first introduced from Japan, it was treated like a stove plant, but

it is now found hardier than the common laurel, and it will endure coal smoke better than almost any other evergreen. Only the female plant is in British gardens.

CAPRIFOLIA'CEÆ.

Twining, climbing, erect, or rambling shrubs, generally with showy flowers, some of them very fragrant; natives of most parts of the world, but not of Australia.

450. to 453. SAMBU'CUS *Tourn.* The Elder. Low trees with large corymbs of white flowers, which have been compared by general observers to heads of cauliflowers. Natives of Europe and America.

450. *S. nìgra* L. The common, or black-fruited, Elder. The shoots are used by boys for making popguns, the flowers for elder water, and the fruit for elder wine; the inner bark is emetic and cathartic, and is used for curing wounds and burns. Every part of the plant was used formerly by herbalists, but the only parts now in repute are, the fruit for wine, and the pith of the shoots, which, being very light, is formed into balls for electrical experiments.

451. *S. nìgra leucocárpa* Hort. The white-fruited common Elder.

452. *S. nìgra laciniàta.* The Parsley-leaved Elder. A very ornamental kind.

453. *S. racemòsa* L. The racemose-flowered Elder. A splendid low tree, when covered with its panicles of fine large scarlet fruit, about the size of grapes. Much neglected, but deserving to be generally cultivated.

454. to 461. *VIBU'RNUM L.* The Viburnum. Deciduous and evergreen shrubs, old inhabitants of British gardens; natives of Europe, North America, and Asia.

454. *V. Tìnus* L. The Laurustinus. A well-known evergreen, which produces its corymbs of white flowers from December till May.

455. *V. Tìnus lùcida* Ait. The shining-leaved Laurustinus.

456. *V. Tìnus strícta* Hort. The upright-growing Laurustinus.

457. *V. Lentàgo* L. The Lentago, or pliant-branched Viburnum. A deciduous tree-like shrub, producing its white flowers in May.

458. *V.* (*L.*) *prunifòlium* L. The Plum-tree-leaved Viburnum.

459. *V.* (cassinöìdes) *lævigàtum* Willd. The smooth Viburnum.

460. *V. dentàtum* L. The tooth-leaved Viburnum.

461. *V. O'pulus stérilis* Dec. The Snowball Tree, or Guelder Rose. Very ornamental, from its large balls of white flowers, which turn pink before they die off.

> ——— "Tall,
> And throwing up into the darkest gloom
> Of neighbouring cypress, or more sable yew,
> Her silver globes, light as the foamy surf
> That the wind severs from the broken wave."

The fruit is eaten in Sweden, and the young shoots are made into tubes for tobacco-pipes, and handles for whips. A spirit is distilled from the berries in Siberia, where also they are made into a paste with honey and flour, and eaten as food.

462. DIERVI'LLA *canadénsis* Willd. The Canadian Diervilla. A low deciduous shrub, throwing up numerous suckers, and producing its yellow flowers in June and July.

463. to 472. LONI'CERA Desf. The Lonicera, or Honeysuckle. Twining and erect shrubs; natives of Europe, Asia, and America; some of them greatly prized for the beauty and fragrance of their flowers. The common honeysuckle is supposed to be the type of one of the most beautiful floral ornaments of Grecian architecture, as the acanthus is said to be of its finest foliage ornament.

463. L. *Periclýmenum serótinum* Ait. The late-flowering common Honeysuckle. A variety of the common woodbine, or indigenous honeysuckle.

" Copious of flow'rs, the woodbine, pale and wan,
But well compensating her sickly looks
With never-cloying odours." COWPER.

464. L. *Periclýmenum bélgicum* Hort. The Dutch Honeysuckle.
465. L. *Periclýmenum quercifòlium* Ait. The Oak-leaved Honeysuckle.
466. L. *gràta* Ait. The pleasant, or evergreen, Honeysuckle. One of the most vigorous-growing, hardy, and durable species of the genus.
467. L. *tatárica* L. The Tartarian Honeysuckle. Flowers pinkish, and with the leaves produced earlier in the season than those of any other species. This plant, and the *Pópulus balsamífera*, come into leaf in the neighbourhood of London before any other trees or shrubs, unless we except the common elder.
468. L. *tatárica rubriflòra* Dec. The red-flowered Tartarian Honeysuckle.
469. L. *pyrenàica* L. The Pyrenean Honeysuckle.
470. L. *alpígena* L. The Alpine Honeysuckle.
471. L. *cærùlea* L. The blue-berried Honeysuckle.
472. L. *ibérica* Bieb. The Georgian Honeysuckle.
473. to 475*a*. SYMPHORICA'RPOS *Dill.* The St. Peter's Wort. Deciduous shrubs, throwing out numerous suckers; natives of North America; and producing their pinkish and white flowers from July to September. These are succeeded by white fruit, which is very ornamental.
473. S. *vulgàris* Michx. The common St. Peter's Wort.
474. S. *vulgàris fòliis variegàtis* Hort. The variegated-leaved St. Peter's Wort. This is one of the few variegated plants that always bear a healthy appearance.
475. S. *racemòsus* Michx. The racemose-flowered St. Peter's Wort, or Snowberry. Fruit large, white, produced in great abundance, and very showy. Pheasants are fond of it; and, as the plant is very hardy, of vigorous growth, and extends rapidly on every side by suckers, it is well adapted for growing in woods or parks.
475*a*. S. *montànus* Arb. Brit. The Mountain St. Peter's Wort.
475*b*. LEYCESTE'RIA *formòsa* Wall. The beautiful Leycesteria. A large, rambling, deciduous shrub, with green branches, and large bracteas remarkable for their reddish purple colour.

*R*UBIA'CEÆ.

476. CEPHALA'NTHUS *occidentàlis* L. The Western Button-wood. A shrub, a native of North America, remarkable for its round heads of whitish flowers, which appear in August, and are succeeded by fruit of the same shape, which has been thought to resemble the sort of round button in fashion in the time of our grandfathers; hence the English name.

COMPO'SITÆ.

This order includes all that numerous body of plants which have compound flowers like the thistle, the daisy, the chrysanthemum, &c. There are but a few genera that are woody and hardy in British gardens. Natives of Europe, Asia, and North America.

477. *BA'CCHARIS halimifòlia* L. The Sea-Purslane-leaved Baccharis, or the Groundsel Tree. A rambling shrub, of little beauty.
478. and 479. *ARTEMI'SIA* Cass. The Artemisia. Strongly-scented low shrubs, powerfully fragrant.
478. *A. Abrótanum* L. The Abrotanum Artemisia, or Southernwood. A well-known inhabitant of cottage gardens in every part of Britain. It was known to the Greeks; and Turner informs us that, in his time (16th century), it was cultivated in almost every English garden. Gerard recommends it as aromatic, and Allioni says the branches dye wool a deep yellow.

479. *A. Abrótanum tobolskiànum* Hort. The Tobolsk Southernwood. A large vigorous-growing variety.

ÆRICA'CEÆ.

Heaths, or heath-like plants, mostly evergreen, with beautiful flowers; natives of Europe, Asia, and America. The genera are very numerous, and include *Æ*rìca, Andrómeda, *A'*rbutus, *R*hododéndron, Kálm*ia*, and *V*accínium, all of which are well known, and a number of others which are less known. This order contains many of the finest and most ornamental shrubs of the temperate regions of the world: all the species which compose it have hair-like roots, and require a peat soil; or a soil of a close cohesive nature, kept moist, but which is yet susceptible of being readily penetrated by the finest fibrils which belong to any kind of plants. Peat, thoroughly rotted, leaf mould, or very fine loamy sand, are soils of this description, and are accordingly required, more or less, for all the plants of this order. The hair-like roots of the *E*ricàceæ soon suffer, either from a deficiency or a superfluity of moisture; and, hence, an important part of their culture in gardens consists in keeping the soil in which they grow equally moist. In transplanting hair-rooted plants, they are very apt to suffer from their slender fibrils coming in contact with the air; but, fortunately, these fibrils are so numerous, and so interlaced with each other, as to form a kind of network, which encloses and supports a portion of the soil in which they grow, and the plants are, consequently, almost always sent from the nurseries with small balls of earth attached to them. This practice, by continually diminishing the quantity of peat earth in a nursery, occasions a demand for a continual supply of this expensive soil, and, consequently, tends to increase the price charged for plants of the *E*ricàceæ. On the other hand, the adhesion of the soil to the roots answers an economical purpose, as it does not require the plants to be grown in pots for the convenience of sending them out, since many of them may be taken up and carried to a distance at any season, and even, if it were necessary, when in full flower, without sustaining much injury.

480. to 485. *Æ*RI'CA *D. Don.* The Heath. Well-known undershrubs, so low as to resemble herbaceous plants. Heath soil and an open airy situation are essential to their successful culture.

480. *E. Tétralix cárnea* Hort. The flesh-coloured four-leaved Heath. The species is the badge of the clan Macdonald.

481. *E. Tétralix álba* Hort. Eric. Wob. The white four-leaved Heath.

482. *E. cinèrea* L. The grey Heath. The foliage and general aspect of the plant are of an ash grey. This is the badge of the clan Macalister.

483. *E. cinèrea atropurpùrea* Lodd. The dark-purple-flowered grey Heath.

484. *E. cinèrea álba* Lodd. The white-flowered grey Heath.

485. *E. ciliàris* L. The ciliated-leaved, or eyelashed, Heath. A very beautiful species, found in Cornwall, but very rare.

486. and 487. GYPSOCA'LLIS *Sal.* The Gypsocallis, or Moor Heath.

486. G. *vàgans* Sal. The wandering Gypsocallis, or Cornish Moor Heath.

487. G. *cárnea* D. Don. The flesh-colour-flowered Gypsocallis. One of the most ornamental species of heaths, coming into flower in the autumn, and remaining in bloom till the following April. Where only one species of heath can be grown in the open air, there can be no doubt as to this being the species to which preference ought to be given.

488. to 491. CALLU'NA *Sal.* The Calluna, common Ling, or Heather. Every one knows

> "those wastes of heath,
> Stretching for miles to lure the bee;
> Where the wild bird, on pinions strong,
> Wheels round and pours his piping song,
> And timid creatures wander free."

The heath is considered the emblem of solitude; in the Highlands of

Scotland beds are made of it, beer brewed from it, and yarn died yellow with it. It is also used for tanning yellow, twisting into ropes, and as an astringent medicine.

488. C. *vulgàris decúmbens* Don's Mill. The trailing common Ling. All the varieties of this species make very neat edgings in peat or sandy soil, in a cool open situation.

489. C. *vulgàris flòre plèno* Don's Mill. The double-flowered Ling.

490. C. *vulgàris fòliis variegàtis* Don's Mill. The variegated-leaved Ling.

491. C. *vulgàris coccínea* Don's Mill. The scarlet-flowered Ling. A very handsome variety.

492. CASSA'NDRA *calyculàta nàna* Sims. The dwarf-growing calyculated Cassandra. Better known as Andrómeda calyculàta. Flowers white; February to April.

493. and 494. ZENO'BIA D. Don. The Zenobia. Better known as Andromeda. Very ornamental shrubs, with white flowers in June.

493. Z. *speciòsa* D. Don. The showy-flowered Zenobia. Very ornamental.

494. Z. *speciòsa pulverulénta* Pursh. The powdery showy-flowered Zenobia.

495. LEUCO'THÖE *spinulòsa* G. Don. The spinulose tooth-leaved Leucothöe. Better known as Andrómeda Catesbæ'i. Flowers white; May and June. A very elegant species.

496. and 497. DABŒ'CIA D. Don. The Dabœcia, or Irish Heath. Low heath like bushes, with purple or white flowers in July and August.

496. D. *polifòlia* D. Don. The Poly-leaved Dabœcia.

497. D. *polifòlia flòre álbo* Swt. The white-flowered Poly-leaved Irish Heath.

498. to 503. *A'RBUTUS Camer.* The Arbutus, or Strawberry Tree. Beautiful evergreen shrubs or low trees, flowering in the autumn, and ripening their fruit the following year.

498. *A. U'nedo* L. The Unedo Arbutus, or Strawberry Tree. Found in the neighbourhood of Killarney, of a very large size, and considered by some to be indigenous there, while by others it is supposed to have been brought from Italy by the monks. The arbutus has been celebrated from the time of Virgil. Horace praises it for its shade, and Ovid for its blushing fruit. Mrs. Barbauld thus describes its appearance in Corsica.

> ——— "While glowing bright
> Beneath the various foliage, wildly spreads
> The Arbutus, and rears his scarlet fruit
> Luxuriant mantling o'er the craggy steeps."

A sugar and a very good spirit have been extracted from the fruit in Spain, and a wine in Corsica. The fruit resembles a strawberry, and, though not agreeable, is not unwholesome; and it is thought by some that, by culture and selection; a variety might be found worthy of being cultivated as a fruit shrub.

499. *A. U'nedo rùber* Ait. The red-flowered Unedo Arbutus, or scarlet Arbutus.

500. *A. U'nedo plènus* Ait. The double-flowered Unedo Arbutus.

501. *A. hýbrida* Ker. The hybrid Arbutus.

502. *A. Andráchne* L. The Andrachne Arbutus. Remarkable for the scaling off of the outer bark.

503. *A. procèra* Douglas. The tall Arbutus. Resembles the preceding species.

504. ARCTOSTA'PHYLOS *U'va-úrsi* Spreng. The common Bearberry. A trailing evergreen, with shining dark green leathery leaves, and red berries which serve as food for grouse and other birds in Britain, and, in Sweden, Russia, and America, form the principal part of the food of bears.

505. PERNE'TTYA *mucronàta* Gaud. The mucronate-leaved Pernettya. A neat little evergreen, very hardy, producing its white flowers in May.

506. GAULTHE'RIA Shállon *Pursh.* The Shallon Gaultheria. A low, spreading, evergreen shrub, which will thrive in the close shade of woods, where scarcely anything else will grow; its flowers are pinkish and white, and appear in May; and the berries are purple, and ripe in August. They are much esteemed by the natives of North-West America, on account of their agreeable flavour, and they make excellent tarts. In Scotland it is planted as shelter and food for game.

507. CLE'THRA *alnifòlia* L. The Alder-leaved Clethra. Its spikes of white flowers are produced from July to September.

508. to 516. *RHODODE'NDRON L.* The Rhododendron, or Rose Bay. Beautiful evergreen or deciduous shrubs, flowering from early spring till late in autumn. The genus, as at present constituted, includes the azaleas, or deciduous species, as well as those that are evergreen. There is a brown dust found on the under side of the leaves of some species, and on the petioles of others, and also of Kalmia, which is used as snuff by the natives of India, where it is imported from Cashmere, and it is also so used in North America.

508. *R. pónticum* L. The Pontic Rhododendron. One of the first introduced species, and now universally cultivated. It, and also *R.* flàvum, the Azàlea póntica of the nurseries, were abundant in the neighbourhood of Trebisond in the time of Xenophon, and the honey extracted from them is said to have poisoned his army of 10,000 Greeks. The soldiers who ate the honey were seized with a violent vomiting and purging, followed by a species of delirium, so severe, that those least affected resembled drunken persons, and the others madmen. The ground was strewed about with the bodies of the soldiers, as after a battle. Nobody died, however, and the malady disappeared twenty-four hours after it had commenced, leaving only a sensation of great weakness. Turner, in his *Herbal*, must have had this story in view, when, in 1568, he wrote the following passage: "I have sene thys tre (the rhodo-daphne) in diverse places of Italy; but I care not if it neuer com into England, seyng it in all poyntes is lyke a Pharesy; that is, beawteus without, and within a rauenus wolf and murderer."

508*a*. *R. pónticum Smíthii Swt.* Smith's Pontic Rhododendron.

508*b*. *R. pónticum azaleòìdes* Hort. The Azalea-like Pontic Rhododendron.

509. *R. máximum* L. The largest Rhododendron.

509*a*. *R.* (*m.*) *purpùreum* G. Don. The purple-flowered Rhododendron.

510. *R. catawbiénse* Michx. The Catawba Rhododendron. A very vigorous-growing species.

511. *R. punctàtum* Andr. The dotted-leaved Rhododendron.

512. *R. ferrugìneum* L. The rusty-leaved Rhododendron. A beautiful low-growing species, with scarlet flowers. This plant is the principal source of fuel for the shepherds of the Alps.

512*a*. *R.* (*f.*) *hirsùtum* L. The hairy Rhododendron.

512*b*. *R. dáuricum* L. The Dahurian Rhododendron. Valuable for its purple flowers, which are produced from December to March. In Siberia the plant is laid among clothes to drive away bugs; and the leaves, being fragrant and narcotic, are used by the inhabitants as tea.

513. *R. flàvum* G. Don. The Pontic, or common, Azalea. The Azàlea póntica of the nurseries, and one of the most ornamental shrubs in British gardens. The varieties and hybrids which have originated between this species and several others, are very numerous, and of surpassing beauty. One race is known as the Belgian azaleas, another as the Highclere hybrids, and a third as the London hybrids.

514. *R. nudiflòrum coccíneum* D. Don. The scarlet naked-flowered Azalea.

515. *R. viscòsum* Torr. The clammy-flowered Azalea.

516. *R. Rhodòra* G. Don. The Canada Rhodora. Deciduous, and producing its purple flowers in April and May.

517. and 518. KA'LMIA L. The Kalmia. (Named after *Peter Kalm*, a Swedish botanist.) Very ornamental evergreen shrubs, requiring peat soil.

517. K. *latifólia* L. The broad-leaved Kalmia. The flowers are particularly elegant in shape, and appear in terminal corymbs in June and July.

518. K. *glaúca* Ait. The glaucous-leaved Kalmia. A very handsome upright shrub, from 1 ft. to 2 ft. high, flowering in April and May. The flower has been compared to a miniature parasol, the corolla to the covering, the stamens to the rays that keep it distended, and the style to the handle.

519. MENZIE'SIA *globulàris* Salisb. (In honour of *Archibald Menzies*, naturalist to the expedition under Vancouver). The globular-flowered Menziesia. Flowers yellowish brown; May and June.

520. AZA'LEA *procúmbens* L. The procumbent Azalea. A procumbent shrub with pinkish flowers in April and May, and generally found in dry arid soil, as the word *azalea* implies.

521. LE'DUM *palústre* L. The Marsh Ledum. The leaves are used for tea in the North of Lithuania, Russia, and Siberia.

521*a*. to 525. VACCI'NIUM *L.* The Whortleberry. Low shrubs, deciduous or evergreen; with white, red, or purple flowers; and red, purple, or white fruit, generally edible.

521*a*. *V. Myrtíllus* L. The Little-Myrtle-like Whortleberry, or common Bilberry, or Bleaberry. Berries bluish black, eaten in tarts with cream, and made into jelly. Found on heaths, stony moors, and mountain woods, throughout most part of Europe, especially the more northern countries, and also in the North of Africa and Asia.

521*b*. *V. cæspitòsum* Michx. The tufted Whortleberry.

522. *V. resinòsum* Ait. The resinous Whortleberry.

523. *V.* Arctostáphylos L. The Bear's-Grape Whortleberry. It produces abundance of fruit agreeable to eat raw or in tarts.

523*a*. *V.* (?A.) *padifòlium* Sm. The Bird-cherry-leaved Bear's-Grape Whortleberry.

524. *V. Vitis idæ'a* L. The Mount Ida Whortleberry, or Cowberry. A well-known Derbyshire undershrub, found in barren stony woods and heaths; producing its pale flesh-coloured flowers in May and June; and ripening its fruit, which is frequently made into pies, from August to October. In Sweden, a jelly is made from them, which is eaten with all kinds of roast meat, and especially venison.

525. *V. ovàtum* Pursh. The ovate-leaved Whortleberry. A very handsome evergreen species, resembling the preceding.

526. OXYCO'CCUS *macrocárpus* Pursh. The large-fruited, or American, Cranberry. Cultivated in gardens in peat soil for its fruit, which is excellent in tarts.

HALESIA'CEÆ.

Deciduous American shrubs or low trees, with beautiful white pendent flowers, resembling those of the common snowdrop.

527. and 528. HALE'SIA Ellis (After Dr. *Hales*, an eminent vegetable physiologist.) The Halesia, or Snowdrop Tree. Low trees, equally hardy and beautiful.

527. H. *tetráptera* L. The four-winged-fruited Halesia, or common Snowdrop Tree. The pure white flowers appear in April and May, and they are succeeded by winged fruit which ripens in October. One of the most ornamental of American deciduous trees. The finest specimens in England are at Purser's Cross and Syon.

528. H. *díptera* L. The two-winged-fruited Halesia.

EBENA'CEÆ.

529. and 530. *Diospy'ros L.* The Date Plum. Deciduous trees, natives of the South of Europe and North America.

529. D. *Lòtus* L. The European Lotus, or common Date Plum. The flowers are small, but the foliage is very beautiful, glossy green above, and purplish beneath. On the approach of frost, they do not change colour, but drop off simultaneously; so that a tree which was densely clothed with fine deep green leaves in the evening, may the following morning after sunrise be quite naked. The fruit is eaten in the South of Europe, and is supposed to be the lotus of Theophrastus. It is much used in Constantinople, where it is called the date of Trebisond.

530. D. *virginiàna* L. The Virginian Date Plum, or Persimon. The fruit, when ripe, is about the size of a bullace plum, and of a reddish yellow hue; it is not palatable till it becomes softened by frost, after which it becomes sweet. It is rarely seen in England, but a tree in Kew Gardens occasionally ripens it. In America it is applied to various purposes, and, among others, to distil an ardent spirit, which becomes excellent when it has acquired age. The bark, in America, is employed in intermittent fevers.

OLEA'CEÆ.

Trees and shrubs more or less resembling the olive; natives of Europe, Asia, and America.

531. and 532. *LIGU'STRUM Tourn.* The Privet. Deciduous or sub-evergreen shrubs, with white flowers; natives of most parts of the world.

531. *L. vulgàre* Trag. The common Privet. A well-known hedge-plant, the shoots and fruit of which are applied to a great variety of uses by country people. The leaves are eaten by cattle, sheep, and goats, but not by horses. The berries are food for various singing birds; they afford a rose colour which is used in tinting maps and prints, and with the addition of alum, a fine green for dyeing wool and silk. They also afford an oil which may be used both for culinary purposes and in making soap. The small twigs are used for tanning leather, and also in basket-making, and the wood is one of the best for making charcoal for gunpowder. Farther details, with regard to this plant, and all others in this catalogue, are given in the *Arboretum Britannicum*.

532. *L. vulgàre leucocárpum* Hort. The white-fruited common Privet.

533. to 534*c*. *PHILLY'REA Tourn.* The Phillyrea. Evergreen shrubs, natives of the South of Europe, which have been in cultivation in British gardens for three centuries. The phillyrea, according to Gerard, was brought to England from Montpelier in France. He says he planted several sorts in the Earl of Essex's garden at Barn Elms, adding, "I have them growing in my garden likewise." The largest phillyrea hedge in England is at Brampton Park, near Huntingdon.

533. *P. angustifòlia* L. The narrow-leaved Phillyrea.

533*a*. *P. angustifòlia lanceolàta* Ait. The lanceolate narrow-leaved Phillyrea.

533*b*. *P. angustifòlia brachiàta* Ait. The divaricate-branched narrow-leaved Phillyrea.

533*c*. *P.* (*mèdia*) *ligustrifòlia* Ait. The Privet-leaved Phillyrea.

534. *P.* (*m.*) *latifòlia* L. The broad-leaved Phillyrea.

534*a*. *P.* (*m.*) *lævis* Ait. The smooth Phillyrea.

534*b*. *P.* (*m.*) *oblìqua* Ait. The oblique-leaved Phillyrea. After the leaves are full grown the petioles twist a little, which gives the disk of the leaf an oblique direction.

534*c*. *P.* (*m.*) *spinòsa* Mill. The spiny, or Holly-leaved, Phillyrea.

535. CHIONA'NTHUS *virgínica* L. The Virginian Snow-Flower, or Fringe Tree. The leaves are large, and the flowers white; hanging down like fringes, from May to July.

536. to 542. *SYRI'NGA* L. The Lilac. A well-known shrub, introduced in the time of Henry VIII., in whose gardens at Nonsuch there was a fountain "set round with six lilac trees, which bare no fruit, but only a

very pleasant smell." This report was made by Cromwell's commissioners, with whom use, in the common sense of the word, was the only source of value. A far more elevating species of utilitarianism is pointed out by Cowper, in the following lines: —

> "The lilac, various in array, — now white,
> Now sanguine, and her beauteous head now set
> With purple spikes pyramidal, — as if,
> Studious of ornament, yet unresolved
> Which hue she most approved, she chose them all."

536. *S. vulgàris* L. The common Lilac.
537. *S. vulgàris álba* Hort. The white-flowered common Lilac.
538. *S. Josikæ'a Jacq.* Josika's Lilac. Named by Baron Jacquin in honour of the Baroness *Von Josika*, a Hungarian lady, by whom it was discovered in Transylvania.
539. *S. pérsica* L. The Persian Lilac. In Paris, it is said, they retard this species, when in pots, by placing the plants in an ice-house in December, and keeping them there till the September or October following; when they will come into bloom, without the aid of artificial heat, about Christmas, so as to be ready for the bouquets given as presents on New-Year's Day.
540. *S. pérsica álba* Lodd. Cat. The white-flowered Persian Lilac.
541. *S. pérsica laciniàta* Lodd. Cat. The cut-leaved Persian Lilac.
542. *S. rothomagénsis* Renault. The Rouen Lilac. A hybrid between the common lilac and the Persian lilac, raised by M. Varin, director of the Botanic Garden at Rouen.
543. FONTANE'SIA *phillyreöides* Labill. The Phillyrea-like Fontanesia. An elegant deciduous shrub, with slender divergent drooping branches, and greenish white flowers in June.
543*a*. to 558. FRA'XINUS *Tourn.* The Ash. Timber trees celebrated from the days of Theophrastus, of which there are but few species but almost innumerable varieties.
543*a*. *F. excélsior* L. The taller, or common, Ash. Homer speaks of the ashen spear of Achilles, and Cupid is said to have made his arrows first of ash and afterwards of cypress. In the Scandinavian mythology, the court of the Gods is held under a mighty ash, the summit of which reaches the heavens, the branches overshadow the whole surface of the earth, and the roots penetrate to the infernal regions. An eagle rests on its summit to observe every thing that passes; to whom a squirrel constantly ascends and descends, to report those things that the exalted bird may have neglected to notice. Serpents are twined round the trunk; and from the roots there spring two limpid fountains, in one of which wisdom lies concealed, and in the other knowledge of things to come. Three virgins constantly attend on this tree, to sprinkle its leaves with water from the magic fountains; and this water, falling on the earth in the shape of dew, produces honey. Man, according to the *Edda*, was formed from the wood of this tree. Ancient writers, of all nations, state that the serpent entertains an extraordinary respect for the ash. Pliny says that, if a serpent be placed near a fire, and both surrounded by ashen twigs, the serpent will sooner run into the fire than pass over the pieces of ash; and Dioscorides asserts that the juice of ash leaves, mixed with wine, is a cure for the bite of serpents. Evelyn mentions that, in some parts of England, the country people believe that, if they split young ash trees, and make ruptured children pass through the chasms, it will cure them; and the Rev. W. T. Bree relates an instance, within his personal knowledge, of this extraordinary superstition having been lately practised in Warwickshire. (See *Mag. Nat. Hist.*, vol. vii. p. 557.) Another superstition is that of boring a hole in an ash tree, and imprisoning a shrew mouse in it; a few strokes with the branch of a tree thus prepared is supposed to cure ameness and cramps in cattle, all of which the poor

mouse is accused of having occasioned. (*Ibid.*, p. 564.) There is also a proverb in the midland counties, that, if there are no keys on the ash trees, there will be no king within the twelvemonth, in allusion to the ash tree being never totally destitute of keys; which, however, can only apply to the hermaphrodite or female plant; for the males, which occur almost as frequently as the others, never produce keys. Lightfoot says that, in many parts of the Highlands of Scotland, at the birth of a child, the nurse or midwife puts one end of a green stick of this tree into the fire, and, while it is burning, gathering in the spoon the sap, or juice, which oozes out of the other end, administers this as the first spoonful of food to the newly born baby. Many poets have mentioned the ash, and the following passages allude to the situations in which it is said most to thrive:—

> " The ash asks not a depth of fruitful mould,
> But, like frugality, on little means
> It thrives; and high o'er creviced ruins spreads
> Its ample shade, or on the naked rock
> That nods in air with graceful limbs depends." BIDLAKE.

> ——— " Here amid the brook,
> Grey as the stone to which it clung, half root,
> Half trunk, the young ash rises from the rock;
> And then the parent lifts its lofty head,
> And spreads its graceful boughs." SOUTHEY'S *Roderick.*

> ——— " Nature seems t' ordain
> The rocky cliff for the wild ash's reign." DRYDEN'S *Virgil.*

544. *F. excélsior aúrea* Willd. The gold-barked common Ash.
545. *F. excélsior crispa* Hort. The curled-leaved common Ash.
546. *F. excélsior verrucòsa* Desf. The warted-bark common Ash.
547. *F. excélsior nàna* Lodd. Cat. The dwarf common Ash.
548. *F.* (*e.*) *heterophýlla* Vahl. The various-leaved Ash.
549. *F.* (*e.*) *parvifòlia* Willd. The small-leaved Ash.
549*a*. *F.* (*e.p.*) *oxycárpa* Willd. The sharp-fruited Ash.
550. *F. lentiscifòlia* Desf. The Lentiscus-leaved Ash. An elegant species, and the following variety more particularly.
551. *F. lentiscifòlia péndula* Hort. The pendulous-branched Lentiscus-leaved Ash. A much more elegant tree than the common weeping ash.
552. *F.* (*americàna*) *pubéscens* Walt. The downy American Ash.
553. *F.* (*a.*) *sambucifòlia* Vahl. The Elder-leaved American Ash.
554. *F.* (*a.*) *quadrangulàta* Michx. The quadrangular-branched American Ash.
555. *F.* (*a.*) *juglandifòlia* Lam. The Walnut-leaved American Ash. There is a splendid specimen of this variety in the grounds of Pope's Villa at Twickenham, of which a portrait is given in the *Arb. Brit.*, vol. vi.
556. *F.* (*a.*) *epíptera* Vahl. The wing-topped-seeded, or two-coloured, American Ash.
557. *F.* (*a.*) *ovàta* Bosc. The ovate-leaved American Ash.
558. *F.* (*a.*) *pannòsa* Vent. et Bosc. The cloth-like-leaved American Ash.
559. and 560. *O'RNUS Pers.* The flowering Ash. Handsome low or middle-sized trees with white flowers.
559. *O. europæ'a* Pers. The European flowering, or Manna, Ash. The substance called manna is collected from this species in Calabria and Sicily. The trees are wounded a foot or two above the ground, and the sap which flows from them during the greatest heats of summer becomes concrete as it runs down, and the granulated particles are scraped off, and form the manna of the shops.
560. *O. rotundifòlia* Pers The round-leafleted flowering Ash.

561. to 563. JASMI'NUM *Forskoel.* The Jasmine. Deciduous or evergreen shrubs, with white or yellow flowers, highly odoriferous; natives of Europe and Asia.

561. *J. frùticans* L. The sprig-producing, or shrubby, Jasmine.

562. *J. hùmile* L. The humble, or Italian yellow, Jasmine.

563. *J. officinàle* L. The officinal, or common, Jasmine. An old and much prized inhabitant of our gardens.

> " The deep dark green of whose unvarnish'd leaf
> Makes more conspicuous, and illumes the more,
> The bright profusion of her scatter'd stars."

The custom which prevails in some countries, of brides wearing jasmine flowers in the hair when they are married, is thus accounted for. A certain Grand-Duke of Tuscany had, in 1699, a plant of the deliciously scented jasmine of Goa (*J.* odoratíssmum), which he was so careful of, that he would not suffer it to be propagated. His gardener, however, being in love with a peasant girl in the neighbourhood, gave her a sprig of this choice plant on her birthday; and she, having learned from him to make cuttings, planted the sprig as a memorial of his affection. The cutting grew rapidly, and every one who saw it, admiring its beauty and sweetness, wished to have a plant of it. These the girl supplied from cuttings, and sold them so well, as to obtain enough money to enable her to marry her lover. The young girls of Tuscany, in remembrance of this adventure, always deck themselves, on their wedding day, with a nosegay of jasmine; and they have a proverb, that " She who is worthy to wear a nosegay of jasmine, is as good as a fortune to her husband."

*A*POCYNA'CEÆ.

564. and 565. *VI'NCA L.* The Periwinkle. Creeping or trailing evergreens Valuable for growing in shady places under trees, and thus clothing a surface with green that would otherwise appear bare.

564. *V. màjor* L. The greater Periwinkle. In the middle ages, many curious medical virtues were attributed to this plant; the most amusing of which is that mentioned by Culpepper, that, " The leaves of the periwinkle, eaten by man and wife together, do cause love between them." Rousseau's anecdote of this flower is well known. He tells us that he was walking with Madame de Warens, at Charmettes, when she suddenly exclaimed, " There is the periwinkle still in flower." Rousseau, being short-sighted, had never before observed this flower, which always grows near the ground; and, stooping down, he gazed at it with pleasure. He did not see it again for 30 years; when, being at Gressier, and climbing a hill with M. Peyron, he observed something blue among the bushes; and, stooping down to examine it, he uttered, with a cry of joy, " Voilà la pervenche!" and all the tender emotions of the moment when he first saw it rushed back upon his mind. Hence the plant, in France, is consecrated " *Aux doux souvenirs;*" and is generally planted near a monumental urn, or other ornament or building dedicated to the remembrance of a friend.

565. *V. mìnor* L. The lesser Periwinkle.

*A*SCLEPIA*DA'CEÆ.*

566. PERI'PLOCA *græ'ca* L. The Greek Periploca. A deciduous twiner, with opposite shining leaves, and brownish purple flowers, having a rich velvety appearance, with, however, an unwholesome odour.

BIGNON*IA'CEÆ.*

567. *CATA'LPA* syringæfòlia Sims. The Lilac-like-leaved Catalpa. A deciduous North American tree, with large, heart-shaped, pale green leaves, and terminal panicles of white flowers, speckled with purple and yellow.

A splendid object when in flower, and not less remarkable when covered with its seed pods, which are frequently 2 ft. long, and curled upwards so as to resemble horns. In the suburban gardens of Paris, it is particularly ornamental during the months of July and August.

SOLANA'CEÆ.

568. and 568*a*. *Ly'cium L.* The Box Thorn. Rapid-growing shrubs, climbing by extension without the aid of tendrils, and without the power of twining, exceedingly hardy, and admirably adapted for covering naked walls, trelliswork, or bowers. The flowers are purple and white, continue appearing all the summer, and in favourable situations and seasons they are succeeded by numerous coral-coloured berries, which are edible.

568. *L.* (*e.*) *bárbarum* L. The Barbary Box Thorn.

568*a*. *L.* (*e.*) *ruthénicum* Murr. The Russian Box Thorn.

CHENOPODIA'CEÆ.

569. *A'triplex portulacòides* L. The Purslane-like, or shrubby, Orache; or Sea Purslane. A shrub, native of Britain, with a white mealy aspect, but in no other respect remarkable.

LAURA'CEÆ.

Deciduous or evergreen trees and shrubs, natives of Europe and North America, all more or less valuable for their foliage.

570. to 571. *Lau'rus Plin.* The Laurel, or Bay Tree. Shrubs or trees, natives of Europe and North America.

570. *L. nóbilis* L. The noble Laurel, or Sweet Bay. An evergreen tree, or rather immense bush, celebrated from the earliest ages as being employed to form the wreaths for crowning victors. In time the laurels were extended from military candidates to men of letters; hence, in the middle ages, poets were crowned with wreaths of laurel, and hence our expression poet-laureate. "Students who have taken their degrees at the universities are called bachelors, from the French *bachelier*, which is derived from the Latin *baccalaureus*, a laurel berry. These students were not allowed to marry, lest the duties of husband and father should take them from their literary pursuits; and, in time, all single men were called bachelors." Perhaps the largest sweet bay in Europe is in the Isola bella, where, in 1839, it was 62 ft. 10 in. high. When Bonaparte visited the Isola bella after the battle of Marengo, he is said to have cut his name on the bark of this tree, with his knife, and added the word Battaglia. There is a portrait of this tree, and also a view of the Isola bella, in the *Gardener's Magazine* for 1840, figs. 39. and 40.

570*a*. *L. nóbilis salicifòlia* Swt. The Willow-leaved Sweet Bay. A curious dwarf variety.

570*b*. *L.* Sássafras *L.* The Sassafras Laurel, or Sassafras Tree. This tree, on account of its medicinal properties, became known to Europeans before any other American tree. Gerard calls it the ague tree, and says that a decoction of its bark will cure agues and many other diseases. It was the strong fragrance of this tree, which, wafted over the ocean, was smelt by Columbus, and encouraged him when his crew mutinied, that enabled him to convince them that the land was near at hand.

571. *L.* Benzòin *L.* The Benzoin Laurel, or Benjamin Tree.

THYMELA'CEÆ.

Deciduous and evergreen shrubs, with showy fragrant flowers; natives of Europe, Asia, and North America.

572. to 576*a*. *Da'phne L.* The Daphne. Low deciduous or evergreen shrubs, with fragrant flowers.

572. *D.* Mezèreum *L.* The Mezereon Daphne, or common Mezereon.

Valuable for its fragrant flowers in February or March, when its branches are,

"Though leafless, well attired, and thick beset
With blushing wreaths, investing every spray."

The whole shrub is poisonous to human beings, though the berries are a favourite food for finches and other birds, more especially the robin. When the berries have been eaten by children, the best remedies are oil, fresh butter, milk, or some other emollient to allay the violence of the inflammation. The branches afford a yellow dye.

573. *D.* Mezèreum *flòre álbo* Hort. The white-flowered Mezereon.

574. *D.* Mezèreum *autumnàle* Hort. The Autumn-flowering Mezereon. The pinkish flowers of this variety appear in November, and continue on the bush till March or April. It is quite hardy, and one of the most desirable of shrubs, though quite neglected.

575. *D. póntica* L. The Pontic Daphne, or twin-flowered Spurge Laurel.

576. *D. Cneòrum* L. The Garland-flower, or trailing Daphne. A most beautiful little trailing evergreen, producing its bright pink flowers from May to September.

576a. *D. Aucklándi Hort.* Lord Auckland's Daphne.

577. DI'RCA *palústris* L. The March Dirca, or Leather-wood. Linnæus has remarked that the wood and bark of this plant are so tough that it is scarcely possible to divide the substance of either without a knife, and hence the name of Leatherwood. Though quite a tree in its habit of growth, it is rarely seen in England above 3 ft. high. Flowers yellow; March and April.

SANTALA'CEÆ.

578. NY'SSA *biflòra* Michx. The twin-flowered Nyssa. Native of North America; and valuable for its foliage, which dies off of an intense red, scarlet, crimson, purple, or yellow. The two largest trees in England are at the Duke of Wellington's at Strathfieldsav and at Lady Shaftesbury's at Richmond. On the former, a writer in the *Gentleman's Magazine* for April 1836, alluding to the notice taken of the duke's single specimen in the *Arboretum Britannicum*, says:—

"Blucher lies within a hollow'd tree low,
And Wellington has but his one *Tupelo*."

ELÆAGNA'CEÆ.

Deciduous trees, natives of Europe and North America, remarkable for the silvery hue of their foliage.

579. and 580. *ELÆA'GNUS Tourn.* The Elæagnus, Oleaster, or wild Olive Tree. Deciduous low trees or large shrubs; natives of the South of Europe, Asia, and North America.

579. *E. hortènsis* Bieb. The Garden Elæagnus. This tree is called by the Portuguese the Tree of Paradise, from the fragrance of its blossoms, which are produced in great abundance in May, and perfume the air for a considerable distance around. The fruit is of a reddish brown, resembling a date, and ripe in August. It is in great repute in the Levant, where it is made into preserves, and is also dried like pistachio nuts.

580. *E. hortènsis angustifòlia* Bieb. The narrow-leaved Elæagnus.

581. and 582. *HIPPO'PHAE L.* The Hippophae, Sea Buckthorn, or Sallowthorn. Large shrubs, with grey silky foliage. The male and female blossoms on different plants, and the fruit a yellow berry.

581. *H. Rhamnöìdes* L. The Buckthorn-like Hippophae. A valuable shrub, as enduring the sea breeze. The berries are gratefully acid, and are much eaten by the Tartars; a jam is made from them in Sweden, which is eaten as a sauce to fish. Rousseau relates a curious story respecting

their supposed poisonous qualities: having made a botanical excursion in the neighbourhood of Grenoble, and seeing these berries, he eat heartily of them. A local botanist who accompanied him, though he saw him eating the fruit, which he knew or believed to be poisonous, was so polite, or regarded Rousseau with so much respect, that he durst not presume to warn him of his danger. Rousseau returned home, and, while waiting patiently for the agonising pains which he expected to suffer, he fell asleep and awoke quite well.

582. *H. salicifòlia* D. Don. The Willow-leaved Hippophae.

583. and 584. SHEPHE'RDIA Nutt. (After Mr. *Shepherd*, late curator of the Botanic Garden, Liverpool.) The Shepherdia. Closely resembling the sea buckthorn.

583. S. *argéntea* Nutt. The silvery-leaved Shepherdia. The fruit, which is produced in great abundance, is about the size of a currant, and said to be much richer to the taste. In some parts of North America it is cultivated as a fruit shrub.

584. S. *canadénsis* Nutt. The Canadian Shepherdia.

ARISTOLOCHIA'CEÆ.

585. ARISTOLO'CHIA *sìpho* L'Hérit. The Siphon-like, or Tube-flowered, Birthwort. The leaves are large, heartshaped, and of a fine pale green. One of the largest plants in the country is in the garden of the founder of the Arboretum in Derby. The plant is much used in the neighbourhood of Paris for covering naked walls.

EUPHORBIA'CEÆ.

586. to 588. *Bu'xus Tourn.* The Box Tree. Well-known evergreen trees or shrubs, celebrated in gardening from the time of Pliny, more especially for edgings and topiary work. Vitruvius also recommends the box for topiary work; and it appears to have been much employed in verdant sculpture and close-clipped hedges, in the gardens of Roman villas, in the Augustan age. Pliny describes his Tusculan villa as having a lawn adorned with figures of animals cut out in box trees, answering alternately to one another. This lawn was again surrounded by a walk enclosed with evergreen shrubs, sheared into a variety of forms. Beyond this was a place of exercise, of a circular form, ornamented in the middle with box trees, sheared, as before, into numerous different figures; and the whole fenced in by a sloping bank, covered with box, rising in steps to the top. In another part of the grounds of the same villa, the box is mentioned as being cut into a variety of shapes and letters; some expressing the name of the master, and others that of the artificer, &c. (*Plin. Epist.*, book v. letter vi.) The same practice is followed in several Roman gardens at the present day; and in that of the Vatican, the name of the pope, the date of his election, &c., may be read from the windows of the palace in letters of box. The wood of the box is in great demand for wood-engravers and mathematical instrument makers; about 1830, the annual consumption of imported boxwood was about 582 tons, which sold in London from 7*l.* to 14*l.* per ton. Boxhill, in Surrey, has long been famous for its box trees, which produced in 1815 upwards of 10,000*l.* There are extensive native woods of the tree on the estate of Sir Robert Russell, at Checquers, in Buckinghamshire. As the ancient style of gardening is beginning to be revived, with the ancient styles of architecture, the use of box in parterres will probably soon become greater than ever.

586. *B. sempervìrens arboréscens* Mill. Dict. The arborescent Box Tree.

587. *B. sempervirens arboréscens marginàta* Hort. The gold-margin-leaved arborescent Box Tree.

588. *B. sempervìrens myrtifòlia* Lam. The Myrtle-leaved Box Tree.

588*a*. *B. baleárica* Willd. The Minorca Box. Great part of the box imported from the Mediterranean and Constantinople, and used by the

wood-engravers, is of this species. It is of more rapid growth, and coarser-grained than the common box.

URTICA'CEÆ.

Deciduous trees, natives of North America and Asia, some of them valuable for their fruit, and others for their leaves. The genera include the Mulberry and the Fig, and some others less known.

589. to 591. *Mo'rus Tourn.* The Mulberry Tree. Low trees, natives of Asia and North America.

589. *M. nìgra* Poir. The black-fruited or common Mulberry, The leaves of this species are by no means so suitable for the silkworm as those of the white mulberry, though they are very frequently substituted for them by amateurs, and hence the worms are often injured or lost. The tree is one of the latest in coming into leaf, and is taken as an index to the time for setting out green-house plants by many gardeners.

590. *M. álba* L. The white-fruited Mulberry Tree. This tree is a native of China, in which country the art of making silk appears to have been discovered 2700 B.C. From China this art passed into Persia, and the whole of Asia; and the ancient Phœnicians carried it to the East of Europe. Silk was introduced into Rome about the time of Julius Cæsar. Heliogabalus, about A.D. 220, is said to have been the first emperor who wore a robe entirely of silk, which cost its weight in gold. Aurelian, in 280, is said to have denied his empress a robe of silk because it was too dear. Through the persuasions of the Emperor Justinian, two monks, engaged as missionaries, brought to Constantinople in 555 some eggs of the silkworm concealed in the hollow of their canes or pilgrims' staves, soon after which the culture of the silkworm became general in Greece. In 711 it was introduced into Spain, and soon afterwards into France and Germany. The first white mulberry tree was planted in France in the reign of Charles VII.; and the first in England in the reign of James I., whose efforts to establish the rearing of silkworms in England were unsuccessful. In 1825, the British, Irish, and Colonial Silk Company made another attempt, but also failed. The reason of this is to be found in the nature of our summers, which are no more suitable for producing nutritive mulberry leaves than they are for producing grapes suitable for making wines. The grape requires the elaboration of a particular acid by intense solar heat and light, and the caoutchouc principle of the mulberry leaf requires it in an equal degree. The clear hot summers of Sweden, remarkable as it may appear, considering the lower average temperature of that country, enable the mulberry leaves to elaborate this caoutchouc better than the cloudy summers of England.

591. *M. álba Morrettiàna Hort.* Moretti's Dandolo's Mulberry. There is a curious variety of the white mulberry, cultivated in the Jardin des Plantes at Paris, which has the soft wood, or cambium, of the current year's shoots of a deep red.

592. Broussone'tia *papyrífera* Vent. The Paper-bearing Broussonetia, or Paper Mulberry. Remarkable for the variable forms of its leaves, hardly two on the same plant being alike. In Japan the branches of the current year are reduced to a pulp by bruising and boiling, and made into paper. Sometimes the mucilage obtained from boiled rice, or a species of mallow, is added to the pulp, and hence the name of rice paper is sometimes given to this manufacture.

593. Maclu'ra *aurantìaca* Nutt. The Orange-like-fruited Maclura, or Osage Orange. It may be mentioned as a proof of the excellence of the natural system of botany, that this genus, and the preceding and following ones, not only resemble the *Mórus*, or type of the order, in appearance, but possess the same properties, and in particular the caoutchouc principle, in consequence of which the leaves of the whole order afford food for the silkworm. The maclura is remarkably hardy and of rapid and vigorous

growth, and the wood is hard and very durable. Every part of the plant dyes a fine yellow. The female has already produced fruit in the Paris Garden, but, the male plant there not having yet produced blossoms, the fruit drops off before it arrives at maturity.

593*a*. *Fi'cus Cárica*. The common Fig. In no country is the fig found in elevated situations, or at a distance from the sea. It thrives best on the shores of the Mediterranean, and in the Islands of the Archipelago. In the *Bible* we frequently read of the fig tree; but this not always the common fruit-bearing fig, but the Egyptian species, *Ficus Sycómorus L.*, which becomes a considerable timber tree, and at the same time bears an edible fruit. The fig ripens its fruit in the open air as a standard, at Tarring, near Worthing, and on other parts of the sea-coast of Sussex, and against walls throughout the greater part of England.

594. Bo'rya *ligústrina* Willd. The Privet-like Borya. The plants have small leaves, which yield a milky juice like that of the fig and the mulberry, &c.

*U*LMA'CEÆ.

Timber trees of the largest size, natives of Europe and North America, known by countrymen in the temperate parts of Europe and Asia from the time of the Romans.

595. to 614. *U'lmus L.* The Elm. Of this tree there are very numerous kinds in cultivation, both in Britain and on the Continent; but the two most commonly planted in England are the *U.* campéstris *L.*, or common English elm, and the *U.* montàna *L.*, or Scotch Elm. The different kinds are so very much alike, that it appears scarcely worth while to keep some of them distinct. Their differences are at all events not easily defined by verbal description, and those who would study the genus must therefore have recourse to living plants. The collection in the Derby Arboretum was received from Mr. Masters of Canterbury, in whose nursery there is one of the best collections in England.

595. *U. campéstris* L. The English, Field, or common small-leaved, Elm.
596. *U. campéstris álba* Masters. The white Field Elm.
597. *U. campéstris acutifólia* Masters. The acute-leaved Field Elm.
598. *U. campéstris stricta* Hort. Dur. The upright-growing Field Elm.
599. *U. campéstris virens* Hort. The green Field Elm.
600. *U. campéstris viminàlis* Masters. The twiggy Field Elm.
601. *U. suberòsa vulgàris* Hort. The Dutch cork-barked Elm.
602. *U. suberòsa fóliis variegàtis* Lodd. Cat. The variegated-leaved Cork-barked Elm.
603. *U. suberòsa álba* Hort. The white Cork-barked Elm.
604. *U. montàna* Bauh. The Mountain, Scotch, or Wych Elm.
605. *U. montàna rugòsa* Masters. The rugose Scotch Elm.
606. *U. montàna màjor* Masters. The larger Scotch Elm.
607. *U. montàna minor* Masters. The smaller Scotch Elm.
608. *U. montàna péndula* Hort. The pendulous-branched Scotch Elm. A very singular and beautiful tree, from the horizontal and pendulous tendency of its branches.
609. *U. montàna fastigiàta* Hort. The fastigiate Scotch Elm.
610. *U. montàna crispa* Hort. The curled-leaved Wych Elm. There is a variety of *U'lmus* montàna, which was found by M. Vilmorin in a wood near Verrières, which has the cambium of the herbaceous shoots of a deep red, as in the case of the variety of mulberry mentioned under number 591. This property is perpetuated by grafting; though, at first sight, it might be taken for a local peculiarity arising from something in the soil, like the blue flowers of the hydrangea.
611. *U. glàbra vegèta* Hort. The Huntingdon Elm.
612. *U. glàbra màjor* Hort. The greater, smooth, or Canterbury Seedling, Elm.
613. *U. glàbra péndula*. The Downton Elm.

614. *U. americàna* L. The American Elm.

615. PLA'NERA *Richárdi Michx.* (In honour of *Planer*, professor of botany at Erfurt; and *Richard*, an eminent French botanist.) Richard's Planera, or Zelkoua. Remarkable for having a bark which, on the trunk and old branches, scales off like that of the *Plátanus*. The wood of this tree is remarkably heavy, and is said never to become wormeaten, and to be remarkably durable as posts, either in water or in the ground. There are large trees of this species at Kew and Syon.

615*a.* to 618. CE'LTIS *Tourn.* The Celtis, or Nettle Tree. Deciduous trees, with numerous branches; producing small fruit, which is remarkably sweet, and said to be wholesome. That of one species, *C.* austràlis, is supposed to have been the lotus of the ancients, the food of the Lotophagi, which, Homer says, was so delicious as to make those who eat it forget their country. The berries are still eaten in Spain and Greece; but, though they are produced in abundance by this species in the climate of London, particularly at Syon, Kew, and on a large tree at Mitcham, no one thinks of touching them.

615*a.* *C. caucásica* Willd. The Caucasian Celtis.

616. *C. occidentàlis* L. The Western Celtis, or North American Nettle Tree. The fruit, when ripe, is of a reddish brown or black, fleshy, and very sweet. The leaves die off of a bright yellow.

617. *C. occidentàlis cordàta* Willd. The cordate-leaved Western Celtis.

618. *C. crassifòlia* Lam. The thick-leaved Celtis, or Hackberry.

JUGLANDA'CEÆ.

Large trees, with compound leaves, producing edible fruit; natives of Asia and North America.

619. to 621. JU'GLANS *L.* The Walnut Tree. The walnuts formerly included the caryas; but the latter have been separated from them, chiefly on account of a difference in the shell of the nut.

619. *J. règia* L. The royal, or common, Walnut Tree. There are several varieties of this species in cultivation for their fruit in England, and upwards of 50 in the South of France and North of Italy. It ripens its fruit as far north as Edinburgh as a standard, and lives trained to a south wall, at Dunrobin Castle in Sutherlandshire. "Green and tender walnuts," Gerard observes, "boyled in sugar, and eaten as suckarde, are a most pleasant and delectable meate, comfort the stomache, and expell poyson." Pliny recommends the walnut for driving worms out of the stomach; and adds that, eaten after onions, they keep them from rising.

620. *J. nìgra* L. The black-wooded Walnut Tree. In Philadelphia the coffins are invariably made of this tree, which lasts in the ground undecayed for many years; about London, coffins are commonly made of the elm, on account of its rapid decay under ground.

621. *J. cinèrea* L. The grey-branched Walnut Tree. The wood, like that of all the other species of Juglandàceæ, has "the great advantage of lasting long, and of being secure from the annoyance of worms." Hence its value for wardrobes, cabinets, and other pieces of furniture.

622. to 624. CA'RYA *Nutt.* The Carya, or Hickory Tree. Trees resembling in all respects those of Jùglans.

622. *C. amàra* Nutt. The Bitter-nut Carya. Distinguishable, even without its leaves, by its naked yellow buds. The fruit is so harsh and bitter, that squirrels and other animals will not feed upon it, while any other nut is to be found.

623. *C. álba* Nutt. The white-nutted Carya, or Shell-bark Hickory. The nuts are white, whence the specific name. The tree attains a large size, both in America and England. At Syon it is 79 ft. high.

624. *C. porcìna* Nutt. The Pig-nut Carya. The wood is excellent, but the nuts are only fit for food for swine, racoons, and squirrels. Michaux

gives a beautiful description of the fruit of this tree, which he says is produced in pairs. Each fruit is covered with a thin husk of a beautiful smooth shining green, and when the nut within is ripe, the beautiful covering opens through half its length, and admits the passage of the nut; after which it never closes, but withers and dies off, as if it were conscious of being no longer of any use. Great numbers of this tree were raised from seed by Michaux, in the Bois de Boulogne near Paris, in 1822, where they are now, 1840, trees from 10 ft. to 20 ft. high.

624*a*. PTEROCA'RYA *caucásica* Kunth. The Caucasian Pterocarya. The whole plant has a yellowish aspect, and is somewhat tender in British gardens.

SALICA'CEÆ.

Deciduous trees and shrubs; mostly natives of Europe in moist soils, but also found in America and Asia. The genera are *S*àlix and *P*ópulus.

625. to 655. *S*A'LIX *L*. The Willow. Deciduous trees and shrubs, of which there are very many kinds described by botanists, but so much alike, as to be with difficulty distinguished except by juxtaposition in a living state. The male and female flowers are on different plants, and the male flowers are invariably the more showy. Nearly 300 kinds are described in the *Arboretum Britannicum*, in which work figures of 142 species are given. In the case of those species, the sexes of which are uncertain, we have, of course, omitted the words mas or femina.

625. *S. purpùrea mas* L. The male purple Willow. An elegant species from the redness of its catkins, and the fine purplish and glaucous hue of its slender young shoots and delicate leaves.

626. *S. purpùrea fem.* L. The female purple willow.

627. *S. hèlix mas* L. The male Helix, or Rose Willow. The leaves have a peculiar twist, somewhat like the shell of a snail, and the shoots are liable to put out tufts of imbricated leaves resembling roses, whence the English names.

628. *S. hèlix fem.* L. The female Helix, or Rose Willow.

629. *S. Lambertiàna Sm.* Lambert's, or the Boyton, Willow.

630. *S. Woollgariàna Borr.* Woollgar's Willow.

631. *S. Forbyàna Sm.* Forby's Willow, or the fine Basket Osier.

632. *S. triándra mas* L. The male three-stamened-flowered Willow, or Osier.

633. *S. triándra fem.* L. The female three-stamened-flowered Willow, or Osier.

634. *S. pentándra* L. The five-stamened-flowered Willow. The leaves resemble those of the peach, but are more coriaceous and shining; and the catkins are large, numerous, very showy, and very fragrant. One of the most desirable species for small gardens.

635. *S. Meyeriàna Willd.* Meyer's Willow.

636. *S. babylónica fem.* L. The female Babylonian, or Weeping, Willow. This tree is said to be wild on the banks of the Euphrates near Babylon, and to be found in China and other parts of Asia, and also in Egypt and other parts of Africa. It is extensively cultivated in North America, and has been introduced into Australia and South America. It was brought into England by an Aleppo merchant about 1730, having been previously introduced, however, into Europe by Tournefort. The weeping willow is employed by the Chinese, both in their gardens and in their cemeteries. It is also employed throughout Turkey, and great part of the West of Asia, in burial grounds, and it is much used for the same purpose in France and Germany. The reason why it is now preferred to the cypress, in France, is thus given by the botanist Poiret. "The cypress was long considered as the appropriate ornament of the cemetery; but its gloomy shade among the tombs, and its thick heavy foliage of the darkest green, inspire only depressing thoughts, and present death under its most appalling image. The weeping willow, on the contrary, rather conveys a picture of the grief felt for the loss of the departed, than of the

darkness of the grave. Its light and elegant foliage flows like the dishevelled hair and graceful drapery of a sculptured mourner over a sepulchral urn; and conveys those soothing, though softly melancholy, reflections, which have made one of our poets exclaim, 'There is a pleasure even in grief.'"

637. *S. babylónica crispa* Hort. The ringed, or curled-leaved, Weeping Willow.
638. *S. decípiens mas* Hoffm. The male deceptive, white Welch, or varnished, Willow. A very excellent basket willow, distinguished by the smooth, clay-coloured bark of the last year's shoots, which shine like porcelain, as if varnished, while those of the present year are red or crimson. Hence the term deceptive.
639. *S. decípiens fem.* Hoffm. The female deceptive, white Welch, or varnished, Willow.
640. *S. frágilis mas* L. The male brittle-twigged, or Crack, Willow. The most common tree willow in cultivation, in most parts of Britain.
641. *S. frágilis fem.* L. The female brittle-twigged, or Crack, Willow.
642. *S. Russelliàna mas* Sm. The male Russell, or Duke of Bedford's, Willow. Dr. Johnson's favourite willow, at Lichfield, was of this species; but whether male or female we have not been able to ascertain.
643. *S. Russelliàna fem.* Sm. The female Russell, or Duke of Bedford's, Willow.

In August, 1815, the remains of Dr. Johnson's willow were swept away by a violent storm, but a young one has been raised from one of its branches, which, in 1836, was 20 ft. high; and is shown to Johnson's admirers by its proprietor, Mr. Holmes, a coachmaker at Lichfield, who deserves the thanks of the public for having preserved this memorial of a great man, and who may be congratulated on the elevated character of mind and taste which led him to do so. A portrait of Johnson's willow when in perfection, and 60 ft. high, and also one when in ruins, and 130 years of age, are given in the *Arboretum Britannicum*.

644. *S. álba* L. The whitish-leaved, or common white, Willow. "Beautiful, and fit to appear in the decoration of any rural scene," says Gilpin in his *Forest Scenery*, and at the same time the most general species in cultivation as a timber tree. The wood when kept dry is very durable, and it is often finely veined. The roads, or rather tracks, through the interminable steppes in the South of Russia are frequently bordered by pollards of this species; forcibly reminding the English traveller of the same pollards which abound in the meadows of England by the borders of streams. At Neuilly, the seat of the king of the French, near Paris, the banks of the Seine are in some parts wholly planted with this tree; and these willowed banks, seen from a bridge which connects a large island with the pleasure-ground, have a very beautiful effect, from the unity of expression, and softness of the forms and colouring.
645. *S. álba cærùlea* Hort. The blue Willow. Said to be of more rapid growth than the species, and to have foliage of a more azure hue and larger.
646. *S. vitellìna mas* L. The male yolk-of-egg-coloured, or yellow, Willow, or golden Osier. The bark is of a rich yellow; and, whether in osier holts, in bushes, or in large trees, it has a very striking effect in the winter season. Indeed, the colour of the bark of the different species of willow varies so much, that a plantation of willows might be shaded of different tints in the winter time, as other trees are in the summer season.
647. *S. vitellìna fem.* L. The female yolk-of-egg-coloured, or yellow, Willow, or golden Osier.
648. *S. nìgra* Mühlenb. The black, or dark-branched, American Willow.
649. *S. acuminàta* Sm. The acuminated-leaved, or large-leaved, Sallow, or Willow.
650. *S. Pontederàna Willd.* Pontedera's Willow.
651. *S. cinèrea* L. The grey Sallow, or ash-coloured Willow.
652. *S. aurìta* L. The round-eared, or trailing, Sallow, or Willow.

653. *S. càprea* L. The Goat Willow, or the great-round-leaved Sallow. The male is very showy when in blossom. This, the following, and the two preceding kinds, are very commonly cultivated in coppice woods as undergrowths.

654. *S. nígricans* Sm. The dark broad-leaved Willow.

655. *S. laúrina* Sm. The Laurel-leaved, or shining dark green, Willow.

656. to 667. *Po'*PULUS *Tourn.* The Poplar. Trees mostly of large size, generally with heart-shaped leaves, which have a tremulous motion in the slightest breeze, owing to the great length of the petioles in proportion to the size and weight of the leaves to which they are attached. The wood, though soft, is durable when kept dry.

> " Though heart of oak be e'er so stout,
> Keep me dry, I'll see him out.'

The male and female flowers are on different trees: but to which sex the plants in the Arboretum belong is uncertain; for so partial is the demand in nurseries for trees scientifically and correctly named, that nurserymen have not found it worth while to pay much attention to this point; though, if they had a male and female of each species of dicecious tree, they would, in the case of sending out named collections, sell two trees for one.

656. *P. álba* L. The white Poplar, or Abele Tree. The leaves vary much in form, and on young branches are almost palmate. The long brown catkins are produced in great abundance, and are very ornamental. There is a fine specimen in the north-east corner of the Arboretum. On the banks of the Vistula at Warsaw, we have measured trees of this species above 100 ft. high, with trunks as erect as those of the spruce fir. Few trees produce a greater quantity of timber in a short time; but the duration of the tree, even in the best soils, is not above two centuries. The poplar is mentioned by Homer, who compares the fall of Simoisius, when killed by Ajax, to that of a poplar:—

> " So falls a poplar, that in watery ground
> Raised high its head, with stately branches crown'd."

Cowper sings of—

> " The poplar, that with silver lines his leaf."

and Barry Cornwall says—

> " The green woods moved, and the light poplar shook
> Its silver pyramid of leaves."

657. *P. trémula péndula* Hort. The pendulous-branched Aspen Poplar.

> ——— " When zephyrs wake,
> The aspen's trembling leaves must shake."

Sir Walter Scott has many allusions to the aspen, particularly in the well-known lines:—

> " Oh, woman! in our hours of ease
> Uncertain, coy, and hard to please,
> And variable as the shade
> By the light quivering aspen made,
> When pain or sickness rends the brow,
> A ministering angel thou."

658. *P. græ`ca* Ait. The Grecian, or Athenian, Poplar. Though from the name it would appear to be a native of Greece, yet there is little doubt of its having been introduced from North America, where there are

several cities named Athens. The species is not registered in Smith's *Flora Græca*.

659. *P. nìgra* L. The black-barked, or common black, Poplar. Remarkable for its crooked, knotty, rough-barked trunk, and its red male catkins which appear in March and April. This tree is abundant on the banks of the Vistula, where it is sometimes called *P.* vistulénsis, and sometimes *P.* polónica. The wood is beautifully veined, and is sent to Berlin, where it is made up into a great variety of ornamental boxes, and curious cabinet work.

660. *P. nìgra salicifòlia* Hort. The Willow-leaved black-barked Poplar; the *P.* balsamífera salicifòlia of the *Arboretum Britannicum*, abridged edition.

661. *P. monilífera mas* Ait. The male Necklace-bearing, or black Italian, Poplar; the *P.* virginiàna of Linnæus, and of the French gardeners, who also call it Peuplier Suisse. A rapid-growing large tree, the latest poplar grown in Britain of coming into leaf, and hence, probably, a native of the southern states of North America. The original plant was received from North America by Messrs. Dickson of the Hasendeanburn Nursery, about 1772; thence it spread into the North of England, more especially subsequently to the year 1787, through the great exertions of Mr. Pontey of Huddersfield. The female plants of this tree have such abundance of cottony substance about their seeds, that the dropping of these in July becomes quite a nuisance near houses. Hence, where it is practicable, the male tree should be selected whenever ornament is an object, not only on account of their being without the cottony substance, but because the deep red catkins are as ornamental as those of *P.* nìgra. The male plant, when in leaf, may be known from the female by the petiole of the leaves being more or less red, while those of the female are invariably of a yellowish white. In the English garden at Fontainebleau there are both male and female trees of this species, and thousands of seedlings come up in the walks every year.

662. *P. monilífera fem.* Ait. The female Necklace-bearing Poplar.

663. *P. monilífera Lindleyàna Booth.* Lindley's Necklace-bearing Poplar.

664. *P. fastigiàta mas.* The male fastigiate, or Lombardy, Poplar. In Persia this tree is planted in gardens and cemeteries, as a substitute for the cypress. The female tree has only lately been introduced into the Horticultural Society's Garden, from Monza near Milan. There are trees in a valley near Rouen which M. du Breuil the director of the botanic garden, measured for us in 1837, and found near 150 ft. high. In August, 1840, we had an opportunity of seeing these trees at a distance, and of questioning M. du Breuil respecting them, when he assured us that his measurement was quite correct.

——— "The poplar there
Shoots up its spire, and shakes its leaves in the sun."

In the village of Great Tew, in Oxfordshire, a tree, planted by a man who in 1835 was still living in a cottage near it, was 125 ft. high, having been planted about fifty years. It will, doubtless, soon equal the Rouen tree.

665. *P. heterophýlla* L. The various-shaped-leaved Poplar Tree.

666. *P. balsamífera* L. The Balsam-bearing Poplar, or Tacamahac Tree. The earliest poplar that comes into leaf in Britain; and, indeed, the earliest tree except the elder. The foliage is of a rich yellow when it first expands, and the tree in that state has a strikingly inviting appearance in plantations and in suburban gardens, more especially among evergreens. Decaying leaves black or dark brown. The range of this tree in North America is very extensive, being found from Canada to the shores of the Arctic Sea, on the shores of the Great Slave Lake, and on the Mackenzie River in such abundance that its native name is derived from it.

667. *P. cándicans* Ait. The whitish-leaved Balsam-bearing, or Ontario, Poplar. A large tree, nearly allied to the preceding species. The poplars planted before the west front of the Duke of Wellington's house, at Hyde Park Corner, are of this species. The tree thrives in the air of the sea, as may be seen at Walmer Castle, where a great many were planted in 1835, by Mr. Masters of the Canterbury Nursery.

*B*ETULA'CEÆ.

Deciduous trees, natives of Europe and North America, chiefly valuable for their timber.

668. to 678*b*. *A'*LNUS *Tourn.* The Alder. Trees, preferring moist situations, with sap wood which turns red when exposed to the air.

668. *A. glutinòsa* Gærtn. The glutinous, or common Alder. When the alder has been cut down, and allowed to spring up from the stool, it forms bold groups with straight stems, which from that straightness form a fine contrast to the winding brooks of which they are the accompaniments. Boutcher characterises the alder as an "ugly melancholy tree;" and, as it is more frequently found by stagnant than by running water, an observation as old as the time of Virgil, we are strongly inclined, though we do not think it ugly, to consider it as one of the most melancholy of deciduous trees. The loose negligent manner in which its dark dull green leaves are distributed over its branches, gives the tree a dishevelled appearance, as if it were careless about itself; and, if the weeping willow is to be considered as representing outward and simulated grief, the alder, we should say, forms a good emblem of the grief of the heart.

> "O'er the swift waters of the running stream
> The willow waves its light and graceful form,
> Mingling a transient shadow with the gleam
> Of the bright sunshine—like a passing storm:
> Emblem of grief, which, elegant, refined,
> Is more of outward show than of the mind.
> O'er the dark pond, whose sullen bosom shows
> No curling waves to greet the passing breeze,
> The rigid alder its stiff image throws,
> Gloomy and sad, as though it scorn'd to please:
> Emblem of woe, too great to be express'd
> Which broods in silence, and corrodes the breast."

669. *A. glutinòsa laciniàta* Willd. The cut-leaved glutinous Alder.
670. *A. glutinòsa quercifòlia* Willd. The Oak-leaved Alder.
671. *A. glutinòsa oxyacanthæfòlia* Hort. The Hawthorn-leaved Alder.
672. *A. oblongàta* Willd. The oblong-leaved Alder.
673. *A. oblongàta fòliis ellipticis* Ait. The elliptic-leaved Alder.
674. *A. incàna* Willd. The hoary-leaved Alder. A very elegant species, the more valuable, because it will thrive on dry soil.
675. *A. incàna laciniàta* Lodd. Cat. The cut-leaved hoary Alder.
676. *A. serrulàta* Willd. The Saw-leaved Alder.
677. *A. cordifòlia* Lodd. The Heart-leaved Alder. A beautiful glossy-leaved round-headed tree, of very rapid growth in dry soil, and quite hardy. It is little known, and in consequence comparatively neglected. Numerous seedlings have been raised from this tree at the royal nursery of the Trianon near Versailles; they vary exceedingly in their leaves, and some of them are with difficulty distinguished from *A.* subcordàta *C. A. Meyer.*
678. *A. víridis* Dec. The green-leaved Alder.
678*a*. *A. barbàta* C. A. Meyer. The bearded-flowered Alder. A native of Russia.
678*b*. *A. subcordàta* C. A. Meyer. The subcordate-leaved Alder. Also from Russia.

679. to 689. *Be'tula Tourn.* The Birch. Trees, chiefly natives of dry soil.

679. *B. álba* L. The white, or common, Birch. Applied to a great many uses in Sweden, from that of foddering cattle with the leaves and young shoots, green or dried, to covering houses with the old bark. The bark is also used in tanning, and a fragrant oil is distilled from it. The sap is made into wine and beer, and the inner bark is dried and ground like that of the Scotch pine, in order to mix it with oatmeal in times of scarcity. In Lapland, the huts are constructed with birch branches, covered with turf; and faggots of the spray with the leaves on, covered with cases formed of the skins of reindeer, serve for seats during the day, and beds at night. In the Highlands of Scotland the natives build their houses of it; make their beds, chairs, tables, dishes, and spoons of it; construct their mills of it; make their carts, ploughs, harrows, gates, and fences of it; and even manufacture ropes of it. The branches form the best fuel for the distillation of whisky, and the best smoke for curing haddocks, herrings, and hams. Coleridge calls the birch

> " most beautiful
> Of forest trees, — the lady of the woods."

Shenstone makes a single birch tree an index to a school: —

> " And all in sight doth rise a birchen tree,
> Which Learning near her little dome did stow."

The schoolboys, looking on this tree,

> " found their horror grew,
> And shaped it into rods, and tingled at the view."

680. *B. álba péndula* Sm. The pendulous-branched white Birch. Common among rocks in the Highlands of Scotland.

> " Where weeps the birch, with silver bark
> And long dishevell'd hair."

681. *B. álba póntica* Hort. The Pontic white Birch.
682. *B. álba urticifòlia* Hort. The Nettle-leaved white Birch.
683. *B. pùmila* L. The hairy dwarf Birch.
684. *B. nàna* L. The dwarf Birch.
685. *B. populifòlia* Ait. The Poplar-leaved Birch. An elegant tree, with large leaves and pendent branches.
686. *B. populifòlia laciniàta* Hort. The cut-leaved Poplar-leaved Birch. A peculiarly elegant tree.
687. *B. papyràcea* Ait. The Paper Birch. The largest tree of this kind in England is at South Lodge, Enfield Chase, where it is supposed to have been planted by the great Earl of Chatham.
688. *B. nigra* L. The black Birch. Next to the common birch this is perhaps the handsomest species of the genus. There is a fine specimen in the centre of the flower-garden of this Arboretum.
689. *B. lénta* L. The pliant Birch.

CORYLA'CEÆ, OR CUPULI'FERÆ.

Deciduous or evergreen trees or shrubs, natives of most parts of the world, and having, as their acorns, mast or nuts.

689*a*. to 715. *Que'rcus L.* The Oak. Deciduous and evergreen trees, several species of which are of great celebrity both for utility and ornament.

689*a*. *Q. pedunculàta* Willd. The pedunculate Oak. The most common species of British oak, readily distinguished from the other species of British oak by the short footstalks of its leaves, and the long footstalks of its acorns. The wood of this species splits clean, and makes the most ornamental furniture; while that of the other British species, *Q. sessiliflòra*, is tougher, but, being apt to rot between wind and water, it is

inferior to the other for shipbuilding. *Q.* sessiliflòra was formerly much used in roofing buildings, and especially churches, because these trees have generally straighter and longer trunks than those of *Q.* pedunculàta. These roofs were at one time thought to be made of chestnut; but this error was long since (1781) detected in France by Fougeroux and Daubenton, though the opinion has only lately been generally adopted in England. The two species are generally confounded by ordinary observers, so that, whenever we find authors speaking of the British oak, what they say, with a few exceptions, can only be considered as applying to oaks grown in British woods generally. Both species of oak on the Highland mountains never rise higher than shrubs, from the extreme cold; and in the North of Africa they are equally diminutive from the opposite cause, extreme heat. In alluvial plains it attains its largest size, and its greatest duration: there are various specimens of both the kinds of oak upwards of 100 ft. high, and some that are estimated to be upwards of 1500 years old. (See *Arb. Brit.*, vol. iii. p. 1764.) The beauty of oak foliage is universally allowed by artists: but it is clear that the foliage to which they allude, and which they describe as tufting so admirably, and being represented by numerous touches of the pencil radiating and imbricating from a point, is that of the pedunculate-fruited oak; because that of the sessile-fruited, or stalked-leaved, oak is by no means tufted, but presents clusters of 3 or 4 leaves, with a flat surface. This difference between the two oaks was first pointed out by the Rev. W. T. Bree, who says the leaves of *Q.* pedunculàta are of a dark deep green; and, though rather small (and small leaves combine better than large ones), are numerous, and grow close to the spray, clustering together in dense masses, and forming those lovely tufts, or rosettes, which constitute one of the characteristic beauties of oak foliage. When the wind blows gently, it partially turns up and displays their glaucous under surfaces in harmonious contrast with the deeper tints of those above, and presents a study worthy of the pencil of a Gainsborough. The leaves of *Q.* sessiliflòra, on the other hand, being of a large size, with long footstalks, are fewer in number, and less thickly set, consequently they do not mass so well. The long footstalks give the foliage a loose and straggling appearance, and a want of depth and solidity, which greatly detract from its general effect. (*Gard. Mag.*, vol. xii. p. 534.) Quércus pedunculàta requires a better soil than *Q.* sessiliflòra; and hence we find that, though the latter species is sometimes found on good soil, yet the former is very rarely found on bad soil. Thus the native oaks which stretch along the chalky hills on the south bank of the Thames, between Woolwich and Gravesend, are almost entirely of *Q.* sessiliflòra, as are those which are indigenous to the poor sandy gravelly soil of the Bois de Boulogne and the Forest of Fontainebleau, in the neighbourhood of Paris; on the rich clays in Sussex, on the other hand, the predominant species is *Q.* pedunculàta.

690. *Q. pedunculàta fastigiàta* Arb. Brit. The fastigiate pedunculate, or pyramidal, Oak.

691. *Q. pedunculàta heterophýlla* Hort. The various-leaved pedunculate Oak.

692. *Q. pedunculàta fòliis variegàtis* Lodd. Cat. The variegated-leaved pedunculate Oak. A very handsome tree, the white being pure, and the green dark and shining.

693. *Q. pedunculàta purpùrea* Hort. The purple-branched pedunculate Oak. Beautiful, though singular; and most desirable for ornamental grounds, to place along with the purple beech, purple sycamore, purple hazel, &c. The finest tree in England is at Mrs. Walker's, Arno's Grove, Southgate.

694. *Q. sessiliflòra* Sal. The sessile-flowered Oak. The native oaks north of London about Hampstead and Southgate, and in Kent along the south side of the Thames, more especially in the beautiful grounds of Belvidere, are chiefly of this species, which, as before observed, is readily known from *Q.* pedunculàta by the long stalks of the leaves. See *Q.* pedunculàta.

695. *Q. pyrenàica* Willd. The Pyrenean Oak. The leaves of this species become of a whitish brown colour in the beginning of winter, and curl up in such a manner as to resemble the most delicate carved work. They remain on all the winter, seldom dropping till June, when the others have begun to appear. Gardeners, in general, who can only see in decaying foliage a source of labour in sweeping it up, are apt in this species to anticipate nature, and pull off the leaves; which, wherever the true beauty of this tree is understood, they ought to be prevented from doing, under a severe penalty.
696. *Q. Æsculus* L. The Esculus, or Italian Oak.
697. *Q. Cérris* L. The bitter, or mossy-cupped, or Turkey, Oak. A vigorous-growing species, remarkable for the variableness of its foliage, which in every variety is of very great beauty. The wood and bark are very inferior in value to those of the British oak, but it is nevertheless as well, and according to some better, adapted for doors, and for wainscoting rooms, and in general for all ornamental purposes. Considering that the tree grows three or four times as fast as the common oak, this is a very great recommendation.
698. *Q. Cérris variegàta* Lodd. Cat. The variegated-leaved Turkey Oak.
699. *Q. Cérris austrìaca* Hort. The Austrian Turkey Oak.
700. *Q. Cérris fulhaménsis* Hort. The Fulham Oak. Sub-evergreen, and forming a very handsome conical tree of rapid growth.
701. *Q. Cérris Lucombeàna*. The Lucombe Oak. Sub-evergreen, and closely resembling the preceding kind.
702. *Q. Ægilops* L. The Ægilops, or Valonia Oak. The acorns are imported in large quantities on account of their cups, which are said to contain more tannin in a given bulk of substance than any other vegetable, and are therefore much in demand among tanners. In point of foliage and acorns, this is one of the most splendid species of the genus.
703. *Q. Ægilops péndula* Hort. The pendulous-branched Ægilops, or Valonia Oak.
704. *Q. álba* L. The American white Oak. According to Cobbett, this is among the least curious and beautiful of the American oaks. Michaux says that it is the only American oak that retains some of its leaves till spring. It is very common in America, and its wood is better than that of most other American species. In England, and also in France, it never attains any size. Decaying leaves whitish brown, never red or yellow.
705. *Q. macrocárpa* Willd. The large-fruited American Oak. Decaying leaves whitish brown, as are those of the next following species.
706. *Q. Prìnus* L. The Prinus, or Chestnut-leaved, Oak.
707. *Q. rùbra* L. The red, or Champion, Oak. A splendid tree in spring, when its leaves are coming out; but especially in autumn, when they are changing to dark red, crimson, scarlet, or a rich yellow.
708. *Q. coccínea* Willd. The scarlet Oak. Decaying leaves scarlet, red, or crimson, and deeply cut, like those of the following species, to which, in its erect vigorous growth, branches, and foliage, the scarlet oak bears a closer resemblance than it does to any other species. There are hundreds of fine specimens in the Bois de Boulogne, which were sown by Michaux in 1822.
709. *Q. palústris* Willd. The Marsh, or Pin, Oak. The hardiest and the most rapid-growing of American oaks in the climate of London and Paris. The trunk is straight and erect, while the branches are produced at regular distances, and hang gracefully down on every side. Unquestionably the handsomest of American oaks. There are fine old specimens at Arno's Grove, Southgate, Middlesex; and hundreds of beautiful young ones, from 20 ft. to 40 ft. high, in the Bois de Boulogne, which were sown by Michaux in 1822. This and the preceding species appear to us the only American oaks worth planting for their timber.

710. *Q. Phéllos* L. The Willow-leaved Oak.

711. *Q. Ílex* L. The common evergreen, or Holm, Oak. A well-known evergreen tree, mentioned as the Ilex by Virgil, and valuable in ornamental plantations. It is by far the commonest evergreen in Italy, where the monotonous character which it gives to many of the celebrated gardens in the neighbourhood of Rome and Florence has obtained for it, from Forsyth, the name of "the eternal Ilex."

712. *Q. gramúntia* L. The Holly-leaved, or Grammont, Oak. This species is supposed to have produced the edible acorns of the ancients, which, they believed, fattened the tunny fish on their passage from the ocean to the Mediterranean. These acorns are the bellotas which Theresa, the wife of Sancho Panza, gathered herself in La Mancha, where they grew in the greatest perfection, and sent to the duchess, wishing, instead of their being only the best of their kind, that they were the size of ostrich eggs.

713. *Q. coccífera* L. The Kermes, or Berry-bearing, Oak. The kermes or chermes insect, a species of coccus, lives upon the leaves of this tree, from which it is collected for the purpose of dyeing scarlet. The plant covers entire hills in Leon, Old Castile, and other parts of Spain; and the insects are collected there, and also in Turkey and Greece.

714. *Q. Súber* L. The Cork Tree. This tree, which is grown extensively in Spain, has the bark taken off periodically for the purpose of being sold for making corks, and for other uses. The bark is first taken off when the tree has attained the age of 15 years, when it is only fit for burning, or for being employed in tanning. In the course of 8 or 10 years it is again disbarked, and the bark is now fit for the manufacture of corks. At the end of 8 or 10 years more, a third disbarking takes place, when the bark is found to be fit for making the very best corks. From this time, while the tree exists, which may be from 150 to 200 years, its disbarking takes place regularly every 8, 9, or 10 years; the quality of the bark improving with the increasing age of the tree, which is not in the slightest degree injured by its removal. The bark is removed much in the same way that the bark of the common oak is taken off for the tanner, but with this difference, that the barker of cork trees takes the greatest care not to injure in the slightest degree the inner bark. The operation is commonly performed in the end of July or beginning of August, when the second sap flows plentifully. There can be no doubt that cork might be produced in abundance in the South of England and in Ireland, but, from the price of land and labour as compared with Spain, it is not likely that it would be profitable to rear it in this country.

715. *Q. Túrneri Willd.* Turner's Oak. Sub-evergreen, and supposed to be a hybrid between *Q. Ílex* and the common oak.

716. to 721. *FA'GUS L.* The Beech. Deciduous trees, bearing mast.

716. *F. sylvática* L. The Wood, or common, Beech. This is considered to be the Fagus of Virgil, but not the Phēgos of Dioscorides, which is thought to be the Quércus *E'sculus*. The beauty of the tree, the density of its shade, and the classical associations connected with it, have occasioned it to be much planted, independently altogether of its timber; and there is scarcely any end to the poetry that has been written on the subject, while

> "On the smooth beechen rind the pensive dame
> Carves in a thousand forms her Tancred's name."

The lines in Gray's Elegy are perhaps among the best:—

> "There at the foot of yonder nodding beech,
> That wreathes its old fantastic roots so high,
> His listless length at noontide would he stretch,
> And pore upon the brook that babbles by"

717. *F. sylvática purpùrea* Ait. The purple-leaved Beech. This tree was

discovered by accident in a wood in Germany, about the middle of the last century, and the original tree, like the original weeping ash, is said still to exist. Perhaps the finest specimen in England is at Enville, where, in 1840, it was 60 ft. high, and clothed with branches to the ground, covering a surface 90 ft. in diameter. It ripens mast in various places, which, when sown, produces plants of numerous shades of purple, red, and green.

718. *F. sylvática fòliis variegàtis* Lodd. Cat. The variegated-leaved Wood Beech.

719. *F. sylvática heterophýlla.* The various, or cut-leaved, Beech.

720. *F. sylvática cristàta* Lodd. Cat. The crested, or tufted-leaved, Beech.

721. *F. sylvática péndula* Lodd. Cat. The pendulous-branched Beech. There is a splendid specimen of this tree in one of the woods bordering Milton Park, in Northamptonshire, of which a portrait is given in the *Arboretum Britannicum.* It has come up there from self-sown seed, and attained the height of 50 ft.

722. to 724. CASTA'NEA *Tourn.* The Chestnut. Deciduous trees, occupying nearly the same soils and climates as the oak, but more tender.

722. *C. vésca* Gærtn. The eatable, sweet, or Spanish, Chestnut. A stately tree, with oblong lanceolate leaves, rivaling the oak in size and longevity; but, in regard to its timber, comparatively worthless after a certain age. The wood has the remarkable property of being more durable when it is young than when it is old, and hence the value of this tree for posts, poles, stakes, hoops, &c. In France it is much used in forming trellis-work against fruit walls, and also for fences; the upright pieces being tied to the horizontal rail with iron wire. Fences of this kind, made from trees from 6 in. to 12 in. in diameter, in the climate of Paris, will last from 10 to 12 years without paint. After the trunk has attained 10 or 12 inches in diameter, it is liable to split interiorly, and, when sawn up, is good for nothing but firewood. The tree attains an immense age, but begins rotting at the heart after it has grown 50 or 60 years. The oldest chestnut tree in the world is supposed to be that on Mount Etna, which is so entirely rotten in the interior that a cottage is built in it in which a family live. The oldest tree in England is that at Tortworth, supposed to have been planted before the Conquest, and the highest that we have heard of is one at Studley Park, which, in 1836, was 112 ft. high. The wood is a good deal used in France for making wine casks:—

> "With close-grain'd chestnut, wood of sovereign use,
> For casking up the grape's most powerful juice."

723. *C. vésca asplenifòlia* Lodd. Cat. The Fern-leaved Spanish Chestnut.

724. *C. vésca variegàta* Hort. The variegated-leaved Spanish Chestnut.

725. and 726. CA'RPINUS *L.* The Hornbeam. Deciduous trees, resembling the beech, but with rougher leaves, and a much smaller and differently shaped fruit.

725. *C. Bétulus* L. The Birch, or common Hornbeam. The wood is tough and horny; and the tree, bearing the knife well, is admirably adapted for forming lofty hedges. It thrives in cold, stiff, clayey, moist soils, and in situations bleak but not mountainous. It is the common plant used in making labyrinths. Rapin says:—

> "These mazy windings form a wilderness,
> Which hornbeam hedges in trim neatness dress."

The greatest number of hornbeam hedges in England, and the highest, are at Bramham Park.

> "Here hornbeam hedges regularly grow."

726. *C.* (B.) *americàna* Michx. The American Hornbeam.

727. and 728. *O'STRYA Willd.* The Hop Hornbeam. Deciduous trees, resembling the hornbeam. The female flowers consist of blunt scales, or bracteal appendages, which are so close and regularly imbricated as to form a cylindrical strobile, very like the catkin of the female hop.

727. *O. vulgàris* Willd. The common Hop Hornbeam.

728. *O.* (*v.*) *virgínica* Willd. The Virginian Hop Hornbeam.

728*a*. to 732. *CO'RYLUS L.* The Hazel. Deciduous shrubs or trees, natives of Europe and America.

728*a*. *C. Avellàna* L. The common Hazel. The first mention of this bush is in Genesis, where hazel rods were among those which Jacob peeled in order to make his cattle conceive streaked young. The name of filbert, applied to the garden variety, is, according to some, supposed to be a corruption of full-beard; but, the old English poet Gower assigns the name a different and more poetical origin, which is rendered plausible by the fact of the old English name being Philberd.

——— "Phillis
Was shaped into a nutte tree,
That all men it might see:
And after Phillis, Philiberd
This tree was ycleped."

729. *C. Avellàna heterophýlla* Hort. The various-leaved Hazel.

730. *C. Avellàna purpùrea* Hort. The purple-leaved Hazel.

731. *C. Colúrna* L. The Constantinople Hazel. A large tree, remarkable for the double involucre of its nuts. The fruit is edible, but not good.

732. *C. rostràta* Ait. The beaked, American, or Cuckold, Hazel.

GARRYA'CEÆ.

733. *GA'RRYA elliptica* Doug. The elliptic-leaved Garrya. An evergreen shrub, with leathery leaves, and long catkins of greenish white flowers, which appear in December and continue till May.

PLATANA'CEÆ.

734. and 735. *PLA'TANUS L.* The Plane Tree. Large deciduous trees with palmate leaves, natives of Asia and North America.

734. *P. orientàlis* L. The Oriental Plane. The divisions of the palmate leaves are lanceolate, by which it is readily distinguished from the following species, in which the divisions are lobate. The Oriental is a much more beautiful and a much hardier tree than the Occidental plane, but it is also of slower growth. All the plane trees that we read of in classical authors were of this species, because the Occidental plane was not brought from America till about the middle of the seventeenth century. It is much to be regretted that this species is not more generally planted, a circumstance that is only to be accounted for by its being more difficult to propagate in the nurseries.

735. *P. occidentàlis* L. The Western Plane. A rapid-growing tree, especially in the neighbourhood of water. The largest specimen in England is in the Chelsea Botanic Garden, near the river side, where, in 1838, it was 115 ft. high, with a trunk nearly 5 ft. in diameter, at 1 ft. from the ground.

BALSAMA'CEÆ.

736. and 737. *LIQUIDA'MBAR L.* The Liquidambar. Deciduous trees, with fragrant foliage; natives of North America.

736. *L. Styracíflua* L. The Sweet-Gum Liquidambar. The leaves die off of an intensely dark purple, sometimes mixed with red and orange. There are remarkably fine trees of this species at Chertsey and Strathfieldsaye; and, considering its great beauty in autumn, it is much to be regretted that it is not more frequently planted.

737. *L. imbérbe* Willd. The beardless, or Oriental, Liquidambar.

*M*YRICA'CEÆ.

Deciduous aromatic shrubs, natives of Europe and North America, which prefer a peat soil kept moist.

738. *M*YRI'CA Gàle *L.* The Sweet Gale, Sweet Willow, Candleberry Myrtle, or Dutch Myrtle. The whole plant diffuses an agreeable smell: —

"Gale from the bog shall waft Arabian balm."

739. COMPTO'NIA *asplenifòlia* Banks. The Asplenium-leaved Comptonia. The leaves are pinnatifid and of a brownish green, and when dried are deliciously scented.

GNETA'CEÆ.

740. *E'*PHEDRA *distàchya* L. The two-spiked Ephedra. A low shrub, a native of Spain, evergreen from the colour of its branches, and producing small succulent berries, slightly acid, and yet sugary and agreeable to the taste. It requires a dry sandy soil.

*T*AXA'CEÆ.

Evergreen or deciduous trees; natives of Europe and Asia, and perhaps of America.

741. to 743. *T*A'XUS *L.* The Yew. Evergreen shrubs or low trees; natives of Europe, Asia, and perhaps of America.

741. *T. baccàta* L. The berried, or common, Yew. The yew has been called the churchyard tree, but why the custom prevailed of planting yew trees in churchyards has never been satisfactorily explained. According to some, it was for the purpose of affording branches on Palm Sunday; according to others, for affording wood for making bows. The former is the more probable supposition of the two. But a third idea has been suggested, viz., that the worship of the druids was performed among trees, and that our churches, like those of the Romans, were built on the sites devoted to the religion which they succeeded. (See *Arb. Brit.*, p. 2071.) In gardening, the practice of clipping the yew into the shapes of animals and geometrical forms prevailed from the time of Charles I. to the latter end of the reign of William III. The yew was preferred to the holly, and other broad-leaved evergreens, on account of the smallness of its leaves, which did not show the marks of the shears, and were not injured by them. The yew is one of those trees that may be transplanted at almost any age, of any size, and at any season of the year; as the immense number collected together at Elvaston Castle from the surrounding country sufficiently proves. Bows were formerly made of the yew, more especially in the time of Queen Elizabeth, when every able-bodied man was obliged to have a bow in his house. At the present time, there is very little yew to be found fit for making bows, either in England or in any other part of Europe; and though English yew is occasionally employed by manufacturers, yet bows are almost entirely made from different kinds of wood from South America. The yew is poisonous in its branches and leaves, though the berries may be eaten with perfect safety.

742. *T. baccàta fastigiàta* Hort. The fastigiate, or Irish, Yew. A very handsome variety, with intensely dark green leaves, and the general form of the cypress. There are two avenues of this rare and beautiful tree at Elvaston Castle.

743. *T.* (*b.*) *canadénsis* Willd. The Canada, or North American, Yew.

744. SALISBU'RIA *adiantifòlia mas* Sm. The male Maiden-hair-leaved Salisburia. Remarkable for the form of its foliage, which resembles that of a

species of fern. The male has occasionally blossomed in England, but the female has only been lately introduced.

745. S. *adiantifòlia fem.* Sm. The female Maiden-hair-leaved Salisburia.

CONI'FERÆ, OR *PINA'CEÆ.*

Trees and shrubs, chiefly evergreen; natives of most parts of the world, more especially the temperate hemispheres. The best collection of living plants in England is at Elvaston Castle, and the oldest collection at Dropmore.

746. to 756*a.* *PI'NUS L.* The Pine. The pines are distinguished from the firs by having the leaves in groups or clusters of 2, 3, 4, or 5; whereas, in the firs, the leaves are single.

746. *P. sylvéstris* L. The Wood, or Scotch, Pine, or Scotch Fir. This tree and the oak are by far the most useful European timber trees, the former for domestic, and the latter for naval architecture. All the timber from the Baltic and Norway is of this tree, as all the spars and poles from the same regions are of the common spruce fir.

746*a.* *P. sylvéstris horizontàlis* Hort. The horizontal-branched Scotch Pine.

746*b.* *P. sylvéstris uncinàta* Don of Forfar. The hooked-coned Scotch Pine.

747. *P.* (*s.*) *pumìlio* Hænke. The dwarf, or Mountain, Pine.

748. *P. pumìlio* Mùghus *Hort.* The Mugho wild Pine.

749. *P. ìnops* Ait. The Jersey, or poor, Pine.

750. *P. Láricio* Poir. The Corsican, or Larch, Pine.

751. *P.* (*L.*) *austrìaca* Höss. The Austrian, or black, Pine.

752. *P.* (*L.*) *Pallasiàna Lamb.* Pallas's, or the Tartarian, Pine.

753. *P. Pináster* Ait. The Pinaster, or Cluster Pine.

753*a.* *P. Pináster marìtimus* Hort. The maritime Pinaster. Scarcely different from the species.

754. *P. Pínea* L. The Stone Pine. The kernels of this species are used in the desert throughout Italy, and are thought to give a peculiar relish to wine.

754*a.* *P. halepénsis* Ait. The Aleppo Pine.

754*b.* *P. brùtia* Ten. The Calabrian Pine.

754*c.* *P. Sabiniàna Doug.* Sabine's, or the great prickly-coned, Pine.

754*d.* *P. insignis* Doug. The remarkable Pine.

754*e.* *P. Llaveàna Otto.* La Llave's Pine. The kernels of this species are eaten in Mexico, as those of the stone pine are in Italy, and of the Cembran pine in Switzerland.

755. *P.* Cémbra *L.* The Cembran Pine. The kernels are eaten as in the preceding species. The flowers are of a bright purple, and more conspicuous than those of any other species of pine; and the cone, when it is full-grown, but not ripe, is covered with a bloom like that of the Orleans plum. The first tree brought to England still exists in the grounds at Whitton, near Hounslow, where it was planted by the celebrated Archibald, Duke of Argyle. In Switzerland the seeds are used in some places as food, and in others as an article of luxury; and the shell being very hard, and requiring some time and skill to separate it from the kernel, the doing so forms an amusement for young persons in the long winter evenings, as separating the films from the kernels of the walnut does in the Tarantaise. (See *Bakewell's Travels*, and *Kasthofer's Voyage dans les petits Cantons, &c.*) Of all pines that are suitable for small gardens, *P. Cémbra* is the best, as it grows exceedingly slow, seldom more than 6 in. in a year, very narrow, and very erect, and therefore never shading any adjoining plant injuriously, and it is besides very hardy and very beautiful. It may be mentioned as a singular fact, that it is found to grow more rapidly on the tops of the Highland mountains than in Middlesex. The next most desirable pine for small gardens is *P. Llaveàna*, exceedingly beautiful, but somewhat spreading.

756. *P. Stròbus* L. The Strobus, or Weymouth Pine. The wood of this

species forms the white pine imported from America. It is by far the most common species throughout the Union, and also in the Canadas.

756*a*. *P.* (*S.*) *excélsa* Wallich. The lofty, or Bhotan, Pine.

757. to 762. *A'BIES D. Don.* The Spruce Fir. Distinguished from the pines by its single leaves, which are distributed regularly round the branches; and by its pendent cones, the scales of which are persistent, adhering to the axis after the cones are ripe.

757. *A. excélsa* Dec. The lofty, or Norway, Spruce Fir. The tallest European tree, attaining the height of from 120 ft. to 150 ft., and sometimes even to 180 ft., with an erect straight trunk, never of proportionate thickness to its height. The best tree in the world for masts of ships is the Scotch pine, and the best for ship's yards the Norway spruce.

758. *A. excélsa Clanbrasiliàna Hort.* Lord Clanbrasil's Spruce Fir. A monstrosity found in a seed-bed in Ireland, and continued by cuttings.

759. *A. álba* Michx. The white Spruce Fir.

760. *A. nigra* Ait. The black Spruce Fir.

761. *A. Smithiàna Wall.* Smith's, or the Himalayan, Spruce Fir. Very hardy, and bearing a close general resemblance to the European spruce.

761*a*. *A. Douglàsii Lindl.* Douglas's, or the trident-bracted, Spruce Fir. (Discovered by Menzies in 1797, but introduced by Douglas in 1826.) In its native forests, on the north-west coast of America, it attains the height of from 100 ft. to 180 ft., and the bark abounds with a clear yellow resin. The timber is heavy, and very durable.

762. *A. canadénsis* L. The Canadian Pine, or Hemlock Spruce Fir. A most beautiful tree, of which the finest specimens in England are at Chertsey and Strathfieldsaye.

763. to 764*a*. *PI'CEA' D. Don.* The Silver Fir. Distinguished from the spruces by its single leaves being arranged in two rows, on opposite sides of the branch; by the cones being erect, and the scales separating readily from their axis, and dropping off when the cone is ripe.

763. *P. pectinàta.* The Comb-like-leaved Silver Fir. A splendid tree, which does not attain a large size, except in cool soils and a sheltered situation. One of the most remarkable facts in the history of this tree is, that stumps of it have been found alive after the tree had been felled upwards of 90 years, the wood of the stump increasing all the time without the aid of leaves. (See *Arboretum Britannicum*, vol. iv. p. 2333.)

763*a*. *P.* Pichta. The Pitch Silver Fir.

763*b*. *P. cephalónica* Arb. Brit. The Cephalonian Silver Fir, or Mount Enos Fir. Introduced from the Black Mountains, the Mount Enos of antiquity, by Gen. Sir Charles James Napier, when governor of that island in 1824.

763*c*. *P.* Pinsàpo *Arb. Brit.* The Pinsapo Silver Fir. Resembles the preceding species; and may, with it, probably be found to be only varieties of the common silver fir.

764. *P. balsàmea* L. The Balm of Gilead, or American, Silver Fir.

764*a*. *P. religiòsa* H. et K. The sacred Mexican Silver Fir. The branches are used for decorating churches in Mexico, as those of the yew formerly were in this country, as those of the spruce fir are in Poland, and of the *I'lex*, *A'rbutus*, and other plants, in Italy.

765. to 765*a*. *LA'RIX Tourn.* The Larch. Distinguished from the pines and firs by being deciduous, and by the leaves being in groups, or fascicles, of 6 or 8, or more. Cones upright, with the scales persistent.

765. *L. europæ'a* Dec. The European, or common, Larch. Next to the Scotch pine, the most valuable European tree. The wood is most durable, when the trees stand thin on cold soil, kept somewhat moist during summer, as the shoots continue to grow during the whole of that season.

765*a*. *L. europæ'a sibírica* Hort. The Russian Larch.

766. and 766*a*. *CE'DRUS Barrel.* The Cedar. Differs from the larch in being evergreen, and in the scales of the cones separating from the axis when

ripe. The cones require two years to attain maturity, and remain on the tree for a year afterwards.

766. *C. Libàni* Barr. The Cedar of Lebanon. When the cedar was first introduced into England is not exactly ascertained, but there can be no doubt that there are more cedars now in Britain than exist on Mount Lebanon. According to the latest accounts, there are now but 7 old trees which are presumed to have existed in Biblical times, but there are around them from 400 to 500 stunted bushes of the same species. It is singular that no gentleman in Britain has ever thought it worth while to plant a forest, or cover the side of a mountain with the cedar of Lebanon, in the same way as is done with the larch: the two trees are equally hardy, and when drawn up by one another produce equally straight and clean timber, though that of the cedar of Lebanon is worthless when compared with that of the larch; but the grandeur of a forest or mountain side of cedars, provided the trees were planted at considerable distances, would surpass any thing that at present exists in Europe.

766*a*. *C.* Deodàra *Roxb.* The Deodara, or Indian Cedar. Differs from the cedar of Lebanon in having the foliage, especially when young, glaucous, and the timber of full-grown trees close-grained, hard, compact, heavy, and extremely durable. This tree is equally hardy with the cedar of Lebanon, and has the same grand and picturesque character; and, as seeds are now readily procured from India over land, it is to be hoped it will soon be common in British parks and pleasure-grounds. It grafts readily on the common cedar, and several hundreds of plants have been thus raised at Elvaston Castle, where also the branches of entire trees have been grafted at their extremities with the deodar cedar, so as already to anticipate the appearance of full-grown trees of that species. The largest tree of this species in England is in the grounds of the Right Hon. Charles Shaw Lefevre, Heckfield Place, Hampshire, where, in 1840, it was 15 ft. high.

766*b*. ARAUCA'RIA *imbricàta* Pav. The imbricate-leaved Araucaria, or Chili Pine. Grand and singular, and probably as hardy as the cedar of Lebanon. Till lately, this tree was exceedingly rare, but some thousands have been recently raised at Liverpool and elsewhere from seeds, and avenues of it will soon be planted at Chatsworth, Elvaston, Woburn, and various other places. The kernel of the fruit is eaten as food in Chili.

767. to 769. *T*HU'JA *L.* The Arbor Vitæ. Evergreen shrubs, or narrow low trees, natives of both hemispheres.

767. *T. occidentàlis* L. The Western, or American, Arbor Vitæ. Distinguished from the Eastern arbor vitæ, by a comparatively open habit of growth, and darker green leaves and shoots.

768. *T. orientàlis* L. The Oriental, or Chinese, Arbor Vitæ. Habit compact, and the foliage of a yellowish green.

769. *T. orientàlis tatárica* Hort. The Tartarian Arbor Vitæ.

770. to 772*c*. *C*UPRE'SSUS *L.* The Cypress. Evergreen trees or large shrubs; natives of Asia and America, and perhaps of the South of Europe.

770. *C. sempervìrens* L. The evergreen, or common, Cypress. A flame-shaped, tapering, cone-like tree, from the earliest ages associated with places of burial.

——— " Triste Cyprès
Fidèle ami des morts, protecteur de leur cendres."

771. *C. sempervìrens horizontàlis* Mill. Dict. The horizontal spreading Cypress. There is a tree of this variety at Somma in Lombardy, said to have been planted the year before the birth of Christ, and which was so much reverenced even by Napoleon, that, when laying down the plan for his great road over the Simplon, he diverged from the straight line to avoid injuring this tree.

772. *C. thyoìdes* L. The Thuja-like Cypress, or White Cedar.

772*a*. *C. torulòsa* Lamb. The twisted, or Bhotan, Cypress.
772*b*. *C. expánsa* Audibert. The spreading Cypress.
772*c*. *C. Tournefórtii Audibert.* Tournefort's Cypress.
773. and 774. TAXO'DIUM *Rich.* The Taxodium, or deciduous Cypress. Conical deciduous trees, with the leaves of the yew.
773. *T. dístichum* Rich. The two-ranked-leaved Taxodium, or deciduous Cypress. A large tree in American swamps, remarkable for throwing up conical protuberances from the roots, which they do also in this country when planted in marshy ground. The wood forms the best shingles of any tree in North America.
774. *T. dístichum sinénse péndulum* Hort. The pendulous-branched Chinese deciduous Cypress. A very doubtful variety, only seen in British gardens in a very young state.
775. to 785. *JUNI'PERUS L.* The Juniper. Differs from the cypresses and arbor vitæs, in having fruit with the general appearance of a berry.
775. *J. commùnis* L. The common Juniper. One of the oldest evergreens of British gardens, and formerly clipped into shapes of various animals, or geometrical figures, for which it is particularly well adapted, from its small leaves and hardy nature. The prophet Elijah took refuge under a juniper when flying to avoid the persecution of King Asa. It forms the badge of the clan Murray, and the Highlanders believe that burning juniper branches before their doors will keep away witches. In the Forest of Fontainebleau this tree has attained, on very poor sandy soil, the height of 30 ft., with a trunk upwards of 1 ft. in diameter.
776. *J. commùnis suécica* Mart. The Swedish Juniper.
777. *J. commùnis nàna* Willd. The dwarf Juniper.
778. *J. virginiàna* L. The Virginian Juniper, or Red Cedar. A handsome, hardy, evergreen tree or large shrub, in very general cultivation, the wood of which forms the cigar boxes imported from America, and is also that employed in making common lead pencils.
779. *J. Sabìna* L. The common Savin. Much planted in gardens in the early part of the seventeenth century and later. The leaves are diuretic; and they are employed by clandestine practitioners to produce abortion in the human species, and also in domestic animals.
780. *J. Sabìna tamariscifòlia* Ait. The Tamarisk-leaved, or Berry-bearing, Savin.
781. *J. Sabìna fòliis variegàtis* Mart. The variegated-leaved Savin.
782. *J. Sabìna prostràta* Hort. The prostrate-growing Savin.
783. *J. phœnícea* L. The Phœnician Juniper.
783*a*. *J.* (*p.*) *lýcia* L. The Lycian Juniper.
783*b*. *J. excélsa* Willd. The tall Juniper.
784. *J. recúrva* Ham. The recurved Nepal Juniper. A very handsome pendent species, quite as hardy as the common juniper.
785. *J. chinénsis* L. The Chinese Juniper.

*E*MPETRA'CEÆ.

Low heath-like plants, natives of Europe, seldom more than 6 or 8 inches in height.

786. *E'MPETRUM nìgrum* L. The black Crowberry, or Crakeberry.
787. CORE'MA *álba* D. Don. The white-berried Corema.

*S*MILA'CEÆ.

788. to 794. *SMI'LAX L.* The Smilax. Climbing evergreens; natives of Europe, Asia, and America; in no way remarkable, though one species bears the sarsaparilla.
788. *S. áspera* L. The rough Smilax.
789. *S. excélsa* L. The tall Smilax.
790. *S.* Sarsaparílla *L.* The medicinal Smilax, or Sarsaparilla. The roots

of this species form the sarsaparilla of the shops, which, at one time, was considered a specific against numerous disorders, and is still occasionally employed in rheumatic complaints and cutaneous diseases.

791. *S. rotundifòlia* L. The round-leaved Smilax.
792. *S. tamnöides* L. The Black-Bryony-like Smilax.
793. *S. caduca* L. The deciduous Smilax.
794. *S. virginiàna* Mill. The Virginian Smilax.

LILIA'CEÆ.

This order belongs to the second grand division of plants, Endógenæ or Monocotyledòneæ, in which the veins of the leaves are parallel, and not reticulated as in all the plants hitherto enumerated in this catalogue, and which belong to the division Exógenæ or Dicotyledòneæ. The hardy ligneous genera are two, natives of Europe and North America.

795. to 797. *Ru'scus L.* The Butcher's Broom. Low shrubs, with obscure flowers, succeeded by red berries, like those of the asparagus.

795. *R. aculeàtus* L. The prickly, or common, Butcher's Broom. The flower is produced on the leaf without any apparent stalk, and this has led some botanists to suppose that the leaves are in fact only expanded branches. The female flowers, which are on separate plants from the males, are succeeded by bright red berries, which are almost as large as wild cherries, and of a sweetish taste. It is much to be regretted that male and female plants are not kept for sale in the nurseries; because the latter, when covered with its fruit, which it cannot be without the proximity of the male, forms a singularly ornamental little bush, as may be seen in woods where the plant grows wild, for example, at Woking in Surrey. The male plant is generally some inches taller than the female, which is contrary to what happens in plants in general.

796. *R. (hypophýllum) Hypoglóssum* L. The Under-tongue Ruscus, or double-leaved Butcher's Broom.

797. *R. racemòsus* L. The branchy Ruscus, or Alexandrian Laurel. A very handsome species, with yellowish green shining leaves.

798. to 801*a*. *Yu'cca* L. The Yucca, or Adam's Needle. Broad lily-like leaves terminating in sharp points, and large white flowers.

798. *Y. gloriòsa* L. The glorious Yucca, or Adam's Needle. Gerard, who first cultivated this plant, supposed that the casava, or Indian bread, was made from its root; but his commentator Johnson says that this was "wherein he most shewed his weaknesse, for that he doth confound it with the momihot [manihot] or true yuicca [tapioca]." A starch, however, resembling that of casava, is made from the stem of the yucca at Carthagena, and forms an article of commerce there; and the fibres of the leaves are used by the Indians to make a kind of cloth, and also cords, which they use to fasten their houses together, and to suspend their swinging beds or hammocks.

799. *Y. stricta* Sims. The upright Yucca, or Lyon's narrow-leaved Adam's Needle.
800. *Y. recurvifòlia* Salisb. The recurved-leaved Yucca.
801. *Y. flaccida* Haw. The flaccid-leaved Yucca.
802. *Y. crenulâta* Hort. The crenulated-leaved Yucca.

The supplementary species added since the list was first made out, and which have letters after the numbers, amount to 111, which makes the total number of species and varieties contained in the Arboretum 913; or, with the addition of the 100 sorts of roses planted in the belt, 1013.

II.

DESCRIPTION OF THE PLAN, AND PROPOSED MANAGEMENT.

THE SITUATION AND INSTRUCTIONS

THE situation is in the outskirts of the town; the extent about 11 acres; the form long, narrow, and irregular, as shown by the plan, *fig.* 2.; the surface is flat, apparently level, but with a very gentle inclination from the north-east to the south-west; and the soil is loamy, on a gravelly or loamy subsoil. The situation is open, but not much exposed to high winds; water is to be found at the usual depth to which wells are dug, and there is one small pond which is never dry at any period of the year. Every part of the ground admits of drainage; but all the drains must terminate at the south-east corner, where alone the water can escape. The soil is particularly well adapted for the growth of trees, as is evident from the belt which surrounds great part of the grounds, and which was planted some years ago by Mr. Strutt. The most important feature in this piece of ground, with reference to its adaptation for a garden of recreation, is, that there is no distant prospect, or view beyond the grounds, worthy of being taken into consideration in laying them out; or at least none that may not, in a very few years, be shut out by the buildings of the town, which are increasing fast on every side.

The instructions given to me by Mr. Strutt respecting laying out this public garden were, that it was intended to be a place of recreation for the inhabitants of Derby and the neighbourhood, and for all other persons who chose to come and see it; that it should be open two days in the week, and that one of these days should be Sunday, during proper hours; and that on other days a small sum should be required from persons entering the garden; or yearly admissions should be granted for certain moderate sums. That the gardens should be so laid out and arranged as not to be expensive to keep up; that a flower-garden and cottage, with the plantations already existing, should, if possible, be preserved; that a tool-house covered with ivy should also be preserved; that two lodges with gates, at the two extremities, should be built; and that each lodge should have a room, to be considered as a public room, into which strangers might go and sit down, taking their own refreshments with them, without any charge being made by the occupant of the lodge, unless some assistance, such as hot water, plates, knives and forks, &c., were required, in which case a small voluntary gratuity might be given. That there should be proper yards and conveniences at each lodge for the use of the public, apart from those to be exclusively used by the occupant of the lodge. That there should be open spaces in two or more parts of the garden, in which large tents might be pitched, a band of music placed, dancing carried on, &c. That certain vases and pedestals now in the flower-garden, and also certain others in Mr. Strutt's garden in Derby, should be retained or introduced; and, finally, that some directions should be left for the management of the garden.

REASONS FOR THE MAIN FEATURES OF THE PLAN.

In endeavouring to accommodate the design submitted to Mr. Strutt to his instructions and to the situation, the first point determined on was, that the whole interest of the garden should be contained within itself. The mode of doing this was next to be considered; when it appeared that a general botanic garden would be too expensive, both to create and to keep up; that a

mere composition of trees and shrubs with turf, in the manner of a common pleasure-ground, would become insipid after being seen two or three times; and, in short, that the most suitable kind of public garden, for all the circumstances included in the above data, was an arboretum, or collection of trees and shrubs, foreign and indigenous, which would endure the open air in the climate of Derby, with the names placed to each. Such a collection will have all the ordinary beauties of a pleasure-ground viewed as a whole; and yet, from no tree or shrub occurring twice in the whole collection, and from the name of every tree and shrub being placed against it, an inducement is held out for those who walk in the garden to take an interest in the name and history of each species, its uses in this country or in other countries, its appearance at different seasons of the year, and the various associations connected with it.

A similar interest might, no doubt, have been created by a collection of herbaceous plants; but this collection, to be effective in such a space of ground, must have amounted to at least 5000 species; and to form such a collection, and keep it up, would have been much more expensive than forming the most complete collection of trees and shrubs that can at present be made in Britain. It is further to be observed respecting a collection of herbaceous plants, that it would have presented no beauty or interest whatever during the winter season; whereas, among trees and shrubs, there are all the evergreen kinds, which are more beautiful in winter than in summer; while the deciduous kinds, at that season, show an endless variety in the ramification of their branches and spray, the colour of their bark, and the colour and form of their buds. Add also, that trees and shrubs, and especially evergreens, give shelter and encouragement to singing birds, to which herbaceous plants offer little or no shelter or food.

There are yet other arguments in favour of trees and shrubs for a garden of recreation, which are worth notice. Herbaceous plants are low, small, and to have any effect must be numerous; while, to acquire their names, and look into their beauties, persons walking in the garden must stand still, and stoop down, which, when repeated several times, would soon, instead of a recreation, become very fatiguing. Now trees and shrubs are large objects, and there is scarcely one of them the beauty of which may not be seen and enjoyed by the spectator while he is walking past it, and without standing still at all. A herbaceous plant is chiefly interesting for its flowers, and the form of its foliage, in which in general there is little change of colour; but, to these two sources of interest, trees and shrubs add the opening buds in spring, the colour of the unexpanded foliage immediately after it has burst from the bud, the fine green tinged with some other colour which the first leaves assume when they are fully expanded, and which continues more or less till the middle of June; the intensely deep green of summer, which continues till the end of July; the first changes of autumn to red or yellow, which commence in August; and the dying off of all the different shades of red, crimson, yellow, orange, brown, and purple, which continues taking place till Christmas; while some deciduous trees, such as the beech and hornbeam, the common oak in certain soils kept moist, and the Quércus *Taúzin* in all soils and situations, retain their leaves, after they have become brown, till the following May. There are also, in deciduous trees, the colour and bloom of the young shoots of the current year; the different colour which the bark of these shoots in many cases assumes the year following (*Sálix decípiens*, for example); and the colour and texture of the older shoots, and of the branches and trunk. In addition to these sources of interest, there is a very great beauty in trees, which, from the improper planting of artificial plantations, is often overlooked, or rather concealed; and that is, the ramification of the main surface roots at the point where they join the trunk. In general, trees are planted so deep that this ramification never appears above the surface, and the trunk of the tree seems fixed in the ground like a post which had been driven into it; an appearance as contrary to truth and nature, and also to the health of the tree,

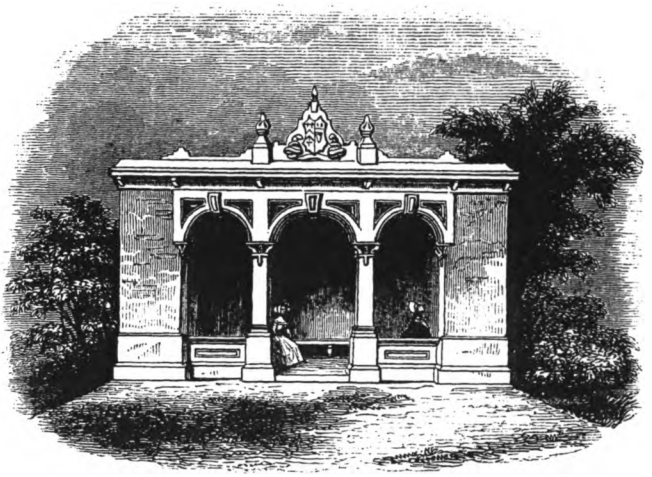


Fig. 3. *One of the Pavilions forming the Terminations to the cross Walk.* Style of James I.

as the shaft of a column without a base or a capital would, if employed in a building, be to architectural taste. To prevent this monstrous and unnatural appearance from occurring in the Derby Arboretum, I have directed all the trees to be planted on little hills, the width of the base being three times the height of the hill, so that the junction of the main roots with the base of the trunk will appear above ground.

Much more might be said to justify the preference which I have given to an arboretum over every other kind of arrangement for the Derby Garden, but I consider any farther remarks on the subject unnecessary.

A glance at the plan, *fig.* 2. in p. 6., will show that I have provided as great an extent of gravel walk as the space would admit of; the total length, including the walk round the flower-garden, exceeding a mile. There is a straight broad walk in the centre, as a main feature from the principal entrance; an intersecting broad and straight walk to form a centre to the garden, and to constitute a point of radiation to all the other walks; and there is a winding walk surrounding the whole. As a straight walk without a terminating object is felt to be deficient in meaning, a statue on a pedestal is proposed for the radiating centre *i* in *fig.* 2.; a pedestal, with a vase, urn, or other object, for the second circle in the straight walk *fig.* 2. *k*; while the pavilions *fig.* 3. form terminating objects to the broad cross walk.

As a terminal object gives meaning to a straight walk leading to it, so it is only by creating artificial obstructions that meaning can be given to a winding walk over a flat surface. These obstructions may either be inequalities in the ground, or the occurrence of trees or shrubs in the line which the walk would otherwise have taken, so as to force it to bend out of that line. Both these resources have been employed in laying down the direction of the surrounding walk, though its deviation from a straight line has chiefly been made in conformity with the varying position of the trees in the belt already existing. This belt, and also the trees in the flower-garden, and in other parts of the plan, which were there previously to commencing operations, and which are left conformably to Mr. Strutt's instructions, are shown in the plan *fig.* 4. p. 75. The point of junctiou of one walk with another is always noticeable in an artistical point of view, and affords an excuse for putting down sculptural or other ornamental objects at these points; we have therefore placed Mr.

Strutt's pedestals and vases in positions where, if they are kept properly supplied during summer with pots of flowers (the pot being placed in the inside of the vase so as not to be seen), they will form very ornamental objects; and, the names of the flowers being written conspicuously on a card, and tied round the narrow part of each vase, and the kinds of flowers changed at least once a week, they will be instructive as well as ornamental. The kinds of plants should be such as have conspicuous red or orange flowers, in order to contrast harmoniously with the masses of green foliage and grass with which they are surrounded.

All the walks are drained by semicylindrical tiles laid on flat tiles in a line along the centre of the walk, and by cross drains from this line to the edges of the walk, communicating with gratings fixed in stone at regular distances. There is nearly a mile of drains, and there are 150 cast-iron gratings. The upper coating of gravel is of a good colour, brownish yellow; and, as when kept in proper order by rolling it binds very hard and smooth, the walks will be of the most dry, comfortable, durable, and agreeable description.

In order to disguise the boundaries of the ground, and to conceal the persons walking in the side walks from those in the centre walks, I have raised undulating mounds of soil, varying in height from 7 ft. to 10 ft., in the directions indicated by the lines in the plan *fig.* 2., and by the shadows in *fig.* 4.; and these, even without the aid of the trees and shrubs which are planted on them, effectually answer the ends proposed.* Certain spaces on the lawn throughout the garden are left perfectly smooth and level, on which tents may be fixed, or parties may dance, &c. I should have made certain hollows and winding hollow valleys, as well as the hills and winding ridges; but the retentive nature of the soil, the difficulty, or rather the absolute want, of drainage for such hollows, as well as the very limited space, and the necessity of having a broad, straight, nearly level walk down the centre, rendered this impracticable.

In moving the ground, care has been taken to preserve some of the old surface soil to form the new surface; and this new surface has also been drained where necessary, and every where rendered perfectly smooth and even, by raking and rolling, before sowing the grass seeds.

The seats have been designed and placed, chiefly by Mr. Strutt himself, reference being had to the following rules:—To make choice of situations under the shade of trees already existing in the belts, or of situations where some kind of view or feature is obtained; to place some in gravelled recesses along the sides of the walks, and others on the turf; some open to the sun for winter use; but the most part looking to the east, west, or north, for summer use. Those seats which are placed in recesses ought to be 1 ft. back from the edge of the walk, in order that the feet of persons sitting on them may not be in the way of passers by; and the gravelled recess should extend 6 in. beyond the seat behind and at each end, for the sake of distinctness, and to prevent any difficulty in weeding the gravel or mowing the grass. No seat should be put down, along the walks, in such a situation as to allow persons approaching it to see the back of the seat before they see the front of it; and, hence, the seats should generally be placed in the concavities of the turns of walks rather than in the convexities of bends. No seat to be put down where there is not either a considerable space directly in front, or at an angle of 45°, or some other equal and large angle on each side. No seat to be put down where there will be any temptation to the persons sitting on it to strain the eye looking to the extreme right or left. None to be put down where more than one point of the boundary of the garden can be seen from the seat. None to be put down

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* A lithograph plan of the garden, on a larger scale, shows these mounds and also the mode of planting the garden, much more correctly than the engraving, *fig.* 4. It is sold by the curator, at the lodge, at 2*s.* 6*d.*; or, if sent post paid, 2*s.* 9*d.*

Fig. 4.

on the tops of the mounds, by which a person sitting would, at least before the trees and shrubs grow up, get a panoramic view of the entire garden, and thus defeat the main object of the mounds, and of the winding direction of the side walks. No seat to be put down, nor any device contrived, by which both the lodges can be seen at once from the same point of view; or even where one of the lodges and one of the pavilions can be seen from the same seat. Seats which are placed on the lawn always to be backed by some of the trees or shrubs there, so that no person may ever come close up to a seat from behind; or, if seats are placed in the open lawn without trees or shrubs near them on either side, then such seats must be made double, with a common back in the centre, or they may be benches without backs, or single seats, such as chairs or stools. All fixed seats, whether on the lawn or on gravel, to have foot-boards for the sake of aged persons and invalids. Round the central circle the seats should have stone backs, and a more architectural character than in any other part of the garden.

The flower-garden with its covered seat, the cottage in it with its public tea-room, and the ivied tool-house formerly attached to Mr. Strutt's kitchen-garden, are preserved; and also a large weeping ash with seats beneath, the branches of which have been trained into a regular form by iron rings.

In order to design the entrance lodges and gates, and the central statue, I called in the aid of Mr. E. B. Lamb, M.I.B.A., whose designs for the lodges and gates are shown in *figs.* 5, 6, and 7, and the ground plans of which are in accordance with Mr. Strutt's instructions in regard to public rooms, yards, and other accommodations. It may be added that the design of the garden will not be complete without an obelisk, or some such object, in the centre of the radiating circle *i* in *fig.* 2.; but this part of the plan is left to be completed by the committee of management.

As my instructions were to preserve as much as possible the belt and the trees in the interior of the ground already existing, I considered it most convenient to adopt the surrounding walk as a line of demarcation between the collection or arboretum in the interior of the grounds, and the miscellaneous assemblage in their circumference. Had the belt not existed, I should have extended the arboretum over the ground occupied by it, and thus have obtained room for a greater number of species, and a larger space for each individual tree and shrub. As things are, I have extended the belt in those places where it was wanting, and added to its interest by evergreen undergrowths, such as rhododendron, kalmia, laurustinus, box, holly, and mahonia; by low trees, such as arbor vitæ, red cedar, and cypress; and by large trees, such as cedar of Lebanon, silver fir, hemlock spruce, and evergreen oak. I have also introduced a collection of 100 different kinds of roses, all named; and placed the genera *Ulmus*, *Quércus*, *Pópulus*, and *Sálix* in the new part of the belt, in order to give more room in the interior.

All the ground not covered by trees or shrubs I have directed to be laid down in grass to be kept closely mown; but round each tree and shrub forming the collection I have preserved a circular space, varying from 3 ft. to 5 ft. in diameter, which (with the hill in the centre, comprising one third of the width of the circle, and on which the plant is placed) is not sown with grass, but is always to be kept clear of weeds. The use of this circle and little hill is to prevent the grass from injuring the roots of the trees while young, and to admit of the larger roots showing themselves above the surface, where they ramify from the stem, as before mentioned. It has been found since the garden was completed that these little hills have served as an effectual preservative of the plants; because, notwithstanding the many thousands of persons that visited the garden during the three days of the ceremony of the opening, not a single plant was injured. Some few of the shrubs which require peat soil, such as the heaths, have had that soil prepared for them; and the genera *Cistus* and Heliánthemum, which are apt to damp off on a wet surface, are planted on a raised mass of dry rubbish, covered with stones, as shown at 40. in the plan *fig.* 2.

p. 7. All the climbing plants throughout the collection have upright iron rods, with expanded umbrella-like tops, placed beside them; the lower end of the iron rod being leaded into a block of stone, and the stone set in mortar on brickwork, so that the upper surface of the stone appears 1 in. higher than the surrounding surface. This appearance of the stone above the surface is not only more architectural and artistical, but better adapted for the preservation of the iron at the point of its junction with the stone. than if the stone were buried in the soil.

With respect to the annual expense of keeping up the garden, it will be evident to those who have seen it, or who understand this description, that it will chiefly consist in mowing the grass in the summer season. As the extent of grassy surface to be mown will be reduced by the space occupied by the walks, and by the circles of earth on which there is no grass (on which the trees and shrubs stand, or which those in the belt cover entirely), to about six acres, one man will be sufficient to mow and sweep up this extent of lawn during the whole summer; the daily space to mow being about half an acre, and the grass mown to be distributed over the naked circles on which the trees and shrubs stand. All the other work which will require to be done in the garden during summer, such as weeding the walks, rolling them, weeding the circles on which the trees and shrubs stand, picking off insects from the plants, watering the ground with lime water where worm-casts appear, wiping the seats every morning so as to remove the excrement of birds, or whatever leaves or other matters may drop from the branches of the trees over them, &c. &c., may be accomplished by a second labourer. The head gardener or curator may manage the flower-garden and the vases of flowers at the junctions of the walks, and see that the company who walk in the garden do not injure the plants, &c.

During the winter season, or from December 1. to May 1., more than one labourer in addition to the head gardener will be unnecessary. The second labourer may at that season, therefore, be allowed to retain his house, and seek for labour elsewhere; and the saving thus made, it is presumed, would be a contribution towards the purchase, from some of the Derby nurserymen or florists, of all the flowers or other plants that may become necessary to fill the vases from May till October. Unless some arrangement of this sort be made, it will be impossible to do justice to the plan of exhibiting plants in the vases; because the flower-garden, if made a source of supply, would be injured in appearance; and to have a reserve garden, with a green-house or pit, would involve much more expense than hiring the plants from a nurseryman, and would be far from attaining the object in view so effectually. On the supposition that there were fifty vases, there would then be fifty different kinds of named flowers or green-house plants in them every day during the summer; and supposing that these kinds were changed once a week, and the same kind not repeated more than once in the same season, there would then have been upwards of 500 different kinds of handsome plants, with their names attached, exhibited to the public in the course of a single year. To give an idea of what these plants might be, I shall suppose them to consist of 200 showy hardy and tender annuals, 100 dwarf dahlias, 100 choice herbaceous plants, 100 geraniums, 100 Australian plants, 50 heaths, and 50 miscellaneous green-house plants, including fuchsias, cacti, aloes, &c. One great use of these plants is, by their bright red, yellow, orange, or white colours, to relieve the eye, and form a contrast to the green of the foliage and grass with which they are surrounded on every side. A similar contrast will be obtained by the colours of the dresses and countenances of persons walking in the Arboretum.

The plan of the Arboretum was made in May, 1839; and, being approved of by Mr. Strutt, as soon as the crop of hay was removed from the ground, in the July following, the work was commenced by Mr. Tomlinson, a contractor for ground work, who laid out the walks, made the drains, and raised the

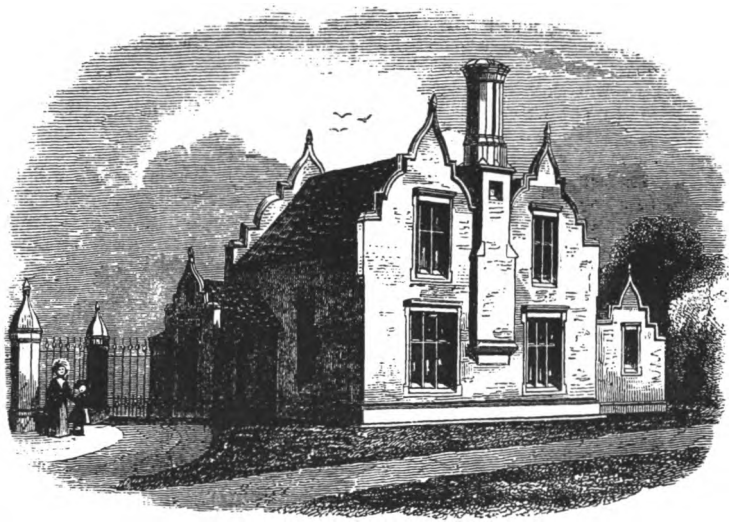

Fig. 5. *Interior View of the main Entrance to the Derby Arboretum.* Style Elizabethan.

general masses of the mounds. The mounds were afterwards moulded into suitable shapes, and connected by concave sides and lateral ridges with the surrounding surface, under the direction of my assistant, Mr. Rauch, who also superintended the planting of all the trees and shrubs, and all the other details connected with the ground, till the completion of the whole in September, 1840. The trees and shrubs were supplied chiefly by Messrs. Whitley and Osborn, but partly also by Mr. Masters of Canterbury; and the miscellaneous collection of roses was furnished by Mr. Rivers of Sawbridgeworth; the mistletoe was supplied by Mr. Godsall of Hereford; and some species, which could not be procured in the nurseries, were obtained from the Horticultural Society's Garden. The lodges and pavilions were designed by Mr. Lamb, as already mentioned: the north, or main, lodge in the Elizabethan style; the east lodge in the Tudor style, and in that variety of this style which was prevalent in the time of Henry VII.; and the pavilions in the style of James I. They were all built by Mr. Thompson of Derby; and the gates to the north, or principal, lodge were cast from Mr. Lamb's designs by Messrs. Marshall, Barber, and Co., of Derby.

MANAGEMENT OF THE DERBY ARBORETUM.

Supposing that the curator will occupy the north lodge, and that two labourers will occupy the other two cottages, I feel confident that these three persons will find no difficulty in keeping the entire garden in the very highest order at every period of the year. What I consider to be the highest order consists in the following particulars: — The walks should be at all times perfectly dry, smooth, firm, free from weeds, worm-casts, or other extraneous matters, and with the gravel of a good colour: the turf equal in thickness, free from all broad-leaved plants except clover, closely mown, smooth, firm, dry, and everywhere without worm-casts, mole-hills, ant-hills, dead leaves of trees, bits of paper, or any other extraneous matter which may be blown about, or left on it by visiters: the flower-garden perfectly free from weeds, and every bed filled with plants in a healthy state, and the beds well covered with flowers: the vases filled with flowers, in the manner above described, from the middle of

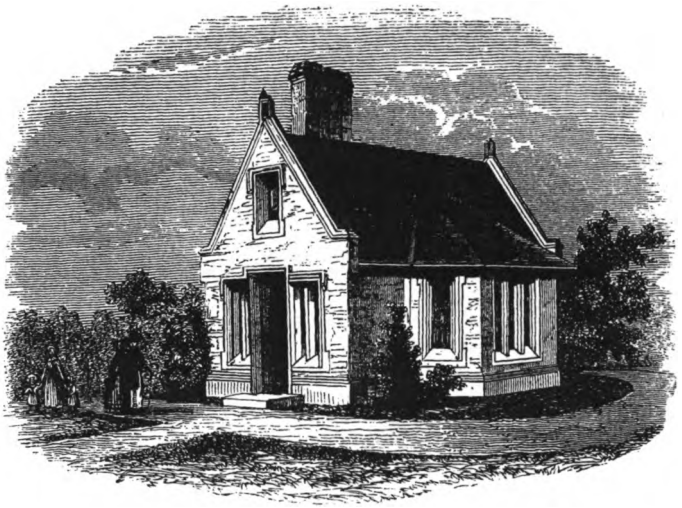

Fig. 6. *East Lodge of the Derby Arboretum, showing the public Room.* Tudor Style, time of Henry VII.

May till October; the flowers being in pots, and either of green-house or hardy kinds, named on a card tied to the narrow part of the vase, and changed not seldomer than once a week; the same species not being more than twice introduced during the same season. All the trees and shrubs to be kept without dead wood, perfectly free from caterpillars, aphides, curled leaves, honey-dew, leaves which have been killed, or branches which have been broken accidentally, and from flowers or fruits which have decayed and not dropped. The climbers or twiners to be kept tied up; the spaces round the trees free from weeds; the seats quite clean; the name tallies in complete repair; the boundary fence, lodges, and gates, in complete repair; and the labourers, and their wives and families who attend on persons who enter the garden or the lodges, clean and neatly dressed. This may be considered as the criterion of good regular management; but there are certain points to which I wish to direct the special attention of the curator and of the public, and especially of the public press.

The first point respects pruning. On no account whatever is the knife to be applied to any of the trees or shrubs, except in the following cases:— for the purpose of cutting out dead wood, branches broken by the wind or by any accident, dead or decayed flowers or fruit, or for removing the suckers or side shoots which come out below the grafts of such species or varieties as have been budded or grafted. No decaying leaves whatever, and no ripe fruit, are on any account to be cut off; but leaves which wither or are killed in the course of the summer may be removed as soon as they are perceived. Pruning is prohibited, in order that every plant may show its natural shape and habit of growth; whether by growing erect, spreading horizontally, or throwing suckers up, or rambling shoots out, on every side. The suckers are not even to be thinned out, but every plant is to be allowed as perfect a freedom of growth as if it were in its native habitat. The only exception is, such climbing, twining, or trailing plants as are to be trained up to the rods or props prepared for them, instead of allowing them to trail on the ground; but this is to be done without cutting off or shortening any of their shoots.

The reason for not removing decaying leaves is, that a great part of the beauty of all trees and shrubs consists in the change of colour which takes

place in the leaves in the course of the autumn, and more especially a short time before they drop off. Hence I repeat, that the leaves on all the plants (unless accidentally killed) are to be allowed to decay naturally on the shoots, and not to be touched till they have fallen on the ground, when they are to be swept up and laid on the circular space of earth which is to be preserved round each plant. The use of laying the leaves on the space around each plant is to serve as a mulching or non-conducting cover to retain moisture, and also because the best manure for every description of plant is decayed foliage. When at any time the leaves laid at the roots of the plants are blown off by the wind, they must be swept on again; and this practice must be continued till the leaves have so far rotted as to adhere to the surface of the soil. In some cases, where the roots are not prominent, the ground may be slightly stirred with the points of the prongs of a fork so as to cause the leaves to adhere, but this must not be done generally. By means of these leaves, and the short grass cut off by the scythe, a sufficient mulching will be produced for each plant, to keep in the moisture during summer, to keep out the frost to a certain extent during winter, and, as the mulching decays into mould, to supply nutriment to the roots.

In consequence of this mode of management, and the limited space which there necessarily is between the plants, some species will soon grow so large as to intermingle their branches, or their suckers, with those which are adjoining them. Whenever this is the case, the overgrown plants must not be thinned or pruned, but be entirely taken up by the roots, the soil stirred up to the depth of 2 or 3 feet, some fresh soil added, and a young plant procured from the nursery of the same kind as that taken up, and planted in its place, on the summit of a circular hill of earth of the same diameter and height as at first; that is, as before stated, on a hillock of from 3 ft. to 5 ft. in diameter, and from 1 ft. to 1½ ft. high in the centre, above the adjoining surface. The brick tally is then to be replaced on a foundation of bricks, so as not to be buried above 1 in. by the soil, as at first planting the Arboretum. Some of the poplars and elms may require to be taken up and renewed in this manner in the course of 15 or 20 years; and perhaps some of the shrubs which throw up numerous suckers, such as the common lilac and common philadelphus, and some which throw out rambling shoots, as the common bramble, may require the same treatment at the end of the same period, or before.

Whenever any of the branches or suckers extend so far as to cover or partially obscure the brick tally, it and its foundation of bricks must be taken up and removed 1 or 2 feet further from the plant; and whenever the glass of any tally is broken, or the card with the name becomes dim, or any other accident happens to it, it must be repaired or renewed by the curator from the reserve stock of bricks, printed cards, and pieces of glass, kept in the north lodge and the flower-garden cottage.

The miscellaneous collection of roses in the surrounding belt will require particular attention to prevent them from being injured by the adjoining evergreens; and, as roses are short-lived plants, some few of them may, perhaps, die every year. Whenever this is the case, the root of the dead plant must be taken up, the soil thoroughly stirred, some fresh soil and manure added, and a new plant, of the same kind as before, inserted. When a new plant of the same kind cannot be procured, some other kind of rose of the same section, and not already in the collection, must be planted, and a new name tally prepared accordingly.

As the trees and shrubs in the belt are much thicker than those in the collection, they will have to be thinned out from time to time; in doing which, the weakest and least valuable plants must be removed first, so that the belt may never have a crowded appearance, or choke up the roses, and at the same time be sufficiently filled with evergreens to conceal, in a great measure, the boundary hedge from the walk. Many of the trees in this belt, and also a number of the old trees of common sorts left standing in the flower-garden and in the collection, will have to be removed in the course of a few years,

Fig. 7. *East Lodge of the Derby Arboretum, showing the Entrance Gates.* Tudor Style, time of Henry VII.

otherwise the effect of the whole, as well as the growth of all the more delicate kinds now planted, will be materially injured. In a word, it forms no part of the design of this Arboretum to exhibit large trees, more especially of the common kinds; and whenever any one of these, or, indeed, any tree whatever in the Arboretum, reaches a greater height than 40 or 50 feet, it should be removed. That height is quite sufficient for producing shade, and for showing the form and character of the tree, and its flowers and fruit; and nothing more is required, or can be admitted in an arboretum on so limited a piece of ground. If this part of the management laid down be neglected, the rapid-growing large trees will soon overtop the slow-growing smaller ones and the shrubs, and ultimately destroy all the finer kinds.

As several of the trees and shrubs forming the collection are small plants of kinds recently raised from seed in the Horticultural Society's Garden, and just introduced into the country, it is not improbable that they may, in some cases, be wrongly named; but, if I am permitted, I shall be happy to examine, free of expense, all the plants, at intervals of two or three years, and correct the nomenclature, when necessary, during my life; because much of the usefulness of this Arboretum will depend on the nomenclature being correct.

As new species of trees and shrubs from foreign countries are continually increasing the collections in British gardens, when any of these are to be added to the Derby Arboretum, it can only be done with propriety and success, by taking up the whole and replanting, adjusting the distances to the estimated heights to which the plants will grow in the given climate and soil. It will be better, therefore, to make no additions whatever for the next 15 or 20 years, and then to take the whole up and replant, introducing the new kinds in their proper places.

To prevent the plants from being injured by giving away cuttings for propagation to nurserymen, or specimens to botanists, the curator ought to be forbidden to give away any, except to one substantial and extensive local nurseryman, and this only upon condition that such nurseryman agreed to supply from his own nursery, or to procure from other nurseries, all plants that might be wanted as substitutes for overgrown plants removed, or for deaths. At the same time, every nurseryman and botanist, as well as all other persons, ought to be allowed to inspect and study the plants at all seasons; and for this purpose the curator should keep in his lodge the copy of my *Arboretum Britannicum* which I have presented to the Arboretum, and should allow all enquiring persons to consult it. For general observers and lovers of trees and shrubs, the catalogue contained in the pamphlet prepared by me, and sold by

the curator, or my abridged edition of the *Arboretum*, will be sufficient, at least for some years to come. To check idle curiosity and a needless waste of time, the curator might be allowed to charge 1*d.* or 2*d.* per hour for the use of the copy of the *Arboretum* in the lodge; but, on no consideration whatever, ought he to be allowed to take it, or allow it to be taken, out of the public room.

It is to be observed, that keeping the vases supplied with flowers during the summer season forms no essential part of the Arboretum, though it will add much to the popular interest of the garden. If, therefore, it should be determined to add to the number of pedestals and vases, this can only be done with propriety, to such an extent as will place one at each angle formed by the junction of the walks, and one at each end of every fixed seat placed along the edges of the walks. To place any vases on the turf, either beside the seats there, or by themselves, would be altogether inartistical, and greatly interfere with the effect of the trees and shrubs. It is earnestly entreated, therefore, that nothing of this kind may be done. If any one should be desirous of presenting statues to the Arboretum, the only situations in which they can be placed are those pointed out for the vases, and for which they may be substituted, with the exception only of the centres of the two circles, in one of which, viz. that which forms the radiating centre of the walks, a statue or obelisk ought to be placed; in the other there is a figure of the Florentine boar.

In the public room in the curator's lodge a blank book should be kept, in which strangers who visit the Arboretum should be invited to write their names, with any remarks which may occur to them, especially with reference to the order in which the Arboretum is kept, and the degree in which these instructions for management, or any others that may be given by Mr. Strutt or the committee of management appointed by the trustees, may appear to have been attended to.

The Derby Arboretum was assigned over to trustees by Mr. Strutt, on the 16th of September, 1840; and Mr. Strutt's Address to the Town Council of Derby, and the ceremonies which passed on that occasion, are given below.

III.

OPENING OF THE DERBY ARBORETUM.

(From the *Derby and Chesterfield Reporter* of Sept. 24. 1840.)

Wednesday, Sept. 16th.

THIS memorable day was ushered in by merry peals from the bells of the several churches. In every part of the town, at an early hour, the processes of decoration were begun, to do honour to the donor of one of the most munificent gifts ever made to the inhabitants of a town. A gift, valuable now, but one that will become more so year after year, as the town increases. Flags and banners were hung out of the windows of many of the tradesmen of the borough; the Royal Hotel was beautifully decorated. At noon business was totally suspended throughout the town, and

THE TOWN COUNCIL

Assembled, the Arboretum Stewards and Committee wearing white rosettes. Mr. Joseph Strutt was warmly greeted on his entrance into the Hall, the gallery of which was filled with ladies, and the body of the Hall with a concourse of persons, such as we never witnessed at any previous meeting of the

Council. The Mayor, John Sandars, Esq., presided, and nearly all the members were present.

The MAYOR, after having stated the object for which the Council was assembled, and read the requisition requesting His Worship to appoint the meeting, called on Mr. Strutt to make his communication to them.

Mr. JOSEPH STRUTT then rose, amid the plaudits of the Council, and read the following address :—

MR. STRUTT'S ADDRESS TO THE TOWN COUNCIL OF DERBY.

"That there has of late been a rapid increase in the trade and population of the town of Derby, is a fact which cannot have escaped the observation of the members of this body, who have been selected by the inhabitants to watch over their local interests. Manufactures have been extending, new buildings have been erected on all sides, and a still further addition to the commercial importance of the town may be expected, in consequence of the completion of three new railways, which, by their junction at this place, offer great facilities for our intercourse with other parts of the kingdom, and render Derby an important centre of communication. Whilst these works have been in progress, the improvement of the town has not been neglected; and I should only have to refer to the recent improvements in our streets and public buildings, to the establishment of our efficient Police, and to the almost unexampled success which has attended our Mechanics' Institution, if I wished to give instances of the adoption of measures for promoting the convenience, the good order, and the instruction of our population. (Applause.) But whilst means have been so creditably taken for these important objects, no provision has been made for supplying a scarcely less urgent want of the inhabitants of a large and increasing town — the opportunity of enjoying, with their families, exercise and recreation in the fresh air, in public walks and grounds devoted to that purpose. (Great Applause.)

"I have observed, with great pleasure, that this subject has of late attracted the attention of Parliament, and that in all Enclosure Bills it is required that an open space shall be reserved for the exercise and recreation of the neighbouring population. (Cheers.) In this town we have no waste land which can be appropriated to such a purpose, with the exception of Chester Green. If this piece of land were properly drained and levelled, and if some alteration were made in the turnpike road which passes through it, it might be converted into a place admirably suited for athletic sports and pastimes; and I earnestly hope that it may soon be thus appropriated to the public. (Tremendous Applause.) [Mr. Strutt here paused for a few moments, being overcome with the intensity of his feelings; during which he was enthusiastically cheered.]

"With a view of further promoting the same objects, I have determined to appropriate a piece of land on the opposite side of the town, containing nearly eleven acres, for the purpose of public walks for the recreation of the inhabitants. (Applause.) Being desirous of uniting, as much as possible, information with amusement, I have been anxious not only that these walks should be laid out in the most advantageous manner, but that they should comprise a valuable collection of trees and shrubs, so arranged and described as to offer the means of instruction to visitors. These objects have been most ably and successfully accomplished by that distinguished Landscape-Gardener, Mr. Loudon, who entered largely and liberally into my views, and furnished the Plan which has since been executed under his superintendence, and that of his able and excellent assistant and pupil, Mr. Rauch. (Applause.) Mr. Loudon has furnished me with a description of his Plan and Arrangements, which I have appended to this Address, and a copy of which I will send to every member of the Council. (Applause.)

"Having thus prepared this piece of land for the intended purpose, I have given it the name of "THE ARBORETUM," and I have vested it in the following Trustees, viz. —

"John Sandars, Mayor,

Edward Strutt,	William Evans,
Richard Forester Forester,	Douglas Fox,
Thomas Bent,	Jedediah Strutt,
William Leaper Newton,	Anthony Radford Strutt,
John Bell Crompton,	John Strutt,
John Barber,	George Henry Strutt,
John Johnson,	Samuel Fox, Jun.
Stephen Gamble,	Thomas William Evans,
Francis Jessopp,	Theodore Howard Galton,
Samuel Job Wright,	Walter Evans,

"On the following conditions:—

"1st. That the Arboretum shall be open to all classes of the public without payment, and subject only to such restrictions and regulations as may be found necessary for the observance of order and decorum, on every Sunday, and also on at least one other day in every week, from sunrise to sunset; except that it shall never be open earlier than six o'clock in the morning, or later than nine o'clock in the evening, and that it shall be closed between ten and one o'clock on Sunday. (Cheers.)

"2d. That it shall be kept, in all seasons, in such order as the funds obtained by subscription, and by the admission of visitors on the other days of the week, shall allow.

"3d. That it be under the direction of a Committee of Management, to consist of the Mayor for the time being, and six other gentlemen, four at least of whom shall be members of the Town Council, and of whom two shall go out every year, but shall be eligible to be re-elected. The gentlemen now to be appointed are to constitute the Committee of Management till the 9th of November, 1841. As soon as elected, they will determine, by lot, which of their number shall go out after the first, and which after the second, year; and in succeeding years they will go out by rotation. The appointment of the Committee is always to take place on the same day as the election of the Mayor.

"It will be the duty of the Committee to fix upon such terms of admission, on the days not appropriated to the public, as they may consider sufficient to keep the Arboretum in the perfect order in which it is now delivered to them by Mr. Loudon, and they will of course take his directions for their guide, in the management of the trees and shrubs. They will find in the grounds a number of fixed and movable seats, sufficient for the accommodation of 350 persons. The two Lodges and the Cottage have also been supplied with fixtures and furniture, and a stock of the necessary tools and implements has been provided. An inventory of the whole will be delivered to the Committee, together with an account of the stock of labels for the plants, which will be found sufficient both for supplying new labels when required, and for replacing the old ones which may become obliterated. (Great applause.)

"The Cottage now occupied by Charles Brown and his family, I wish him to retain so long as he remains in my service, and conducts himself to the satisfaction of the Committee, paying to them two shillings per week, being the rent he has hitherto paid to me.

"I have purposely omitted any endowment to keep the Arboretum in order, as I know by experience that I shall best provide for its future preservation by intrusting it to those who will enjoy and profit by it, and who will take an interest in its permanence. (Shouts of applause.)

"It has often been made a reproach to our country, that in England collections of Works of Art, and Exhibitions for Instruction or Amusement, cannot, without danger of injury, be thrown open to the public. If any ground for such a reproach still remains, I am convinced that it can be removed only by greater liberality in admitting the people to such establishments; by thus teaching them that they are themselves the parties most deeply interested in their preservation, and that it must be the interest of the public to protect that which is intended for the public advantage. If we wish to

obtain the affection and regard of others, we must manifest kindness and regard towards them; if we seek to wean them from debasing pursuits and brutalising pleasures, we can only hope to do so by opening to them new sources of rational enjoyment. (Enthusiastic cheers.) It is under this conviction that I dedicate these Gardens to the Public; and I will only add, that as the sun has shone brightly on me through life, it would be ungrateful in me not to employ a portion of the fortune which I possess, in promoting the welfare of those amongst whom I live, and by whose industry I have been aided in its acquisition. (Tremendous cheering.)

"I now, therefore, present to the Council the Deed of Settlement, and all the writings relating to the Arboretum."

(The whole meeting then rose, amid the waving of hats, reiterated cheers, and manifestations of enthusiastic feeling, such as we never saw surpassed.)

RESOLUTIONS OF THE TOWN COUNCIL.

Dr. BENT rose and said it appeared from the deed which had just been completed and presented to the Council, that it was the wish of the munificent donor of the Arboretum, that it should be vested in a Committee, chosen annually, consisting of six persons and the Mayor of the Borough for the time being, four of them to be Members of the Council, and two other persons, who might, or might not, be Members of the Council, as they thought fit. He was quite sure that they would cheerfully accede to the request of Mr. Strutt, and he had, therefore, great pleasure in moving the following resolution: — "That the Council do comply with Mr. Strutt's request, and take upon themselves the obligations imposed upon them by the Arboretum Deed of Settlement."

Dr. BENT then said that he should refrain from giving expression to his own sentiments, or alluding to the gratitude of the town for the noble act of munificence for the benefit of the borough, which they had just witnessed, as that, he knew, would be done by others more capable of doing justice to the subject than he was. But he must be allowed to say that amongst the many honourable and beneficial favours conferred upon the town by Mr. Strutt, this was pre-eminent; and, towering above every other, entitled the generous donor of the Arboretum to the respect and gratitude of all the inhabitants of Derby. (Applause.) He could do no more than express a sentiment in which he knew they would all concur — that was, his wish that Mr. Strutt might live long to enjoy the honour and respect which he had so well earned during his long life, and which he had no doubt would be as cheerfully conceded to him as they were justly his due. (Great applause.)

Mr. S. GAMBLE, in seconding the resolution, could only join in the general expression of gratitude which was universally felt for the munificent gift just made to the town. He earnestly hoped that Mr. Strutt might live long to witness the good effects of his liberality; and to receive the honour and esteem to which his generosity justly entitled him.

Carried unanimously, followed by loud cheers.

Mr. CROMPTON felt peculiarly happy in taking any part in furthering the views of the donor of this munificent gift to his fellow-townsmen, and moved with great pleasure the following resolution: — "That the following persons, namely, Dr. Forester, Dr. Bent, Mr. James Peet, Mr. Thomas Wright, Mr. Francis Jessopp, and Mr. John Johnson (all Members of the Council), be and they are hereby nominated and appointed to act, in conjunction with the Mayor for the time being, as the Committee of Management of the Arboretum."

Mr. D. FOX felt that this was a subject for feeling, not for speaking, at least he could say so for himself, and this would be easily understood when his connexion with Mr. Strutt was considered. He must confess that he could not express himself as he could wish, but he was sure they would all feel those sentiments which naturally arose in the mind, and that they did not need arousing by eloquent appeals to a sense of the value of the donation

which had just been made to the town. (Applause.) It would ill become him, in the presence of Mr. Strutt, to say what he knew would annoy him, in giving expression to the feelings which prevailed in that meeting, and throughout the town. He knew it had always been his ardent desire, that every enjoyment he possessed himself should be freely participated in by others (great applause); this was the key by which he had found entrance into every heart; this was the talisman by which he had influenced every mind; and which he felt persuaded he would retain the influence of to the last day of his existence. His philanthropy and benevolence would always induce him to lend his powerful aid to every object embracing the public good, especially when it involved the welfare and health of the inhabitants of this town. (Applause.) He hoped the example of Mr. Strutt would be followed in other large towns (great applause), and he had now only to hope that the sun of prosperity to which Mr. Strutt had alluded would shine upon him in full splendour during the remainder of his life; and that that might be longer than commonly fell to the lot of humanity. He was sure that not only the Council, but the town, would concur in his kind wishes to his relative. He cordially seconded the resolution, which was carried unanimously.

The MAYOR then said it was necessary, in compliance with the Deed of Settlement, that they should determine which two of the Committee should o out in 1841, and which two in 1842.

The Ballot was then taken. Mr. Jessopp and Mr. T. Wright retire after the first year; and Dr. Forester and Dr. Bent after the second year.

Mr. DUNNICLIFFE thought it would be presumptuous in him to make any reference to the noble gift that day conferred upon the town, but he did not feel the less grateful, though he did not attempt to give expression to his feelings. Mr. Dunnicliffe then moved — "That Messrs. Crompton, Newton, and Co., of Derby, Bankers, be, and they are hereby nominated and approved of as, the Bankers of the Arboretum Committee."

Mr. H. MOZLEY, jun., rose and said: — I rise, Sir, to second the resolution which has just been proposed, and I gladly avail myself of the opportunity thus afforded me of expressing my own feelings of delight and of gratitude for the splendid gift now conferred on us and our fellow-townsmen. There are many men of great benevolence of disposition without the means of indulging it; there are others of large possessions without the heart to confer any portion of them on their neighbours, who live for themselves alone; but when, as in the present case, the truest kindness of heart, the most unbounded benevolence, the greatest desire to promote the welfare and happiness of others, and the possession of an ample fortune are centred in one individual, he is a blessing to all about him, and happy himself in contemplating the objects and the results of his goodness.

> "Thrice happy he — enabled to pursue
> What most men wish, but want the power to do."

We think a good deal, Sir, of a man who has directed by his will, that, out of the fortune he leaves behind him, some benevolent or charitable institution be founded; that he has so far a regard for his fellow-creatures as to wish them to derive benefit from those riches which he can no longer use or enjoy, and which he cannot take with him. He lives long in our minds and memories. He awakens a feeling of gratitude. How much more grateful, then, must we feel to one who deprives himself during his life — when he might many years have enjoyed it, as I most sincerely hope the event will prove—of so valuable a possession as that which has just been transferred; who gives when he might retain, and not when he must abandon it. (Cheers.) The idea of presenting an Arboretum to the public, though an extremely noble one, is not quite new. I recollect but one instance of it, and I must go a long way back for that. Julius Cæsar, as will doubtless be remembered, left by his will a sort of Arboretum to the citizens of Rome. Shakspeare, availing himself

of this circumstance, with his usual consummate art makes Mark Antony, in stirring up the Roman citizens against Brutus and the others who had killed Cæsar, close his inciting addresses by referring to his will, and announcing to them —

> " Moreover, he hath left you all his walks,
> His private arbours, and new planted orchards,
> On this side Tiber : he hath left them you,
> And to your heirs for ever ; common pleasures,
> To walk abroad and recreate yourselves."

This proof of the kindly feelings of Cæsar to the citizens had the effect Mark Antony intended, and they proceeded to revenge themselves on Brutus and his party. The object of that gift and of this to-day seem similar, but the Roman Arboretum was *left* by its owner, the Derby one *given*. (Cheers.) After all, Sir, it seems almost absurd to *talk of* our feelings of gratitude to Mr. Strutt for his gift — who can doubt them ? We cannot but entertain them. Not only in this neighbourhood, but wherever else I have heard it mentioned, this presentation has been declared to be one of the most munificent acts of our times. (Great applause.)

Mr. R. Cox had the honour of a motion being placed in his hands, which he moved with very great pleasure. With respect to the noble gift they had received, he must say that it was the most liberal he had ever heard of (cheers), and that ever would be heard of again in the proceedings of the Derby Town Council. (Cheers and laughter.) It would be folly in him to attempt to eulogise the donor, but they all felt more than Shakspeare, or Cæsar, or any of the persons who had been alluded to. Mr. Cox then moved the following resolution — " That the Deed of Settlement be entered at full length in the Book of Proceedings of the Town Council."

Mr. Moss seconded the resolution, which was carried unanimously.

Mr. BARBER said, that, having occasion so often to introduce to the Council subjects on which difference of opinion existed, it was most gratifying to him, on this memorable occasion, to have assigned to him the very pleasing duty of proposing a motion which was sure to be cordially received and unanimously passed, viz. — " The thanks of this Council, on behalf of themselves and their constituents, to Mr. Strutt, for his generous and noble gift of the Arboretum " — a gift of which he believed this country, or this kingdom, did not furnish any thing like an example. (Cheers.) It had been justly observed, that this was a matter of feeling, and not of speaking, and the observations of those who had preceded him had left him comparatively little to say ; but still language was the channel by which one's feelings were communicated ; and this occasion, as uncommon as it deserved to be memorable, demanded the expression of those feelings of respect, gratitude, and veneration, which he was sure animated all who heard him. (Great applause.) The gift of the Arboretum was necessarily a public act, but it proceeded from a gentleman they might be proud to call their townsman, whose acts of private charity were numberless, his benevolence universal, not contracted by any considerations of party or religious difference, but extended with a bounteous hand to all who needed and deserved assistance. (Cheers.) Whatever a man's opinions might be, it was enough for Mr. Strutt to see a fellow-creature in distress, his benevolent heart was ever prompt to suggest and his liberal hand to afford relief, — not once or twice, but oft, as the occasions arose. His charity was not the shallow, noisy, bubbling brook, telling with all its feeble powers its little story as it passes to oblivion ; but the deep, exhaustless, and fertilising stream which dispenses its blessings and its benefits, widely indeed, but silently and permanently. (Cheers.) True, as had been observed, such examples of the happy union of wealth, with the disposition to employ it for the general good, were too rare ; but when they were found, as in the munificent donor of the Arboretum, they were examples not for this town or county, but for the country and for mankind, at once to stimulate, to

encourage, and to show the way to others. In referring to Mr. Strutt's uniform courtesy, kindness, and urbanity, he should be anticipated by all who had the happiness of intercourse with him. For who had not felt that his was not the mere conventional politeness, the tinsel which glitters and beguiles, but the genuine and sterling gold, the pure unadulterated feeling, direct and fresh from an open and generous heart, a feeling and a manner which all can understand, which all can feel, which makes its resistless way with the force and vigour which genuine feeling can alone convey to the hearts of all. (Great applause.) Having been honoured by the duty of making this motion, he could not satisfy his own feelings by saying less, but would, for the reasons alluded to, abstain from saying much more which might be said, and conclude his observations on this part of the motion, by expressing a sincere and anxious hope, that, as Mr. Strutt has raised for himself an imperishable monument in the hearts of his neighbours, he may long live to enjoy, in health and happiness, the fruits of his benevolence (Great applause.) But there remained another view of the subject. Mr. Strutt had most judiciously given the Arboretum absolutely and exclusively to the public, without endowment, for the reasons so forcibly stated in his excellent address. (Cheers.) This country has been too long, and too slow, in endeavouring to remove the reproach cast upon the English nation — that its people were mutilators of works of art, and could not safely be admitted to collections of such valuable things: but a better and more sensible spirit had lately prevailed; more justice had been done to the body of the people; greater reliance placed upon their manly sense and feeling; more confidence in that steadiness of character which has never been fairly appealed to in vain. (Cheers.) Such an appeal was most successfully made when the Palace and Gardens of Hampton Court were opened to the public with this simple but effective address — "It is hoped that the public will protect what is intended for the public enjoyment." Here Mr. Strutt appeals thus to the inhabitants of Derby, not in the language of hope only, but of confidence, full and undoubting confidence, that the public of Derby will protect and preserve this gift of their generous benefactor. (Cheers.) The property is now theirs — absolutely theirs, and let every man feel and act as if an injury done to this property was an injury and affront to himself; let each be the protector of that in which all have an interest. There are around us all the evidences of respect and thankfulness to the donor, and of desire to testify their sense of the benefit he has conferred. Let not then the best and most effectual means of acknowledging this gift be overlooked, but let it be remembered that every donation entails upon the recipient some obligation; and, to show that this feeling exists with that force and intensity which the occasion calls for, let no exertion be spared — no effort be wanting to maintain the Arboretum with vigour and efficiency, in that state of perfection in which Mr. Strutt will delight to see it — and in which, if he does see it, as doubtless he will, he will feel that his gift is appreciated, his wishes remembered and respected, his feelings regarded with that tenderness which he has shown to others, and this cherished object of his care supported and preserved as it would have been by himself; not an easy matter, to be sure, for whatever a Strutt has undertaken he has carried to perfection. (Cheers.) Subscriptions and annual tickets extensively taken will accomplish this object. At present the Arboretum is to be freely opened on two days of the week, but it is to be hoped that the liberal contributions of those who have their own walks, gardens, and places of recreation will procure for their less wealthy neighbours, those for whose benefit this gift was more especially intended, the advantage of having the Arboretum gratuitously opened on a greater number of days, and so carry out, to a large extent, the intention of the benevolent donor. (Great applause.)

Dr. Forester then rose to second the motion of Mr. Alderman Barber, and observed, that if he possessed the highest powers of eloquence, he should consider it a manifestation of bad taste to enlarge on the subject of Mr.

Strutt's magnificent donation, or to occupy the time of the Council after the admirable address which had just been delivered by his friend Mr. Barber. That gentleman always spoke well, and to the purpose; but, on the present occasion, he must say that he had exceeded his usual ability. He entirely concurred with him, and would merely observe that in Mr. Strutt's distinguished act of liberality, which, as far as he knew, had never in these times been equalled, either in this, or any other of the kingdoms of Europe, they had a splendid instance of the right use of riches, the knowledge of which he feared was not so common a quality as he thought it ought to be. The Arboretum would be an inestimable benefit to the inhabitants of Derby, especially to the younger portion of it, and would, he believed, be as conducive to their health as to their recreation. He joined sincerely with the speakers who had preceded him, in wishing that Mr. Strutt might long live to receive the gratitude of the public, and to witness the good effects of his beneficence; and would now beg to second the motion which had just been made by Mr. Barber.

The MAYOR proposed that it should be carried by acclamation, which was heartily responded to with three times three, followed by a flourish of trumpets, and reiterated cheers.

Mr. JOSEPH STRUTT then rose, amid the plaudits of the meeting, and very feelingly acknowledged the vote to the following effect:—"The kindness which you have now, and always have, expressed towards me, has made a deep impression on my mind. If the gift which I have now made to the inhabitants of Derby should contribute to their pleasure and advantage, as I hope and trust it will, I shall be most amply repaid for making it." (Tremendous cheering.)

Mr. JOSEPH STRUTT then said—"I am sorry to trouble you again, but there is one motion which I wish to make, and which will come, perhaps, with more propriety from me than from any other person—I mean a vote of thanks to Mr. Loudon. This gentleman has laid out the gardens in the admirable manner which you have all witnessed; he has given his services on the most liberal terms, on account of its being a *public* work, and he is therefore well entitled to *public* thanks. I beg to move—'That the best thanks of the Council be presented to J. C. Loudon, Esq., for the great judgment, ability, and taste which he has displayed in forming the plan of the Arboretum, as well as in superintending its execution with the assistance of his indefatigable and intelligent pupil, Mr. Rauch; for his valuable services in selecting the plants and trees, and in preparing a complete catalogue and description of the collection; and for having recommended that able architect, Mr. Lamb, of London, to prepare the designs of the Lodges and Pavilions.'"

Mr. STRUTT, M.P., said it was gratifying to him, on that gratifying day, (cheers) to second the resolution. He believed he had been selected chiefly because he was acquainted with the great difficulties Mr. Loudon had to struggle with, and the admirable manner in which he had performed the duties assigned to him. Gentlemen who were aware of the truth of what he was stating would feel that, on an occasion like that, and considering the great talents and high professional reputation of Mr. Loudon, and the services he had rendered the public, some public testimony ought to be accorded to him. He felt sure the Council would join cordially in the vote of thanks to Mr. Loudon.

Carried unanimously and with great applause.

Mr. LOUDON thanked the Council sincerely for the honour done to him. He felt proud to think that his name would in future be associated with that of Mr. STRUTT, as the humble instrument of carrying into execution his noble and munificent design. In the catalogue of the Arboretum, which would be published, and to which Mr. Strutt has referred in his address, would be found the reasons why he had preferred arranging the garden as an Arboretum, rather than in any other form or character; and therefore he would not now enter into details on that subject. He should content himself by observing that the Derby Arboretum would not only serve as a source of recreation and instruction to the inhabitants of Derby and its neighbour-

hood, but as a standard of nomenclature to that part of the country generally; the collection of trees and shrubs being one of the most extensive ever planted, and the whole having been named with a degree of correctness scarcely to be found in any other garden. The Derby Arboretum would also serve to show the advantage of planting with care and attention. Mr. Strutt had had the ground prepared in the best manner, under the able superintendence of Mr. Rauch, so that in three years the plants would attain such a size, as would develope the specific character of each; and in seven years many of the trees would attain the height of from 30 to 40 feet. The soil might have been prepared, and the trees planted, at one tenth of the expense incurred, and they would have looked as well as they did now for several months, but in two or three years they would not have been much larger than at the end of the first year. In concluding, Mr. Loudon expressed a wish that Mr. Strutt might live to enjoy good health for many years, that he might witness the good effect of his munificence on the inhabitants of Derby; and receive honour and respect from them while he lived, instead of their waiting for his death to partake of his bounty. (Great applause.) In making this munificent bequest in his lifetime, Mr. Strutt doubled the enjoyment calculated to result from it, both to himself and the public, and in this latter point of view he considered Mr. Strutt's example as peculiarly worthy of imitation. (Great applause.)

At the request of Mr. Johnson, on the part of the stewards and deputies of the several trades and societies, it was determined that the Council should assemble again on Thursday and head the procession to the Arboretum.

The thanks of the Council were then voted to the Mayor, for having called the meeting, and for presiding on the occasion.

PROCESSION OF THE CORPORATION TO THE ARBORETUM.

At half-past one o'clock, the Corporation, attended by their officers in their robes, headed by a band of music, and accompanied by many of the gentlemen of the town and neighbourhood, some of whom wore white favours upon their left breast, proceeded round the Market Place, Corn Market, Peter's Street, Osmaston Road, and reached the Arboretum soon after two o'clock. Numbers of persons, principally ladies elegantly dressed, had already assembled, and had stationed themselves on each side the principal walk, and on the eminences around, to witness their arrival. The gentlemen then joined their families, and the whole company, amounting to nearly fifteen hundred persons, walked about the grounds admiring its exhaustless, and hitherto undiscovered, beauties. We never remember to have seen so many happy countenances togegether; every one looked pleased; and the garden, promenaded throughout its length and breadth by the beauty and fashion of the neighbourhood, presented a most animated appearance. On reaching the south end of the garden, twelve volleys of cannon were fired, which were continued at intervals throughout the afternoon. At three o'clock dancing commenced in an adjoining field prepared for the purpose, which was kept up with spirit during the whole of the afternoon. Tents were provided for the accommodation of the dancers. The weather was upon the whole very favourable; the morning was beautifully fine, and there were but two slight sprinklings of rain in the evening, which caused a rush to the tents, and, as we heard a lady goodhumouredly observe, occasioned a little variety. About four o'clock teamaking commenced in the pavilion, which was beautifully decorated with flowers and evergreens, and contained portraits of Her Majesty, Prince Albert, and the munificent donor of the Arboretum, Joseph Strutt, Esq. The arrangements for the tea were admirable, and reflected the greatest credit upon the Committee of Management. Notwithstanding the immense number of persons, perfect order was maintained, and every person obtained an abundant supply. The tea was hot and of the best quality, and the sandwiches and other provisions were excellent. A printing press, decorated with a flag, was stationed at the entrance to the garden, and continued print-

ing the address delivered by Mr. Strutt at the Town Hall on the delivery of the Deed of Gift, enclosed in a most splendid gold border, containing the Derby Arms and the family motto. About seven o'clock the company returned, attended by the band as before; vast numbers of persons who had assembled for the purpose accompanied them into the town. On reaching Mr. Strutt's house they halted and sung the "Old English Gentleman," accompanied by the band. They then proceeded to the Market Place, where the national anthem was played, and, after giving a hearty cheer, the multitude wended their way home.

PROCESSION OF THE SECOND DAY.

Thursday, September 17.

In pursuance of the arrangements made by the Committee, this day was appointed for the Celebration of the Opening of the Arboretum by the Working Classes. On Wednesday the numbers that attended (about 1500) of the class which will take both pride and pleasure in supporting these splendid gardens in their present perfect state, gave a pleasing omen that the gift of the munificent donor is duly appreciated; and that they enter into his enlightened views respecting the recreation and amusement of the Working Classes.

The several Trades and Societies entered into the design of distinguishing this proud and happy day, by taking possession of the Arboretum in a splendid procession, with that zeal and earnestness which they evinced on a former well-remembered occasion. Several of these Societies expended considerable sums in their preparations; and one of them, we have heard, incurred an expense amounting to 17*s.* for each member. The day was a universal holiday; and, although the morning was wet, towards noon the sun shone out, and the afternoon turned out remarkably fine and pleasant. Early in the morning the bustle of preparation was observed throughout the town, the bells rung merry peals, and all was joy and gladness. About twelve o'clock the procession began to form in the Friar Gate; and at half-past twelve the Druids wheeled off into Bridge Street, leading the van, the other Societies falling in in the following order, pursuing the route prescribed in the programme, along Bridge Street, Lodge Lane, King Street, Queen Street, Iron Gate, to the Market Place. —

THE LOYAL PRUDENCE LODGE, No. 117., OF THE UNITED ANCIENT ORDER OF DRUIDS.

BAND.
OFFICERS, bearing Dispensation, Mace, &c.
150 MEMBERS wearing green collars, with crimson and white rosettes, medals, &c., and carrying wands, &c.
White Silk Banner, with the name of the Lodge.
Union Jack, with Derby Arms in centre.
Crimson Flag, with Druids' Arms; motto, "United to assist."
White Flag, with Druids' Sacrifice.
Large Purple Flag, with Druidical emblems.
Purple Flag, with figure of Prudence; mottoes, "Let Prudence be our Guide," and "Union is the Bond of Society."
FOUNDERS, in silk scarfs.
PAST OFFICERS, with crimson collars, bound with gold lace.
OFFICERS OF THE ARCH-DRUIDS' REPOSE LODGE, No. 13.
OFFICERS OF THE LOYAL ARCH-CHAPTER, in their silk robes, bearing the precept, mace, &c.
40 MEMBERS wearing crimson velvet collars bound with blue riband, wearing rosettes, medals, &c.

LOYAL DUKE OF DEVONSHIRE LODGE OF THE UNITED ANCIENT ORDER OF DRUIDS.

Banner, crimson ground, with gold edge, "United Ancient Order of Druids," on one side; "Loyal Duke of Devonshire Lodge, No. 143." on the other.
60 BROTHERS, with green silk scarfs tied with crimson riband, and medal of the Order with crimson riband attached.

RECHABITES.

Banner. — Inscription, The Teetotal Society.
BAND.
The VICE-PRESIDENT, with wand and dove.
White Flag, tastefully decorated.
FEMALE RECHABITES, &c.
The Flower of the Flock Tent.

The Officers, with white sashes and pink rosettes.
Members.—White sashes and pink rosettes.
Banner, the Prodigal Son—"This my Son was dead and is alive again, was lost and is found."
On the reverse side, Industry and Sobriety.—Print, "The Happy Man."

"Industry never is pursued in vain;
To the mechanic and the rural swain,
Contentment, health, and temperance it brings,
Prizes more precious than the wealth of kings."

The Grindrod Tent Male Rechabites.
The Officers of the District, with white scarfs and blue rosettes, bearing white wands and white and red rosettes.
The Officers of the Tent, bearing white wands and wearing white scarfs and red rosettes.
The Members of the Tent, &c., with their white scarfs and white rosettes.

ODD FELLOWS.

Five Banners, with scarlet grounds, and the three emblems of Odd Fellowship—Faith, Hope, and Charity.
One Blue Banner, with the same motto.
One White Flag, presented by the Derby Corporation, on the occasion of the coronation of Her Majesty.
Past and Present District Officers, wearing yellow scarfs, aprons, &c. with regalia.
Past and Present Officers of Lodges, with red scarfs, aprons, regalia, &c.
Members, with blue scarfs, aprons, regalia, &c., amounting together to 550; a great many wore white favours, &c.

JOINERS.

Band,
In uniform, black velvet jackets and white trousers, trimmed with gold lace.
Flag.
Members abreast, carrying a variety of tools belonging to the trade.

CHINA MANUFACTORY.

Rich Silk Flag, decorated with festoons of roses on each side. In the centre of one side, a large vase, ornamented with roses, &c., and the words "Derby China Manufactory" written on silver ribands; on the reverse side, the crest of Joseph Strutt, Esq., with the scroll unfolded representing the deeds of the Arboretum: motto, "Deeds are preferable to Words."

Band.
Managers of the Manufactory.

Splendid China Vase, with rich blue ground, enamelled and richly gilt. On one side a view of Chatsworth, the seat of His Grace the Duke of Devonshire, Lord Lieutenant of the county of Derby; on the reverse, a rich group of flowers. Carried underneath a bower of flowers and evergreens.

Females, three abreast, bearing two small Union Jacks.
Large Union Jack.
Workmen three abreast.

Splendid China Vase, with rich blue ground, enamelled and richly gilt; on one side a view of Kedleston Hall, the seat of the Right Honourable Lord Scarsdale; on the reverse, a rich group of flowers. Carried underneath a bower of flowers and evergreens.

Workmen three abreast.

Flag—on one side written "Joseph Strutt, Esq.," encircled with roses, shamrocks, and thistles; motto, "Let Benevolence have its Reward;" on the reverse, motto, "For Ourselves and Posterity."

Workmen three abreast.
Banner, decorated with roses; motto, "The Gift is noble, don't abuse it."
Apprentices three abreast.

PRINTERS AND BOOKBINDERS.

In a Car, neatly decorated for the occasion, and drawn by one horse, was a Printing Press, with two men at work, at which was printed the Address of Joseph Strutt, Esq., on presenting the Arboretum to his fellow-townsmen. In front of the car was a large Blue Silk Banner, with a Columbian Press emblazoned in gold; motto, "The Press, the Palladium of the Liberties of the People—the Terror of bad Governments." From the back part of the Car floated a large British Ensign—"The flag that's braved a thousand years the battle and the breeze."

Members three abreast, with dahlias as rosettes.
Union Jack, surmounted by a long Pennant.
Two Crimson Silk Banners; mottoes, "Noblest Motive, Public Good."
Members three abreast.
Small British Ensign, supported by two Pennants.
Two Secretaries bearing white wands.
Two signal Flags.
Members three abreast.
Two Presidents bearing white wands.

Thirty-six elegant Silk Banners, crimson, blue, and white, bearing various mottoes in gold, amongst which we observed, "May the Press never advocate Oppression;" "Civil and Religious Liberty;" "Union the Bond of Friendship;" "Power to the Merciful;" "Peace, Order, and Happiness," &c. &c.

The Committee.
Two White Silk Banners; device—rose, thistle, and shamrock; motto, "The Constitution in its Purity."
Members three abreast.

Large and splendid Purple and Orange Flag; on one side was the Printing Press, over which was the motto, "Liberty of the Press," and under it, "Dispeller of Darkness." On the other side were Justice and Minerva, and between them was a round garter, on the top of which was a book opened, round which were the words "Printers and Bookbinders:" the mottoes were, "Knowledge is Power;" "Just Laws and Equal Rights;" "United to support, but not combined to injure."

BRUSHMAKERS.

A large Banner, on one side the arms of the Society, supported by a warrior and wild boar, with the Russian eagle and crown, on a cask of bristles, as crest: motto, "In God is all our trust." At the top are two allegorical figures of Britannia and Ireland, and over them is inscribed, "Civil and Religious Liberty." At the bottom is a representation of a boar hunt, and underneath the following inscription, "Independent Brush-makers' Society." The other side is the same, except the top, where, instead of the figures, are two hands joined, with the motto—

"In love and unity may we support our trade,
And keep out those who would our rights invade."

MEMBERS abreast, wearing puce, crimson, and gold rosettes.

RIBAND WEAVERS.

Large Silk Flag, with inscriptions emblematic of their trade, followed by
FEMALES four abreast, wearing white satin scarfs.
Banner—motto, "Thanks to the benevolent Donor."
MALES, walking four abreast, carrying wands, and wearing white and crimson scarfs and rosettes.
Banner; motto, "Health and long life to the generous Benefactor."

PHEASANT FRIENDLY SOCIETY.

OFFICERS with wands.
Flag—Purple and Yellow, "Unity versus Liberty."
Ditto—Crimson and yellow.
Rosettes, white and purple streamers.

CHEQUER FRIENDLY SOCIETY.

Large Banner—on one side, the lion and the lamb lying down in concord, and a little boy holding a riband which encircles the neck of each, and, at the same time, in the act of receiving the olive branch of peace from a dove; motto, "Live in Love, and the God of Love and Peace shall bless you." On the obverse, the Good Samaritan, with the motto, "Be not weary in well doing."
Ten OFFICERS in checked scarfs, with chequer on the breast.
Forty-four MEMBERS in crimson scarfs, with chequer on the breast.

ST. MARY'S CATHOLIC BENEFIT SOCIETY.

CROSS-BEARER.
Flag—motto, "Go and teach all Nations."
PRESIDENT, VICE-PRESIDENT, and STEWARDS.
FEMALE MEMBERS two abreast, and a YOUTH carrying a beautiful Satin Banner.
MALE MEMBERS two abreast, with another Banner.
The Members wore green and white rosettes, with a shield of Constantine's Cross,—motto, "In hoc Signo vinces."

UNITED SISTERS' SOCIETY.

Forty MEMBERS, headed by the Committee, with their regalia, walking four abreast, with crimson and white rosettes and green sashes.
White Banner, with inscription, "United Sisters' Friendly Sick Society, established February 3, 1840."

MECHANICS' INSTITUTION.

DELEGATES with wands.
Large Banner with enriched Shield—inscription, "Derby Mechanics' Institution, established April 11th, 1825; motto, "Knowledge is Power;" trimmed with gold fringe and tassels, and decorated with evergreens.
BAND of MUSIC in a carriage, drawn by grey horses.
COMMITTEE of MANAGEMENT with wands.
Banner, Devonshire Arms. Banner, Arms of Strutt.
VICE-PRESIDENT (Douglas Fox, Esq.), with wand.
HONORARY MEMBERS two abreast.
Portrait of the President of the Institution (Joseph Strutt, Esq.), decorated with evergreens, and surmounted by a White Silk Banner.
SECRETARY with wand.
Large Flag, with double poles and painting illustrating mechanical powers.
MEMBERS of the Institution abreast.
Crest and Coronet of His Grace the Duke of Devonshire, the Patron of the Institution, borne on a cushion of crimson velvet.
MEMBERS.
Silk Banner, Arms of Lord Vernon. } JUNIOR MEMBERS, carrying models of the square, level, &c. &c. { Silk Banner, Crest and motto of the Earl of Leicester.
Circular Medallion decorated with flowers and evergreens, inscription, "Prosperity to the Arboretum;" reverse, "Derby Arboretum, opened Sept. 16th, 1840."

JUNIOR MEMBERS with wands and emblems. { In the centre of the procession an elegant Car drawn by grey horses, fitted up as a bower composed of evergreens and flowers, the interior containing a model of a steam engine, pair of globes, telescope, &c.; and four Junior Members illustrating the study of the various sciences. Decorated with silk banners, with V. A. R., crown, &c., and the whole surmounted by a large royal crown, with the national and union flags at the corners, and a model of the queen's arms in the rear. } JUNIOR MEMBERS with wands and emblems.

Double Silk Blue Pennon; motto, "Seek Truth;" reverse, "Honour Science."
MEMBERS.
Blue Silk Banner emblazoned with the Arms of Evans. Crimson Silk Banner emblazoned with the Arms of Arkwright.
MEMBERS.

Large Flag, with double poles: obverse, Archimedes raising the world; reverse, sculpture, &c., motto, "From Art and Science true Contentment flows."

MEMBERS.

Scotch Streamer. Irish Streamer.

Oval Medallion, and Emblematic Design of Peace, Hope, and Industry.

Sir F. Burdett's Arms on white silk, edged with blue. MEMBERS. Sir George Crewe's Crest and Badge on white silk with crimson fringe.

Portrait of James Watt, decorated with evergreens. Portrait of Dr. Birkbeck, decorated with evergreens.

MEMBERS.

Crimson Banner, V. R., decorated with the National Emblems. Large Union Jack — Streamer.

MEMBERS.

Green Roman Banner; motto, "Industria vincit Omnia." Green Roman Banner; motto, "Sapientia melior Divitiis."

MEMBERS.

Large Flag, with double poles, library with globes, instruments, &c., illustrative of the Institution; motto, "Knowledge diffuseth Happiness;" on the reverse, philosophical instruments, &c., motto, "Science enlightens the Mind."

When the Procession had perambulated the Market Place, it was headed by the Town Council and many other gentlemen, and in the same order proceeded along Corn Market, St. Peter's Street, Osmaston Street, Grove Street, to the Arboretum.

Throughout the whole line of the Procession, the windows were filled with spectators, and the streets crowded with such multitudes as to defy computation. The head of the Procession was three quarters of an hour before it reached the Arboretum, and it was nearly three o'clock before the last Society in the train was admitted into the gardens. The scene was extremely imposing. Splendid flags and banners gaily floated in the wind, over a train which must have extended upwards of a mile in length; the air resounded with the strains of enlivening music, issuing from the numerous bands in the Procession; and the artisans belonging to the several Societies exhibited an appearance which bespoke their self-respect, and their sense of the kind consideration for their welfare of the generous donor of the Arboretum.

THE PROCESSION IN THE ARBORETUM.

As the Procession wound along the spacious walks of the Arboretum, the gaiety of the scene was heightened by the rural aspect of the place. The multitudes soon spread over the grounds, some thronging about the artisans who were preparing a Montgolfier balloon, others engaged in rural sports, and a large company joined in the pleasures of the dance, in a neighbouring field, to the dulcet strains of a well-appointed band. The day was again unfavourable for the balloon, which took fire soon after its ascent, owing to the wind being too high. Another attempt was made, which failed; the second balloon being blown into a tree, where it stuck fast. The most ample provision was made, of the best quality, for regaling upwards of 6000 persons; but owing to the immense numbers in the gardens, it was found impossible to supply their wants fast enough. The spacious tent erected for the occasion accommodated 600 persons at a time. This, on the Wednesday, had been found sufficient for the convenience and enjoyment of the whole party. But on this day, when there were between five and six times as many persons to be entertained, it was impossible to attend to the wants of the multitudes as the Stewards wished; and, in consequence, some disappointment ensued. It should not be forgotten, however, that this was the first time that it was ever attempted, in Derby, to entertain 6000 persons in one place; but it appears nearly 3000 persons more were present than were anticipated. On other occasions the experience of this day will be a guide to the Committee, and enable them to avoid a deficiency which could not be foreseen, and which the Committee deplore. We have great pleasure in stating that, notwithstanding every part of the garden was visited by such immense numbers of persons, many of them young, full of animal spirits, and disposed to fun and frolic, not a single tree or shrub has been destroyed. When Mr. Loudon heard of this almost miraculous instance

of care and personal attention from every visitor, he said — "Such a population is worthy of the noble gift that has been made to them." So we are persuaded, will all other persons say who are desirous to see the Working Classes elevated by the cultivation of their minds, and the respectability of their conduct.

In the evening another, and a successful, attempt was made at the Royal Hotel, to send up a balloon. Never did we witness a more beautiful ascent. Stately as a swan, she sailed the ether, like a "thing of life," and as she gradually towered above the town, her whole form became most beautifully illuminated, while the brilliancy of the colours was greatly heightened by their contrast with the ebon sky. The lads sent after her a hearty shout, that ceased not till she had become a twinkling star, and probably was puzzling the young tyro in astronomy to discover the Greek character by which she was distinguished; or was flattering him with hopes that he had found another planet to be added to our system. A display of fireworks from the portico then followed. Rockets, squibs and crackers, serpents, wheels, and bang-ups flew about in all directions. Men shouted, women screamed, and little lads laughed lustily as each new lighted cracker leaped and banged in zigzags through the crowd — now up — now down — now here — now there — till all its rage was spent, and, like some other animated crackers, it was found to be an empty shell. The stock was soon exhausted by the great demand thus suddenly created for those articles. When the firing ceased, a mass of people lingered round the place that had contributed so much to their amusement, on one of the most general holidays Derby ever witnessed. The holiday, indeed, was so universal, and the excitement so great, that the sick and ailing forgot their pains, or sought relief in the Arboretum. Wednesday and Thursday are the usual days for attending at the Hospital to the out-patients; and, instead of the usual number attending, there were but about one sixth of the accustomed average of patients presented themselves on the morning of these two days.

MARKS OF RESPECT TO THE DONOR OF THE ARBORETUM.

On Thursday, in an early part of the day, a Deputation from the Printers and Bookbinders waited on Joseph Strutt, Esq., and presented him with a Writing-Case, got up in a very chaste and unique style. The outside is covered with violet-coloured Turkey Morocco, which is finished in the most elegant style of bookbinding, with a mosaic gold edge. The inside is lined with rich marone velvet. On one side are Mr. Strutt's arms, inlaid (which is a beautiful specimen of heraldic painting). On the other the following address, most elegantly printed in gold, on a light green ground: —

PRESENTED TO
JOSEPH STRUTT, ESQ.
BY
THE PRINTERS AND BOOKBINDERS OF DERBY,
AS A
TESTIMONIAL
OF
THEIR HIGH RESPECT FOR HIS PUBLIC AND PRIVATE WORTH,
AND AS A SMALL TOKEN OF
THEIR GRATITUDE FOR HIS MUNIFICENT GIFT OF
THE ARBORETUM
TO THE INHABITANTS OF DERBY.

THEY ARE DESIROUS ALSO OF
EXPRESSING THEIR GRATEFUL SENSE OF HIS PRAISEWORTHY OBJECT, BY A PARTICULAR NOTICE OF
THE LIBERAL AND ENLIGHTENED VIEWS
WHICH CHARACTERISE THE GENTLEMAN AND THE POOR MAN'S FRIEND,
IN OPENING
THOSE BEAUTIFUL GROUNDS ON THE DAY OF REST FROM LABORIOUS EMPLOYMENT,
TO FACILITATE
THE WHOLESOME AND RATIONAL ENJOYMENT OF
THE WORKING CLASSES.
1840.

Mr. Strutt's address was also spontaneously got up by the Associated Body of Printers, displaying the utmost perfection of the art of printing; indeed we never saw the beauty of the border surpassed. The speech was printed in gold, silver, and copper in the most perfect manner, and sold by the Printers' Association in aid of the Arboretum funds.

The following Address was also presented to Mr. Strutt, signed by 84 Members of the Loyal Prudence Lodge of Druids: —

"TO JOSEPH STRUTT, ESQ.

"SIR — We, the undersigned, the Members of the Loyal Prudence Lodge of the United Ancient Order of Druids, held at the house of Mr. Thomas Gregory, the Acorn Inn, Queen Street, do beg respectfully to tender our most grateful and heartfelt thanks for that Princely Gift — 'The Arboretum' — to the Inhabitants of this Borough; and to assure you that we shall ever hold in lively remembrance the many acts of Public and Private Benevolence which you have constantly shown to the Working Classes. Wishing you Health and long Life, we subscribe ourselves your grateful and much obliged Fellow-townsmen."

[This Address was unexpectedly presented to Mr. Strutt, while he was sitting in one of Mr. Lamb's beautiful pavilions (see *fig.* 8. in p. 73.), and was very affecting to us, and all present, both in itself and in the manner in which it was received by Mr. Strutt.]

On Thursday evening, a Ball, which was attended by a highly respectable and numerous company, was held by the Members of the Mechanics' Institution, in their splendid Lecture Hall, which was tastefully decorated for the occasion. Dancing commenced about half-past 8 o'clock, and was kept up with a degree of spirit rarely witnessed on any occasion, there being seldom less than 200 couples dancing at the same time. The refreshments, which were provided by Mr. E. Hollingshed, were plentiful and of the best description, and great merit is due to the stewards for their excellent arrangements; for although there were not less than 450 persons present, not the slightest confusion or disorder was experienced, and throughout the whole of the evening the greatest order and harmony prevailed. According to a standing rule of the Institution, the dancing ceased at one o'clock, and, after singing "God save the Queen," the company, highly pleased with their evening's entertainment, retired to their respective homes.

CHILDREN'S CELEBRATION OF THE OPENING OF THE ARBORETUM.

Saturday, Sept. 19.

This day, which was appointed for the Children's Celebration of the Opening of the Arboretum, was the most favourable, with regard to weather, of the three, not a drop of rain having fallen from sunrise to sunset. A few minutes before two o'clock Mr. Joddrell's band entered the garden, playing "God save the Queen;" and soon afterwards the gates were thrown open for the public. It had been very generously agreed by the Committee that on this day all persons should have free admittance, a kindness the public were not slow to avail themselves of. From the time the gates were opened, and throughout the afternoon, numbers of persons of all classes continued to enter the gardens, some entering into the sports that had been commenced in the field adjoining; others promenading the walks of the Arboretum, and all enjoying themselves in some way or other. The children, of whom there were vast numbers, were not long in making themselves at home; after making their acquaintance with the Arboretum by scampering round the walks, they

found their way to the field where the sports of the day were carried on, and leap-frog, thread-the-long-needle, drop-the-glove, and all the old-established and favourite games, were entered into with the greatest possible zest and glee, ever and anon leaving their place in the rank, or in the ring, and repairing to Mr. Hunt's confectionery stall. No one could have seen their joyous faces and buoyant spirits, and have heard their merry laughter without being gratified, at least no one with any kindly feeling in their bosoms. Dancing, too, was kept up with as much spirit as on either of the former days, to Mr. Gover's band; at times as many as twelve sets were dancing together, including several quadrille parties. At one time there were from 2000 to 3000 engaged in this exhilarating pastime; indeed, so far from being satiated, the enjoyment seemed to increase rather than diminish, and we have heard many persons observe that Saturday was the happiest day of the three, some even going so far as to say it was the pleasantest day of their lives. We consider it a good omen of the morality and propriety of conduct of the visitors to these gardens, that notwithstanding the immense number of persons, of all classes, which the low price of admission on the second day, and the free admittance on the third, enabled to be there, not an oath, or a word that could offend the most moral person, was heard. Tea was provided in the Pavilion, under the superintendence of Mr. and Mrs. Hunt, at one shilling each for adults, and sixpence for children. It is not too much to say that the arrangements, as well as the provisions, were most excellent. Six thousand persons visited the Arboretum during the day.

At seven o'clock the national anthem was again played, the whole company, men, women, and children, joining enthusiastically; after which they dispersed, to use the words of a bystander, as "orderly and quietly as if they were retiring from a place of worship." Thus ended this long talked of and much enjoyed CELEBRATION.

THE END.

LONDON:
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New-Street-Square.