INTRODUCTION.

In treating of plant form as a source of inspiration for the designer, one is struck by the abundance and variety of the material; the endless forms and colours of the vegetable world that face him at the outset.

It is not a case of the want of material, but the excess of it, that forms one of the difficulties in dealing with this subject. After having carefully considered the scope and use of the present volume, a careful selection of plant forms, mainly typical of English wild flowers, to be found during Spring, Summer, Autumn, and Winter, has been made with a view to their appropriateness for decorative treatment. One intention of the present book is to form a guide to the Government examinations in memory plant drawing and design.

The requirements of the examiners in the memory plant examination should be thoroughly understood by the student before attempting the paper, as the time allowed does not admit of any superfluous labour.

A careful drawing of a plant, with analytical details, is to be made from memory by the student, before adapting it decoratively to any of the given spaces.

With this object in view, the student should make careful studies from nature of the plants chosen, so that, at any given time, no great difficulty would be experienced in making a drawing from memory. The points to be closely studied in the selected plant are: its decorative possibilities from every point of view; the characteristic growth from the root upwards and outwards; leaf and stalk junctions with the main stem; front, back, and profile of flower and leaf; the growth of buds and their particular forms; all such growths as the calyx of a flower and bracts, should be seized upon and carefully drawn, as they offer great ornamental possibilities for decorative work. The fruit and seed pods of various plants should also be carefully noted, as here again most beautiful forms are abundant; such, for instance, as those to be found in the Poppy, the Nasturtium, the Dandelion, etc. Tendrils of climbing plants and shrubs also offer great scope; and really no more delightful forms are to be found in nature than these tendril forms. They are of great service to the designer in tying and binding together his design, just as they tie, bind and cling to any obstacle in their way in their natural state; but they require very careful drawing and observation in order to give them that nervous, energetic look with which they are so full. A limp-looking tendril should be avoided.

The particular veining of the leaf must also receive attention, as this is a great characteristic of many plants; young leaves and shoots and leaf-buds must, in their turn, be put down in the category of useful forms to be noted and sketched. Some

few sections are also necessary as showing the construction of certain parts, such as the stems, showing whether they be triangular or polygonal or square; but anything like a series of botanical sections is not necessary. The section of certain seed-pods and fruits is sometimes useful, such as the Pomegranate or big Poppy-head, and those of the Pea and Bean tribe.

Having made the memory sketch, then, of the chosen plant, the problem will be, to select one of the given spaces, and suitably fill it with a design based upon the particular plant you have selected. There are several ways of commencing a design to fill a given space. First of all, the student should carefully consider the plant in relation to the space itself; some plant forms lend themselves to certain shapes much better than others. One will compose within a rectangle much better than in a square; another in a square better than in a circle, and so on; but much of this depends upon the ingenuity of the student, and no recipes can be given.

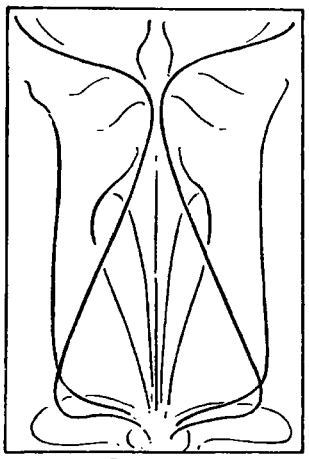


Fig. 1

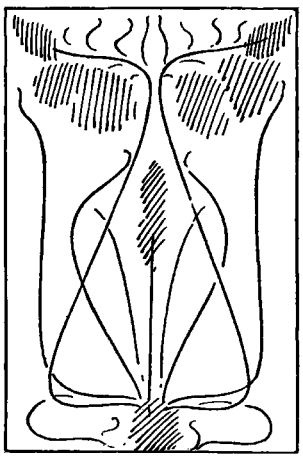


Fig. 2

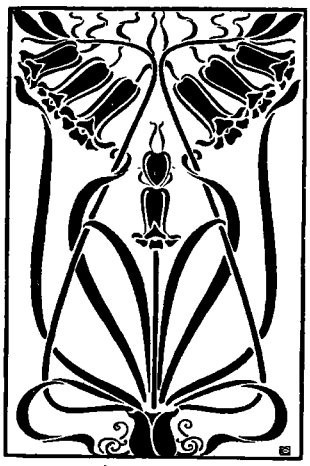


Fig. 3

Having finally settled upon the plant and the given space, a good method is to commence by lightly sketching-in the construction or main lines of the design, getting these to balance each other and to harmonise with the given lines of the space, which are, of course, the controlling lines of the composition. Having decided upon these, suggest with charcoal or soft pencil where the masses or interesting spots will occur, taking care that these also balance; they should generally fall at the most important divisions of the space. Again, the student may begin by placing the masses of the design first, and then connecting them by suitable lines. A third way is, mentally to work out the design before putting pencil to paper; but as this is not usual with students, as it requires long experience to accomplish it, one of the two former ways will be safer and quicker.

The student must fully understand that there is no final word to be spoken regarding the making of decorative compositions. The designer takes that method which comes easiest and most natural to himself; but in most cases it is better and more methodical first of all to decide upon the main lines and masses, satisfying oneself that they balance and harmonise with each other and the lines of the given space.

Having done this, one can then elaborate as much as time and circumstances permit, and good taste and judgment suggest. Figs. 1, 2, and 3, given opposite, will indicate the method of procedure, from the first lines to the finished design.

One or two words might be said regarding the conventionalising of plants. Here, again, at the outset, we are met by an ever-present difficulty in the use of the word *conventionalise*. To begin with, a young student does not understand it in relation to design, and to the older students it presents various meanings. A young student, for instance, does not always grasp the reason why he is not to copy exactly the flower and leaf forms before him, feeling instinctively, and, as a rule, rightly, that they are much more beautiful and ornamental than they will be when he has tortured them into something else, or "conventionalised" them according to instructions. This, of course, is partly true. Therein lies the difficulty, as you cannot conscientiously tell a beginner that his forms *are* an improvement upon nature, even for that particular corner for which he designed them. But what can and must be impressed upon him is, that first of all an ornamental or conventional arrangement of line and mass, based upon the plant, must be decided upon to fill decoratively and harmonise with the given space, before any conventionalising of detail is thought of; in fact, in the process of filling the space the detail is more likely to become satisfactorily dealt with than by what is often no more than a torturing process. To this extent the student will understand that the flower, fruit, or leaf forms of his plant play an important part in the general decorative or *conventional* arrangement of the design, and to that extent are conventionalised or ornamentalised, inasmuch as they take a secondary part in a conventional arrangement. Later he can be initiated, by the assistance of the teacher and examples of conventional forms, into the greater subtleties of and reasons for conventionalising particular flower or fruit and leaf forms. At the commencement it will take all the teacher's energy in preventing his most backward students from making a flower-stem grow in two ways at once, or from placing Wild Roses on a sprig of Holly, and thorns on the Oak. But there are many young students who with very little tuition make excellent designs.

To the student who is more advanced it will not be necessary to quibble over the word at all. He will understand that to take a group of flowers or leaf spray, direct from nature, and place it in a given space without any modification, is neither design nor nature, and a violation of both, because he has not considered his plant in relation to his space, it bears no relation to it whatever, no invention, no artistic feeling was in the least necessary in order to do this. The result is therefore disastrous. But, again, the extent to which an artist may conventionalise natural forms, be they animal or floral, depends *almost* entirely upon the taste of the artist after certain conditions have been fulfilled. I say *almost* advisedly, because he may select a very naturalistic treatment for the decoration of a building, which, in certain parts, would most likely call for a more severe or more conventional treatment. He will understand that after having determined his arrangement with regard to the space at his disposal, the degree to which he carries his conventionalising is left entirely with him—students should not at all be hampered here; but as a rule they err on the side of naturalness—he may conventionalise his forms out of all semblance to particular natural forms like some of the early Gothic foliage (fig. 4), or he may depart very slightly from the particular

ways and forms of nature, like the decorated Gothic forms (fig. 5). In deciding this he is entirely within his own rights, and the resulting general effect either justifies or

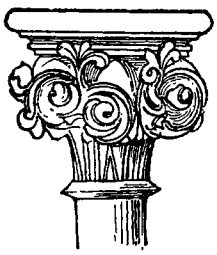


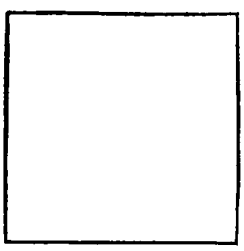
Fig. 4 Early English Gothic. 13th Cent.

Fig. 5 Decorated Gothic 14th Cent.

condemns him. We may say, then, that to conventionalise, is to seize upon the decorative qualities of growth, flower, fruit, or root forms, and make ornament out of them, or emphasise them so that they become part of a general harmonious scheme, ignoring as a rule all natural accidents, such as the number of wrinkles in a Poppy petal, or the upward or downward turn of a Rose leaf, or the number of revolutions in a Vegetable Marrow tendril, or in the spiral of a shell.

The process may be further illustrated by the following diagram. Here we have a given space, say a square, and a given Rose flower and three Rose leaves. The problem is to *design* them into the square so that they fill it pleasantly, leaving no awkward spaces. At present it will be seen that they bear no kind of relation to each other, the square has no relation whatever to the floral forms, or the floral forms to the square; they are three distinct units from which we are to make a harmonious composition. To bring them all three into relation—that is, so that leaves, flower, and square reflect and influence each other—may be done in somewhat the following manner (*see* fig. 1, pl. 1.).

Fig. 6



In this figure we have a simple diagonal arrangement of the three elements which fall pleasantly in the square form, without violating any principle of growth. The leaves fit into the corners and arrange themselves along the sides of the square without any awkward spaces intervening, while the flower is made the centre of attraction and central *mass* of the design.

Of course, all this is very simple when you are dealing with simple elements, but exactly the same principles hold when you are dealing with more complex arrangements. You might, for instance, in this particular case, multiply your elements by making your space larger, and including the stems, root, bracts, buds, and fruit of the plant, uniting them all into one arrangement. You have increased your difficulties by increasing your forms, but not your principles. Similarly, if your design be for a ceiling, and your elements the human figure and lower forms of animal life,

beyond the designing of the figures and animals to fit into their allotted spaces, the only other great influence on your design would be the materials in which your design was to be executed—whether flat, coloured, or in relief. But this opens up another great question in design which it is not the province of this book to enter into, and which would serve no useful purpose in an elementary treatise.

But to return to our three elements. In fig. 2, pl. I., we have substituted a circle for our square, thus altering one of our elements. The altered space then brings about an alteration in our design, as the student will see at once that the same design will not do for square and circle alike. In the case of the first the outlines of the square are the controlling lines of the design; in the second case it is the same, but the controlling line this time is the circumference of a circle. The other elements remain the same. The flower remains as before, though not necessarily the central mass, the chief difference being in the arrangement of the leaf forms, which are made to take a somewhat curved line in order to echo the outline of the circle and compose with it. Sufficient has now, I think, been said to show that, no matter what the space is to be filled, the fundamental principles are the same.

There are one or two other principles illustrated in these two little diagrams about which a word or two might be said. Taking the square design again, besides the principle of *subordination* which is illustrated in the fact that the internal arrangement of lines and forms is subordinate to the lines of the space, there is the principle of *radiation* from a centre, illustrated by the leaf-bearing lines running towards the centre of the flower or square. There are several forms of radiation, all of which are to be found throughout nature. An example or two will suffice. If you take an ordinary scallop or cockle shell (fig. 3, pl. I.), and note the direction of the lines upon it, you will see that they all radiate to one point. This is an instance of radiation from a point or radiation to a point.

The radiation of the main ribs in the leaflets of the Horse Chestnut (fig. 4, pl. I.), give you the same form of radiation. The radiation of the feathers in a bird's wing is *towards* a given point without actually reaching it (fig. 5, pl. I.). Then there are radiating tangential lines, either to a straight line or a curved one, sometimes called tangential curvature; this is most generally illustrated by the springing of leaves from a stem or the boughs from a tree trunk—a familiar illustration of it would be the springing of the flower-stalks of the Lily of the Valley (fig. 6, pl. I.), or the Wild Hyacinth from the main stem—that is, they run down with, and do not cut into, the main stem. This is called radiation to or from a given line. Another principle, which is also illustrated in both the designs, is that of *balance*; but before describing the principle of balance it will be better to give an illustration of the principle of *symmetry*, which is an analogous principle. A symmetrical composition is simply an arrangement whereby the first half of your design is turned over and repeated on the other side of a centre line, real or imaginary, thus making both sides exactly the same, as in the simple example of Greek ornament (fig. 7, pl. I.), or as you may see in the circle design, where the three leaves on a curved line are repeated exactly or reversed, on the opposite side of an imaginary line. Now if you maintain the balance of line and mass, but slightly alter the detail on one side of your design, you get a balanced arrangement without absolute symmetry, that is you get variety introduced as a new

element. The diagram given in fig. 9, pl. 1, of a piece of Renaissance ornament is a very good example of balance. In any design you must have one of these two principles, either absolute symmetry or balance.

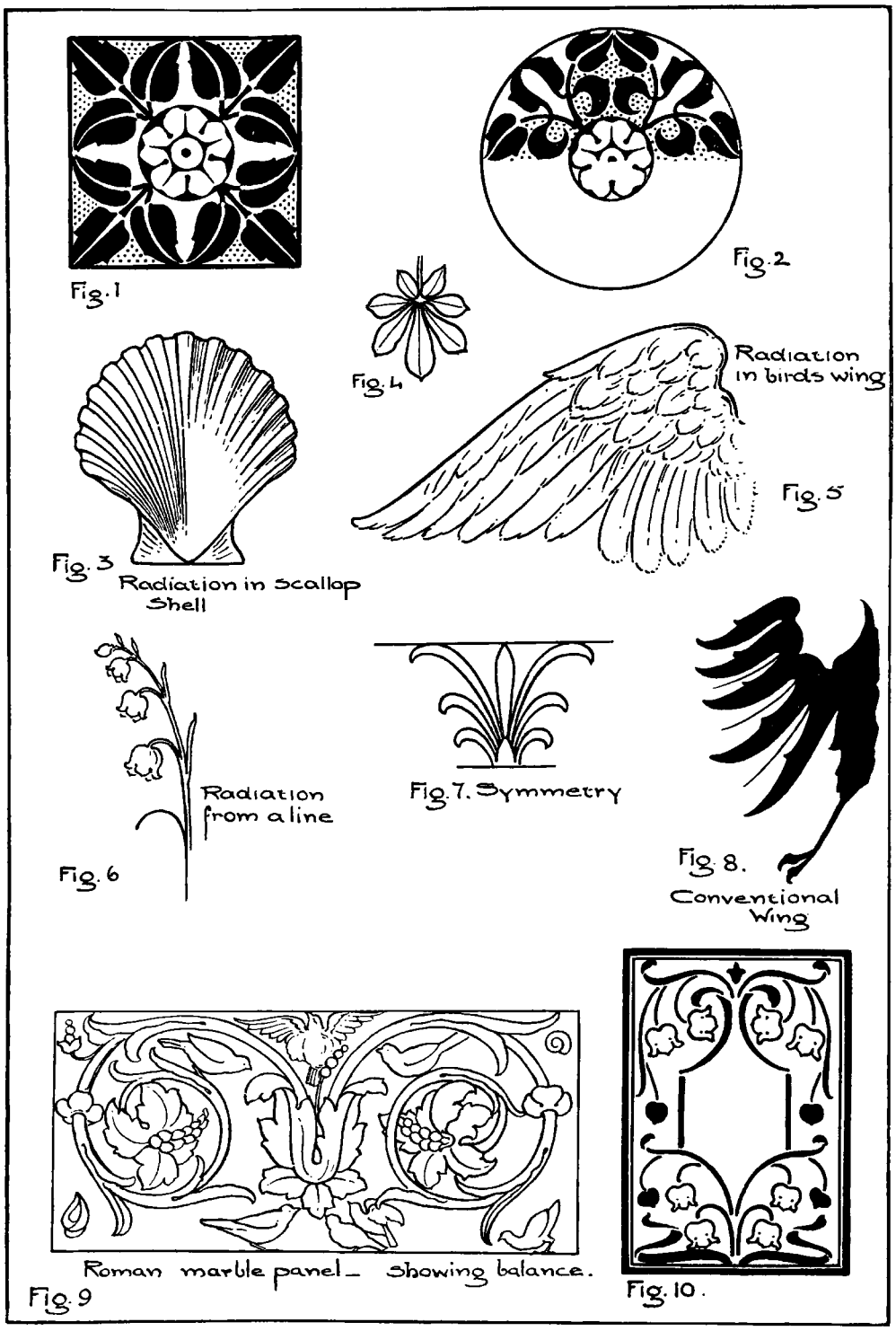
The principles of *variety* and *contrast* are also illustrated in figs. 1 and 2, pl. 1., by the pattern occurring as black upon white or *vice versâ*, or by the introduction of a spotted background. Contrast may be obtained in another way—by leaving in your design an empty space upon which the eye may rest, but such space must form a feature of the design and not be merely an accidental vacant space; it must be specially designed like the rest. The little design shown in fig. 10, pl. 1, will explain what is meant, the vacant space in the centre of the panel forming a portion of the design and at the same time a rest for the eye. One other principle might be mentioned, and that is the principle of *proportion*. It is somewhat a matter of personal feeling how far one may go in keeping the proportion between, say the flowers and leaves of one plant in the same design as it exists in nature, or if two plants be used in the same design, how far it is necessary to keep the proportion between them that we find in the plants themselves. If the space to be filled is first divided into separate divisions and two plant forms are to be used, one to be occupied by a design on one flower and the remaining space or spaces by a design on the other, possibly being used as a background to the first, then it is not essential that the strict natural proportion between the two plants should be adhered to; but if the two plants form part of the same design in the same space, then good taste would seem to suggest that their relative natural proportions should be borne in mind. Similarly, with regard to the proportion between the flowers and leaves of the same plant, nature here again will be a safe guide, and a design will generally be of a more refined character where this proportion is observed than where it is ignored. But again, in this case, as in many others, the personal element of the student counts for much, and this is a case where some young students seldom make a mistake, while others require constant watching and warning lest they surround a Hawthorn blossom with leaves of gigantic proportions or a Wild Rose form with microscopic leaves placed on hedgestakes.

There are other principles which it is necessary the student should be familiar with, but which cannot now be entered into here. Sufficient has been said that will, by the aid of the class teacher and by the persistent practice of the student, put them on a fair way to become designers.

First of all, the ability to draw any plant placed before him fairly accurately; then a knowledge of the fundamental principles of design; and lastly, the constant practice of applying the material at hand to spaces of varying shapes, will be all that is necessary for the student at the present stage of design.

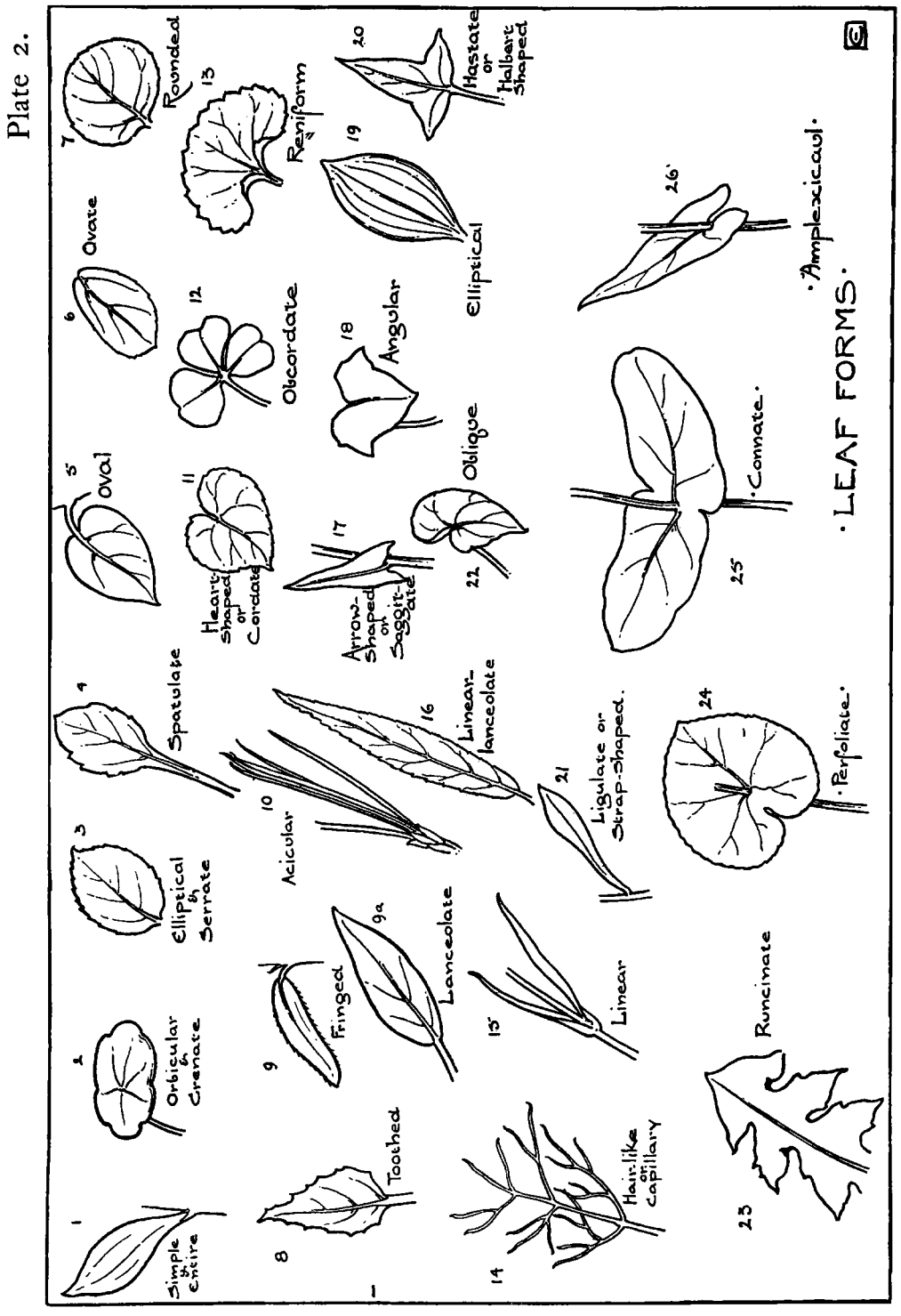
The question of the underlying principles of ornament is being further dealt with by the writer in another form, and according to the present syllabus of the Department. Obviously, this is too great a subject to do justice to in the present work, which aims mainly at placing before students material and the manner of collecting material from nature, and certain fundamental rules for its application to decorative purposes.

Plate 1.



LEAF FORMS. Plate 2.

On Plate 2 a number of different leaf forms occurring on different plants is given. The variety that exists also in the way they are notched or toothed along their margins is illustrated, and the various ways in which they attach themselves to the main stems. It must be borne in mind that the endless variety of forms to be found in leaves is due to the degree of development to which the leaf has been carried; all leaves, to begin with, are similar in form, but some are arrested in their growth earlier than others, and undergo less modification on that account thus becoming *simple* and *entire* leaves, or other simple forms: degree in development also carries us to *decompound* and *supra-decompound* leaves. The various names attached to the illustrations are explained in the list of botanical terms. A reference to fig. 1, pl. 2, and to the leaf of the Columbine will explain the difference between a *simple* and *entire* leaf and a *decompound* leaf. Fig. 1 is entire because its edge is not notched or divided in any way. Fig. 2 is *orbicular* in form, and its edge is *crenate*. It is also called *peltate*, from the way the stalk is attached to the underside of the leaf, from which point the veins radiate. Fig. 4 is a Wild Rose leaflet, is elliptical in form and its edge is *serrate*. Fig. 4 is *spatulate* in form and likewise serrate. Fig. 5 is *oval* or egg-shaped, and *entire*. Fig. 6 is *ovate* or inversely egg-shaped, with serrated margin. Fig. 7 is another rounded leaf, with serrated edge. Fig. 8 is rather an elongated heart-shape, with a *toothed* edge. Fig. 9 is *oblong*, with a fringed edge or margin. Fig. 10 is the Fir-tree foliage and is called *acicular*, or needle-shaped. Fig. 11 is *cordate* or heart-shaped, and serrated. Fig. 12 is *obcordate*, or inversely heart-shaped. Fig. 13 is *reniform* or kidney-shaped and serrated. Fig. 14 is an example of the *capillary* or hair-like form. Fig. 15 is the *linear* shape, seen also in the leaves of grasses. Fig. 16 is the *linear-lanceolate* leaf of the Willow. Fig. 9*a* is lanceolate. Fig. 17 is arrow-shaped or saggitate, and is also an example of the sessile attachment to the stem. Fig. 18 is angular in form, and divided or lobed in regard to its edge. Fig. 19 is elliptical also and entire; it also illustrates *parallel* venation as distinct from net-veining, as seen in the leaves of the Ivy or Wild Rose, etc. Fig. 20 is *hastate* or halbert-shaped, and three-lobed. Fig. 21 is strap-shaped or *ligulate*, and entire. Fig. 22 is an *oblique* heart-shaped leaf, such as the Begonia. Fig. 23 is called *runcinate*, owing to the form and direction of its marginal divisions. Fig. 24 shows a form of attachment to the stem which is called *perfoliate*. Fig. 25 *connate*, as in some varieties of the Honeysuckle. Fig. 26 is *amplexicaul*, the base lobes of the leaf passing round and beyond the stem.



B 2

BLACKBERRY, or BRAMBLE. Plates 3, 4, 5.

(*Nat. Ord. Rosaceæ. Rubus fruticosus.*)

The Blackberry is a conspicuous plant or shrub in English hedgerows, which is rich in suggestions to the designer. Its flowers may be seen from July to September, varying in colour from white to pink. The inflorescence is what is known as a compound panicle; the flowers growing in little groups at the ends of short stalks which branch from the main stem. Petals five and six, with the corresponding number of sepals forming the calyx. Stamens numerous. The fruit may be had from August to October. The leaves grow alternately with, as a rule, five or three leaflets, each on a separate short stalk, and are often lobed. Bracts and stipules grow at the junctions of the flower and leaf stalks with the main stem. One variety of this shrub is called the *Dewberry*, in which the sepals clasp the berry. Buds, flowers, and fruit may be found on the same plant at the same time.