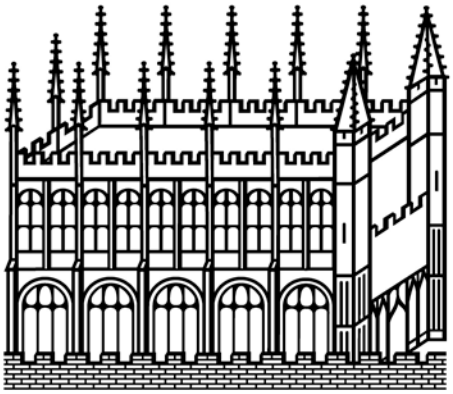


FRANK HOWARD'S

SCIENCE OF DRAWING.

PART I.—TREES.

3rd

15V

A. M. Phillips

A

THE SCIENCE OF DRAWING

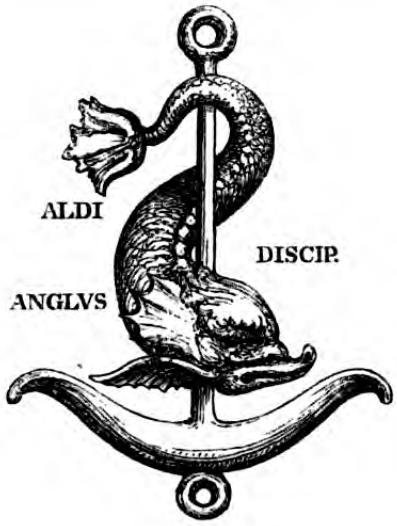
BEING A PROGRESSIVE SERIES OF THE CHARACTERISTIC FORMS OF NATURE

PART I—TREES

" Learn to sketch before you attempt to finish."
MICHEL ANGELO.

BY FRANK HOWARD.

AUTHOR OF THE " SKETCHER'S MANUAL," " COLOUR AS A MEANS OF ART," " THE SPIRIT OF SHAKESPEARE," ETC. ETC.



LONDON
WILLIAM PICKERING
1839

And foorth they passe, with pleasure forward led,
Joying to heare the birdes sweete harmony,
Which, therein shrouded from the tempest dred,
Seemd in their song to scorne the cruell sky.
Much can they praise the Trees so straight and hy,
The sayling Pine; the Cedar proud and tall;
The vine-propp Elme; the Poplar never dry;
The builder Oake, sole king of forrests all;
The Aspine good for staves; the Cypresse funerall;

The Laurell, meed of mightie conquerours
And poets sage; the Firre that weepeth still;
The Willow, worne of forlorne paramours;
The Eugh, obedient to the benders will;
The Birch for shaftes; the Sallow for the mill;
The Mirrhe sweete-bleeding in the bitter wound;
The warlike Beech; the Ash for nothing ill;
The fruitfull Olive; and the Plantane round;
The carver Holme; the Maple seeldom inward sound.

SPENSER. FAERIE QUEENE.

C. WHITTINGHAM, TOOKS COURT,
CHANCERY LANE.

ADVERTISEMENT.

In the Sketcher's Manual, has been given the Science of Picture-making, in black and white, or, as it is technically termed, in Chiar Oscuro: the end to be obtained, and the means of attaining it. In Colour, the means of producing pictures in colour, have been afforded. The present series of works has been undertaken with the view of providing materials for those who wish to add to pictorial qualities, the individuality of Natural Character, and with the view of affording to those who desire the power of delineating objects, without attempting to convert the representation into a picture, a sound and simple method of instruction in the art of Drawing, upon the only solid basis of Science.

The Science of Drawing consists in the knowledge of the forms, in representing

which, consists the Art. Hitherto, in the education of the draughtsman, whether as an amateur, or as a professional man, it has been the custom to devote attention solely to the Art, and to leave the Science to intuition or to chance; although Sir Joshua Reynolds, whose works do not shew transcendent mechanical power, but evidence frequent vacillation of purpose, or intention, declared that the difficulty was not so much in doing what was right, as in knowing what it was right to do. This, though tacitly admitted by all who are competent to judge of the comparative difficulty, has never been acted upon in any published works of instruction. The deficiency it is the endeavour of the Author to supply.

For the benefit of Amateur Sketchers, the forms of the principal trees have been given, in the method advised in the Sketcher's Manual for beginners, viz. by rubbing in a mass of dark, extending it from the centre until it is made to assume the requisite shape. And this method may be adopted by the beginner who desires to become a draughtsman, until the characteristic forms are learned; but as

soon as they are distinctly understood, the course of practice recommended herein, should be rigidly adopted and enforced.

In the Frontispiece, a Spanish Chesnut has been represented, of which, one branch has been denuded of its leaves on the side next the spectator, to show how the ramifications must be traced from the root to their extremities, and that they gradually diminish in thickness from their source to their extent.

CONTENTS.

PRELIMINARY REMARKS.

It is unnecessary to enlarge upon the importance of Drawing as a means of communicating ideas. It has been tacitly admitted, if not openly asserted, in every age, and in none more generally than in the present.

In Egypt and in Mexico, Drawing was a language. There can be little doubt that it preceded the written alphabets, as being the readiest means of transmitting or recording ideas. And even now, amidst all the extension and refinements of modern tongues, there are few persons who do not have recourse to signs, or such drawings as they are capable of executing, in explanation of their words. The finger dipped in wine has described the battle and the siege. Launce cannot recount the hardheartedness of his dog to his own satisfaction till he has personified his mother by his shoe.

It tells a chapter at a glance, and throws whole pages of a narrative into a single view. Forms, situations, proportions, and character, actions and passions, are alike by Drawing condensed, distinguished, and made intelligible in a moment. Ideas, experience, facts, may all be described; but scarcely more intelligibly by words than by forms,—in many instances decidedly less so. Machinery, whether new inventions, or such as have been long established, cannot be fully explained without Drawing, in addition to description. But in every thing that regards form, as of animals, plants, &c. or the general character of a country, or its inhabitants, Drawing is indispensable to writing, whilst it is sufficiently explanatory alone. Nothing but abstract reasoning is confined to writing.

It should therefore surely form a part, and a principal part, of the education of every one. Reading is first taught as a means of acquiring knowledge; then writing as a means of diffusing it. Drawing should be taught conjointly with the latter to the same

intent. But the difficulty of attainment is the alleged objection. It will be the endeavour of the present work to shew that the objection is unfounded; that the difficulty supposed does not exist.

Hitherto Drawing has been looked upon as a fine art, attainable only by those whom Nature has endowed with what is designated taste and genius. The greater portion of mankind are prevented making any attempt to acquire a power, to the utility and desirable qualities of which they all bear testimony, by the idea that it is entirely beyond their reach; and this idea has been confirmed by the want of method, or rather by the ill-digested method of instruction. They are induced to believe that all proficients in Drawing belong to a more gifted class of the creation; that Nature has placed insurmountable barriers between them and the object of their desire. They are alarmed at the outset with technicalities, rarely accompanied by explanation. Every difficulty is put in their way, increased tenfold by the mist of obscu-

rity, and headed by the most formidable and terrorising terms; Anatomy, Geometry, Perspective. They are required to begin with details, which at the same time are acknowledged to constitute the greatest difficulty of the Art; with heads, hands, and feet, which are considered the test of the skill of the Master. Raffaelle, in his letter to Count Castiglione, respecting the Galatea at the Chigi Palace, has tacitly admitted that he could not draw a beautiful female head; (for whatever may be the merit of the picture, the head of the Galatea is indisputably not beautiful;) and he assigned as a reason, that he could not *find one* in Nature; but to this Mengs adds, that he could not find one among the relics of Grecian Art. And notwithstanding the universal taste for portraiture in modern times has ensured better drawing of heads than of anything else, no painter had produced more than a broad approximation to beautiful features until our own Lawrence shewed how much minute detail and exquisite form are to be found

therein: in which respect he is so much in advance of his contemporaries, that few are able to approach his minute delicacy of drawing; and his works are the most difficult of any to copy or to engrave from. Yet these are the subjects selected for the beginner; and he is expected to be able to succeed, where the greatest Masters of the Art have constantly failed; or, he is directed to an endeavour, in which he can have no hope of success.

It might easily be shewn that this discouraging course of procedure is wholly unnecessary to the acquirement of Drawing as a Fine Art. But at present it will be sufficient to point out that there is a much more simple and much more satisfactory method of teaching Drawing, as a means of communicating ideas by the representation of objects, which will prove to be far less difficult than is usually supposed.

Any one who can write can draw. For he can form a letter slowly, and he is then drawing the letter. He is enabled to do thus

much from a perfect acquaintance with the form of the letter. The power of Drawing, therefore, resides in the head, in the intellect, not in the hand; and it would require no great stretch of imagination to conceive that, if the party were equally well acquainted with any other forms as he is with the forms of the letters, he would be equally able to draw them, at least sufficiently well to convey the impression intended. For in this class of Drawing, the objects to be represented are rarely such as require *minute* accuracy; and the eyes to which they are addressed are rarely able to appreciate that accuracy, if attained. A strongly marked and general idea is required for general comprehension. To this may be added as much detail as the knowledge of the draughtsman can supply; but this is the first and indispensable qualification of Drawing as a means of communicating ideas—that it should convey a distinct and intelligible impression: for this purpose it must possess Character.

Character is that quality by which one

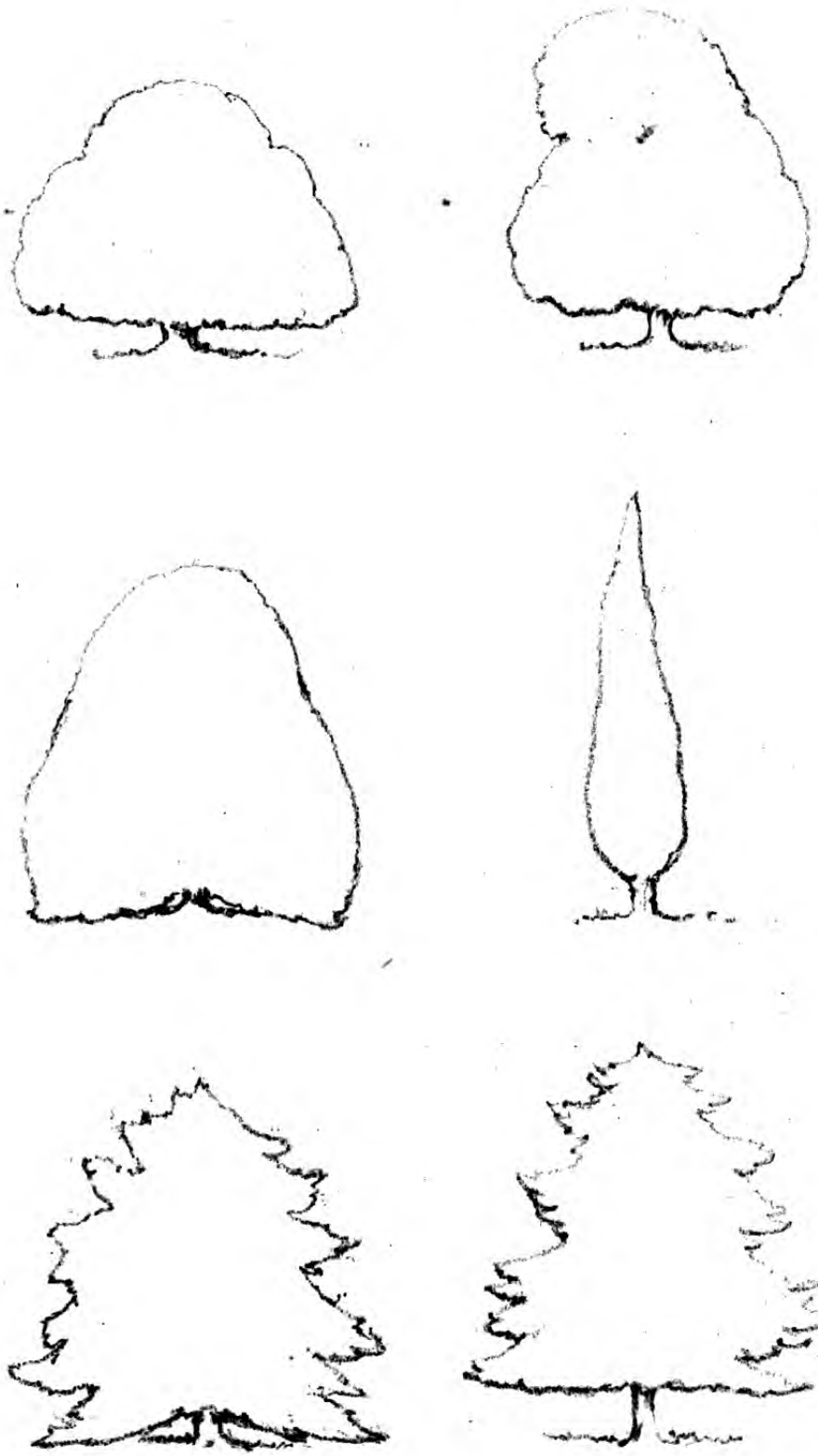
object or circumstance differs permanently from another; whether the distinction be in size, form, colour, or any other property. Or it may be extended thus:—that quality in objects or circumstances, by which a distinct impression, or impression peculiar to each object or circumstance, is produced on the mind.

There are no two objects of the same kind exactly alike in every respect; but there is a specific character belonging to each class, by means of which we may be enabled to analyze and fully appreciate every individual form in Art or Nature.

It is an old observation that in one sense of the term there is no such thing as positive size. We judge of every thing by comparison. What a little pony! What a large rat! What a long nose! What a short man! No one for a moment supposes that the *little* pony is *less* than the *large* rat, though it were the largest rat that ever was seen; nor would any one have an idea that the *short* man was *shorter* than his own *long*

nose. But the ideas excited are, that there is a pony smaller than the usual size of such animals; a rat larger than is generally seen; that the man is below the usual stature; and the nose longer than ordinary. There is therefore some tangible specific characteristic with which comparison is made in the foregoing instances; some general size for a pony; some common size for a rat; some usual length for a nose, and some standard for the height of a man. This is so evident and so universally acted upon, that to some it may appear trifling to notice such truisms; but upon these facts must be raised the means of instruction in Drawing, which will not be the less likely to be sound, that it has for its foundation incontrovertible and undisputed truths.

From the examples cited above, it will be observed that there are *Characteristic* forms of every *class* of objects, which are so well and so universally known, though they have never been strictly *defined*, that the *Character* of the individual objects is immediately ap-

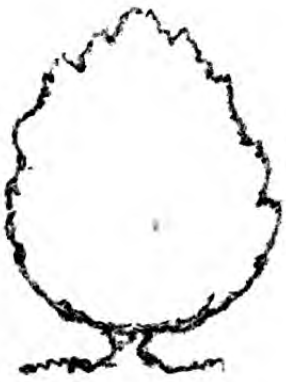


preciated by means of a silent comparison with the *Characteristic* of its class, and it is *described* and *distinguished* by the *variations* therefrom. The Characteristic of the class is never lost in the Character of the individual, although we have heard of very singular variations, such as a pig-faced lady, and Bucephalus who obtained his name from his head resembling that of a cow; but these variations are all within certain limits, and are confined to particular parts.

If, therefore, the Characteristics of each class of objects be pointed out, and the attention of the student in Drawing be directed to the particular parts, in which the variations will be found that give the peculiar Character to the individual, he will know what to look for, and will have no difficulty in instantly appreciating the form of any object that may be placed before him. And having done this, very little tuition will be required to enable him to represent it.

The roughest rudest general Characteristics should at first be attempted; drawn

with decision and without correction. The details should be added as the hand acquires facility, and the head knowledge to direct it. By this method, precision and power of description will speedily be attained, and intelligible drawings are ensured from the first, which will gradually increase in explanatory detail. The first are addressed to all, and fully to be comprehended by all; but the last, though equally intelligible to all, will only be fully appreciated by the more minutely learned in the objects represented. They will gradually require more and more knowledge in the observer, to judge of the skill displayed by the draughtsman, but they will never lose a particle of their effect on the world at large. The importance of this will be felt by every timid beginner. There is a story told of the great sculptor Flaxman, who when a boy, began to draw, according to the old established system, detached eyes and noses, that he took some of his productions to Sir Joshua Reynolds, and was mortified by the enquiry whether the proposed eyes were intended for *flounders*.



Upon this principle, the present system of education in Drawing has been constructed, and notwithstanding many old notions and prejudices have to be combated, before the public will give credence to the assertion that Drawing is easy, and that the difficulties hitherto found and encountered, have been raised by want of consideration in the competent, or by policy in the incompetent masters, the prejudice must give way to conviction, and the assertion will be found to be true.

"Lightly come, lightly go," is a favorite piece of artillery, brought by those bred in the old schools, to play against the facilitation of the acquisition of any branch of knowledge. But the slightest consideration of the present plan of instruction, will make it evident that knowledge and power thus acquired can never go. We might as well expect a child to forget its mother tongue, because it acquired it insensibly, and in fact in the very course now proposed as the method of learning to draw. The object is the same in both cases; why should not the course

of instruction be the same? The child learns to communicate ideas in words, by commencing with the endeavour to express a sense or meaning: the grammatical construction is left to take its chance; the very words themselves are allowed to be distorted in any way most easy to the infantine pronunciation. The niceties of spelling, parsing, &c. are reserved for after years. Imagine for one moment, if such a thing were possible, a child commencing with a regular course of grammar; when would it be able to utter a sentence? If such a supposition involves an absurdity in the communication of ideas by words, why should it be considered more applicable to the communication of ideas by forms?

On the other hand, in the natural method, the student in form has a manifest advantage over the student in letters, in this respect:— The principles of grammar are so strictly defined and limited, that the slightest deviation becomes an *error*, and the child *cannot* express itself *correctly* for some time. But

as the nature of any object, and the class to which it belongs, can be determined when it is only just within the scope of vision,—when it is so far off that it is utterly impossible for any eyes to discover the exact outline ;—the Characteristics with which it is proposed that the student in Drawing should commence, do not depend upon minute exactness, and there is little difficulty in his producing *correct* representations from the first, and avoiding *error* altogether.

This will be more evident upon a consideration of what is requisite to constitute correctness.

Of those objects which have what may be termed internal motion, such as animals, or trees, it is obvious that no fixed form can be considered exclusively correct. For the leaves may be moved by the wind in a variety of ways, each furnishing a new shape : the muscles may be temporarily excited more or less, and to the same extent produce a variety of forms. More or less light will produce different appearances. To this it may be

added, that in viewing any object, the circumstance of the spectator being the slightest degree higher or lower, nearer or farther off, will make a material change in the appearance. The positive form of the individual object cannot be determined, the actual situation of the observer cannot be determined; how then are we to judge of the correctness of the representation? Again, there are numberless instances to be found of drawings, which in one sense of the word are perfectly correct, but which do not appear so: place the observer in exactly the same situation, and under exactly the same circumstances, as the drawing was made, and the object will appear as it is represented: but unless the intention be to point out the peculiar appearance of the object under certain circumstances, the drawing cannot be considered correct. So that there is a standard of correctness, by which we may judge of good and bad drawing. Let us endeavour to ascertain in what it consists.

A pupil shall make a drawing within

almost a hair's-breadth of perfect accuracy ; the lines shall be firm, and the form most carefully defined ; nevertheless it shall be pronounced ill drawn ; whilst the master shall make the rudest sketch, without one single line correct, and yet it shall appear and be approved well drawn. The inexperienced shall attempt the most beautiful figure he is able to design, but not *quite* succeed. The proficient shall design a mass of deformity, such as the Lame Beggar in Raffaelle's Beautiful Gate of the Temple. That which is so nearly beautiful, and with such trifling defect in form, shall be less satisfactory than that in which the defect is obtruded. The intended monster shall appear less incorrect, or more true, than the attempted beauty. And in caricature, the skilful are able to take the greatest liberties with the human form, and yet the drawing is good; whilst the bungler shall avoid almost all defect, and yet be pronounced the most deficient.

The cause of this will be, that the student's works shew a want of intention, and want

of knowledge in what parts defects are admissible, and in what parts correctness is indispensable; in other words, what is absolutely requisite to preserve the Character. Correctness consists in conveying the impression intended;—bad drawing is the deficiency of the Characteristic.

Thus we see that by the present method of instruction, the attainment of Drawing is not only rendered a matter of great facility by the adaptation of the examples to the powers of the student; but every step of the progress is impermeably established on the surest basis, and the attention is riveted from the first to the last, upon what is the essential requisite of correctness;—while at the same time, a style of representation is acquired, that is very superior to the mere mechanical power of copying individual objects when placed before the draughtsman, which is all that can be attained under the common method of tuition. The study of details has a tendency to manner: the study of Characteristics is the foundation of style.

CLASSIFICATION

OF THE CHARACTERISTICS OF ALL OBJECTS.

The first point to be attended to, is the consideration of the characteristics of each species of the productions of nature, or art, so as to ascertain in what they consist; and to define them in such a manner, that the student shall be able to appreciate them, without going through so extensive a course of examination, as looking at even one individual object of every kind. This will be done without much difficulty, by means of classification.

The primary classification of the productions of nature, will be the obvious division into the vegetable, animal, and mineral kingdoms. These again will be subdivided into trees and shrubs, &c.; human beings,

quadrupeds, birds, &c.; with some other divisions, that afford facility to the student in storing his mind with this branch of knowledge. But it will not be necessary to carry this subdivision very far: for when the general character of any one species of animal is clearly understood, comparison, with very little trouble, immediately gives all the others: so also with trees and vegetable productions; when the characteristic form of any one has been well studied, the others all arrange themselves as gentle and gradual varieties of the same class. Nor will it be necessary in the present work, to do more than point out the characteristics of trees, quadrupeds, birds, and human beings. These, with the explanations appended, will enable the spectator to estimate correctly what he sees in any other objects, whether of art or nature; and to arrange his observations so methodically, that they can scarcely be forgotten; the true instruction how to observe: the real education of the eye.

The intention of applying to an instructor,

is to be taught what has been discovered during the whole practice of the art. Life is indeed short, and art is truly long, if every student is to learn for himself, what has resulted from the repeated attempts, and repeated failures that have been made, during the period the art has been practised. But the fruit of the experience of ages may very easily be communicated, and the art will then cease to be long. This should constitute the difference between learning and being taught, though it is scarcely sufficiently considered in that light at present. The following gleanings to that intent, have been arranged in the order calculated to afford the greatest facility to the student.

For those objects, of which the outline is formed or governed by the greatest number of unconnected small parts, are, in consequence, most subject to variation: and, as they cannot be subjected to such strict definition of correctness, as those composed of fewer parts forming one connected line, they are much the most easy to represent. Thus trees and

flowers are the easiest objects for a beginner; for a bough, or a leaf, may project more or less, without in any way impairing the correctness of the drawing. Next to these, animals whose anatomical forms are rendered indefinite by the length of their hair; and so on progressively as the form becomes more definite, to that of the human figure, in which more strict adherence to certain limits, conventionally settled to be correctness, is required, than in the representation of any other object. This, perhaps, results from the greater capability of general observers to detect an error in the representation of a form they are accustomed to study more than any other; but the greater difficulty in drawing the human figure is occasioned by the fineness of texture of the surface of the form, unobscured by hair, in consequence of which, the form is so much more distinctly defined; while at the same time, the form itself is more minutely varied than any other, and is more susceptible of definition as to what is strictly correct.

CHAPTER I.

CHARACTERISTIC FORMS OF TREES.

THE most general character of trees, results from the different manner of growth of the various species. These may be divided into classes, but none of the arrangements of Botanists, however well adapted to the developement of the science of Botany, can be made use of by the draughtsman. Their classification is founded on details, the form of the leaf, the minute parts of the blossom, fruit, or seed; that to serve the draughtsman must be founded upon the general form of the whole tree, or larger masses of foliage, in the various species.

Section I.

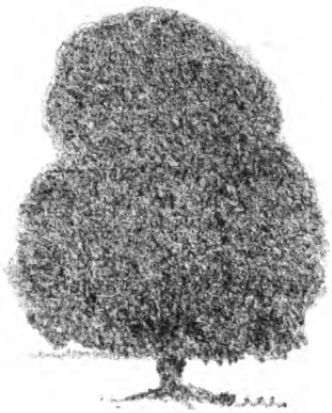
General Forms.

The first class will comprise all those trees in which the branches are lost in the uniform mass of the whole: such are the Oak, the Elm, the Horsechesnut, the Lime, the Lombardy Poplar.

The Oak is of pyramidal form, very broad in proportion to the height. The lower part extends horizontally from the trunk, and near to the ground, in proportion to the size of the tree.

The Elm is similar in form, but higher in proportion to its breadth, and has a division into two masses, as if a head were superadded to the Oak.

There is another form assumed by the Elm, but generally in consequence of the lower limbs having been at some time lopped



away ; the upper mass exceeds the lower in size.

The Horsechesnut is broader in proportion to its height than the Elm, but less so than the Oak ; it forms a heavier mass than either, the lower part droops to the ground, and sometimes curls out at the extremities.

The Lime is of a single pyramidal or conical form, more lofty than wide, and high upon the trunk, with which the lower part is at right angles.

The Lombardy Poplar is unique from its slender pyriform, or spear-shaped character, gradually widening from the trunk, near to the ground, and still more gradually tapering to a point at the summit.

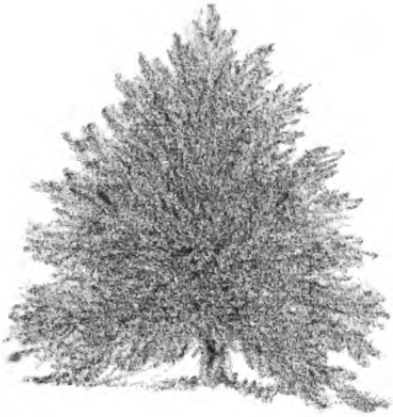
Section II.

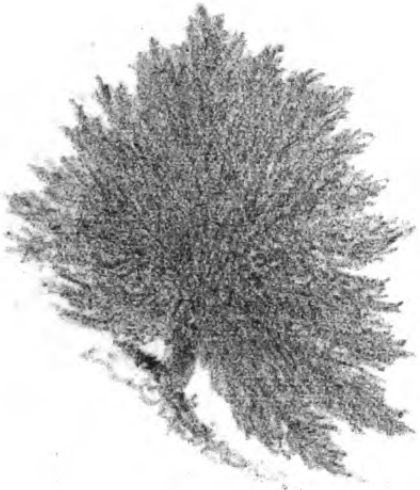
General Forms.

The second class comprises those trees in which the simplicity of the outline is considerably affected by the projection of the branches: though the branches themselves are sufficiently enveloped in foliage to merge in the general mass: such are the Beech, the Ash, the Plane, the Willow, the Yew, the Cypress, the Cedar, and the tribe of Firs.

The Beech is of a generally lofty pyramidal form; the outline of which is varied by the projection of a series of points, radiating from a centre not far from the ground, to a boundary more or less curved.

The lower branches frequently droop to the ground: and when the tree grows on the side of a bank, which is a favorite situation with the Beech, the branches become very pendant.





The Ash is of similar general shape with the Beech: but the whole character of the tree is lighter: the trunk is apparently longer: the branches do not radiate, but, drooping from the main stem, gracefully curl up at the extremities, and a more irregular, and more varied outline is the result.

The Oriental Plane is of similar lofty pyramidal form, the outline of which is broken by the horizontal projection of the branches, in jagged pointed shapes.

There is a variety of Plane, which is less common, and varies from the former species, by being of much wider base, and rounder top. The branches have less distinct projection, and it is principally in the lower part that the general form becomes irregular.

The Willow greatly resembles the Ash in lightness; but is of more globular form. The extremities of the branches do not curl up.

In the variety called the Weeping Willow, the drooping of the branches give a more decidedly globular form in the upper part, whilst the lower is a series of points.

The Yew is a broad lanceolate form, broken by the projection of the branches in a vertical direction.

The Cypress is similar in character to the Lombardy Poplar, but with more regularity of outline.

A variety called the Deciduous Cypress much more resembles a Fir in general shape, the branches projecting laterally and drooping to the ground.

The Chinese Arbor Vitæ is similar in shape to the Yew, but the widest part is frequently near the top.

The Cedar is peculiar in its flat top and horizontal branches of distinct projection.

In the species growing at Lebanon, the extremities of the branches rise.

The general character of the numerous tribe of Firs, is a conical form, in which is distinctly seen a straight perpendicular stem, with equally straight projecting branches, nearly horizontal, or very slightly inclining upwards or downwards. The varieties are principally known by details; but the Spruce

Fir is remarkable for the pensile filaments from each bough, which almost divests it of its generic Fir character. The outline is no longer broken by projecting points, but square ends to the branches connect one with another.

The Walnut is divided into two flattened oval masses, nearly equal in size, and with a long stem, free from leaves.

The Spanish Chesnut is a lofty tree, with a distinct crown-like head, and broken outline, resembling the Beech, but with the projecting points more pendant.

Section III.

General Forms.

The third class comprises those trees in which the ramifications are slightly covered with foliage, and the general form of the tree is divided into detached masses, such as the Sycamore, the Acacia, the Abele or white Poplar, the Scotch and Stone Pines, and the Pine of the Alps.

The Sycamore is of rather a globular form, but the character of the tree is governed by dense masses of foliage in irregular parallelograms, distinct yet near together.

In Acacia the masses of leaves assume a more oval though still elongated form, and vary in size, the largest being near the top of the tree.

In the Abele, the foliage is principally dependent from the summit of the tree. The

main stem rises to a considerable height bare of leaves and then divides into gracefully tapering branches, from which depend distinct and characteristic masses, in form resembling that of a bunch of grapes.

The Scotch and Stone Pines very much resemble each other, but the former is distinguished by the absence of any other than a dense oval mass of foliage extending horizontally at the top of a bare stem.

The Scotch Pine has other masses of foliage similar in shape on the stem; and the summit is more pointed.

The Pine of the Alps is of pyramidal form, with irregular branches resembling those of the Spruce fir, but sometimes curling up like the cedar.

In the Aspen, and some other varieties of the Poplar, and in the Birch, the principal characteristic is a pyramidal form, but the leaves are so small and detached that it is scarcely possible to discover any masses of definite form. The trees have an appearance of greater lightness than the Ash

or Willow. But to give the distinctive character, requires minute details, which will be described in a subsequent part of this work, addressed to the more advanced student. At present it will be sufficient to state, that the rising branches bend with their own weight; the drooping branches are too feeble to rise at the extremities, as in the Ash; and in the variety called the Weeping Birch the boughs are equally pendant with those of the Weeping Willow, but the branches do not droop so much from the main stem, which is more perpendicular, and the general mass of the tree is much higher from the ground than in the Weeping Willow; the summit is slightly rounded.

The Mountain Ash is also of a similar delicate and indefinite character, but the tree is generally rather more square in form.

The Alder rarely grows to the size of a tree, but when it does so it appears to be of pyramidal form, with slightly rounded head, and branches drooping into the water.

The Thorn when it becomes a tree, divides

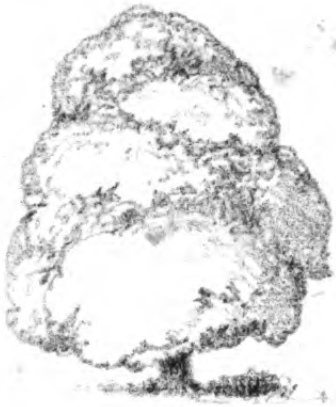
into several distinct stems, some of which extend horizontally to a length much greater than the height of the whole mass, which is much broken up and very irregular in outline.

These are the principal Forest trees, which are distinguished from each other by general forms. In the subsequent parts of this work, when the subjects are treated more in detail, the characteristics of some others will be pointed out, which are inadmissible in this general classification.

CHAPTER II.

CHARACTERISTICS OF TREES.

In the last chapter of this division, were given the Characteristics of Trees, by which they are distinguished when at a great distance. On a nearer approach, other elements of Character become visible; the forms and proportions of principal masses of leaves; of the trunk and principal branches; and in a few instances, the forms and relative proportion of the leaves themselves. This will render necessary a new classification, dependant upon the particular details, which assume the most striking appearance, and by the variations, in which the different species in each class are distinguished from one another.



Section I.

Principal Masses of Foliage.

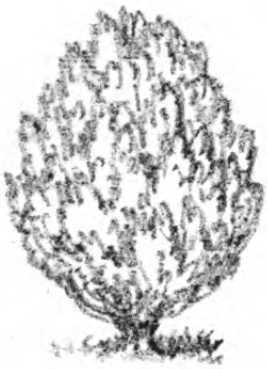
These masses of foliage vary in shape, and in proportion to the whole tree. In some species, as the Elm, and the Abele, the whole tree is divided into a few large masses of an oval form, which when seen sideways, sometimes droop in the shape of a bunch of grapes.

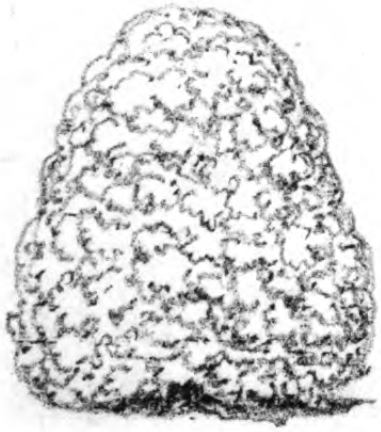
In others, the masses are smaller in proportion to the whole tree, but so run into one another, that they are less easily distinguished; as in the feathery tapering forms of the Beech; the flaky, horizontal pointed forms of the Plane, and Cedar; and in the vertical pyriform masses of the Lombardy Poplar, Cypress, Yew, and Lignum Vitæ.

In some others, the masses of leaves vary in size, but are more decidedly detached from each other; as in the ragged, irregular

horizontal shapes of the Oak; the oval masses of the Acacia; and the pendant forms of the Weeping Willow: in these, the shape and direction of the principal branches form an important feature, which will be separately considered.

In another class of trees, the masses of leaves are still smaller, and sometimes so closely connected, that the divisions are scarcely perceptible; as in the Horsechesnut, the small oval masses of which are frequently invisible, at even a short distance, and the whole tree appears to be one dense mass of large leaves. The divisions of the masses in the Lime, are equally indistinct, and even more rarely discoverable.





Section II.

Branches.

There is undoubtedly, a very decided difference between the forms and directions of the principal branches, in various species of trees, as they may be distinguished from one another in the winter, when deprived of leaves; and the character of the tree is materially affected thereby, when the foliage is sufficiently dense to conceal the branches altogether, as is evident from the first classification adopted.

Some are straight, as in the Fir, Beech, and Willow.

Some bend with their own weight, as the slender branches of the Weeping Willow, and Birch.

Some are of serpentine form, as in the Horsechesnut, Ash, and sometimes the Beech.

Some are gnarled, (very much twisted) as in the Oak, and the Acacia.

Others are less regular, as the Elm, but nearer straight.

Some break or shoot out at right angles from the stem, as the Oak, and sometimes the Elm, at the lower part of the tree; the Fir and Cedar.

Others form angles of various degrees of acuteness, from the Poplar to the Acacia and the Beech.

Section III.

The Trunk.

The Trunk of a tree, in general, diminishes more or less from the root, to a certain height: it then continues much the same thickness to the first branches, where it again spreads in various degrees in different species.

It is generally cylindrical; but is sometimes ribbed, as in the Acacia, and Horsechesnut; and more or less knotty, or bossy, as in the Lombardy Poplar, the Oak, Old Lime, and sometimes the Elm.

The Bark is sometimes smooth, as in Plane, Horsechesnut, Beech.

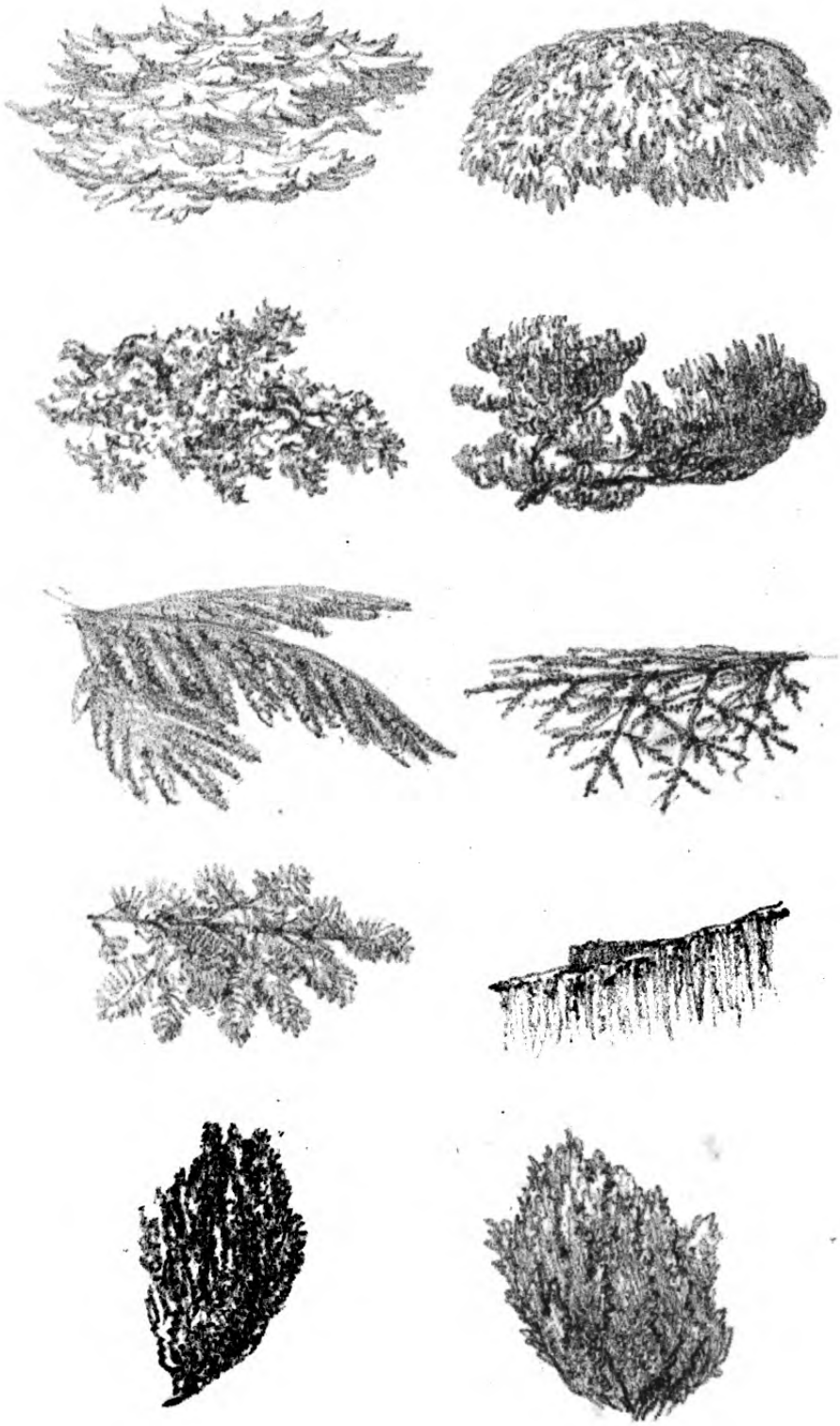
Sometimes slightly granulated, as in the Abele, which has black stripes across it.

Sometimes corrugated more or less deeply, as the Elm, Oak, and lower part of the Birch,

(which is very smooth and silvery in the upper part, and crossed with black stripes).

Sometimes reticulated, as in the Spanish Chesnut, and Acacia.

Sometimes as if it were about to fall off in flakes; the peculiar characteristic of the Pine.



Section IV.

Forms of the Leaves.

Although upon close inspection, the forms of the leaves of different trees afford a ready means of determining their various species, and would be commonly referred to as the most conclusive testimony by general observers; it is not requisite, except for botanical purposes, and in very elaborate drawings, to represent the actual form of any one individual leaf when drawing a tree. But the attention must be given to the small masses, and the shape they assume, which sometimes are the only means of distinguishing one species of tree from another.

The appearance of the principal masses of leaves, is materially influenced by the mode in which they are attached to the branches. In some they appear to grow at the extremities, as in the Elm: in others, they appear

to lie like flakes upon the branches, as in the Beech and Cedar: and sometimes they grow all round the branches, as in the Oak.

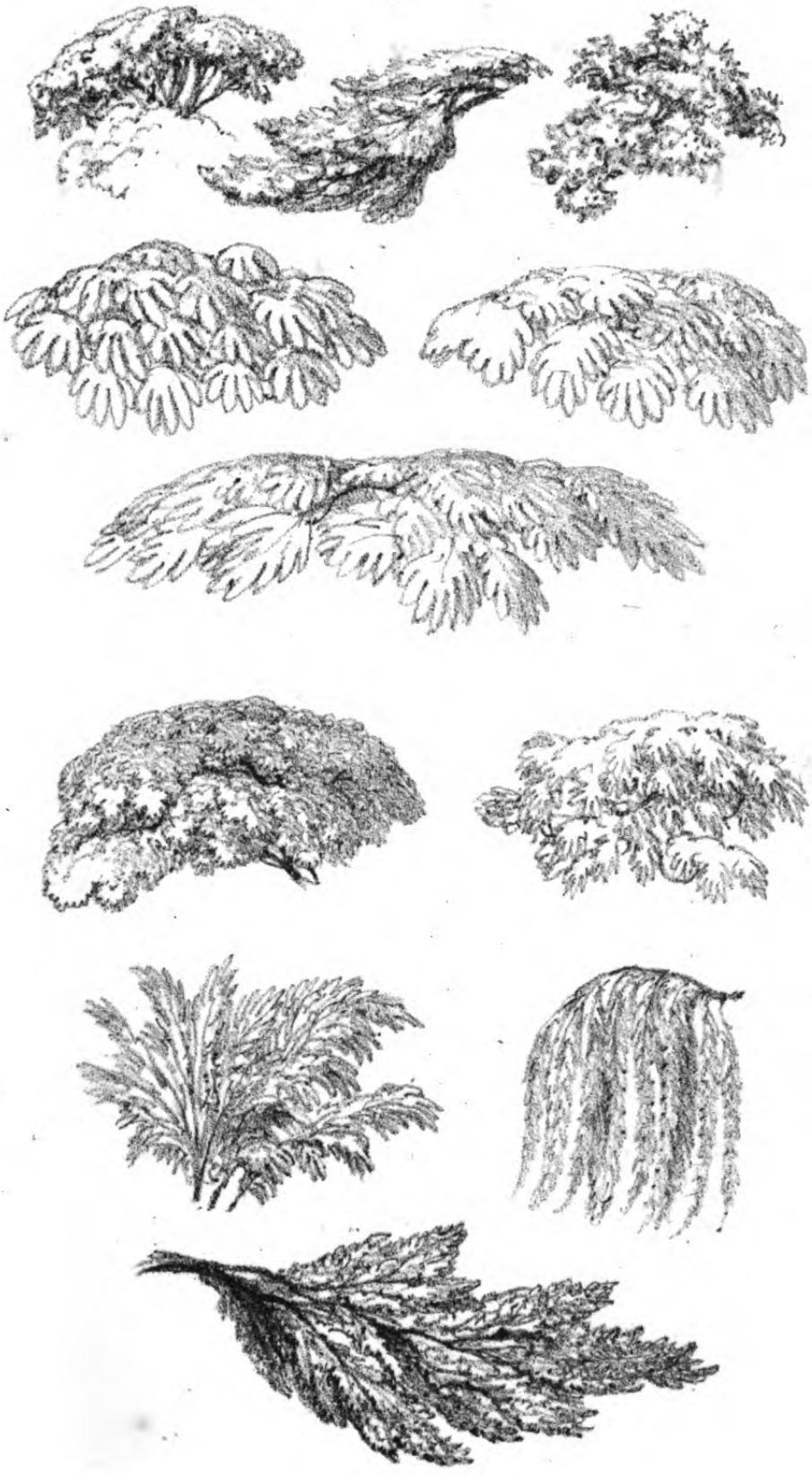
The Horsechesnut is remarkable for small oval masses of large leaves.

The Walnut has leaves of similar character, but in larger masses and more detached.

The Spanish Chesnut is of the same class, but the leaves are longer in proportion.

Similar forms, but less distinct, being smaller and closer together, will be found in the Elm; more open and with longer leaves in the Ash and Willow; and more pointed in the Beech.

There are some exceptions to this general form, as the broad and palmated Plane, and Sycamore, the former slightly curling up, the latter drooping and more closely arranged; the minute irregular ragged forms in the Oak; and the minute regular form of the Pine, Cedar, and Fir, Cypress, and Yew.



THE COURSE OF PRACTICE REQUISITE TO ENSURE SUCCESS.

It has been stated, that the hand will be found competent to perform all that the mind has knowledge to direct; to represent any and every form that the mind fully comprehends. It is not meant that this can be done without a certain degree of practice; and that course has been pointed out as most efficacious, in which the student shall commence with general Characteristics, and add details as facility and knowledge are acquired; but there are some difficulties, generally found at first, in reducing the hand to the perfect obedience desired, which require some notice: though they are less likely to attend the present, than the common method of study; as will be evident upon examination into their causes. They arise from physical

qualities in the human frame, and hitherto have passed unmentioned.

There is an involuntary nervous action occasioned by anxiety, which interferes with the regular contraction of the muscles, and renders the motion of the hand unsteady, uneven, and beyond the influence of exact direction by the mind. This can only be obviated by confidence: which will best be acquired in the following course of proceeding.

Rubbing out is interdicted to the beginner, positively, entirely, in the slightest degree, or at any time.

The shape to be drawn, must be attentively examined, and when understood, the attempt must be made to put it down, correctly, firmly, and at once. In the proposed succession of examples, it is not probable that it should be erroneous; but if it should so happen, correct the error by another attempt, altering the first line. It is possible that this may also be wrong: again correct the line until the difficulty be mastered. Then

on a fresh piece of paper put down the form firmly and decidedly ; success will attend the trial.

But it should be observed that in addition to the involuntary nervous action alluded to, there is another point requiring attention, to enable the mind to control the action of the hand.

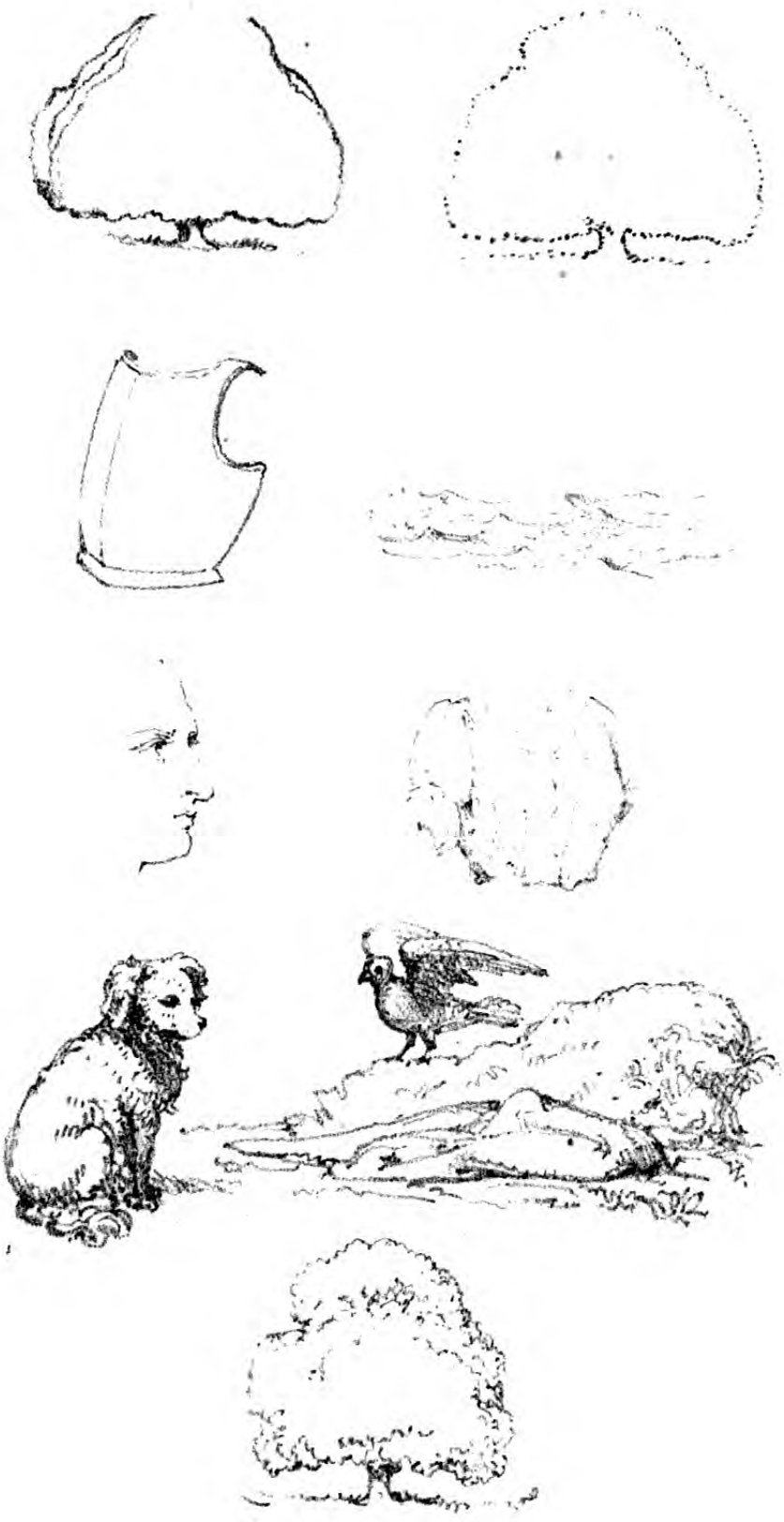
The formation of the arm is such, that the contraction of the muscles, however free from involuntary action, can only draw the hand or fingers in particular directions, and within certain limits. Unless, therefore, the hand be in the right position at commencing the line, it is evidently an impossibility to complete it as intended, without taking off the hand and placing it anew on the paper; when some difficulty will be found in joining the line, so that it shall not appear to be the result of two operations. To avoid this, the extent of easy motion in the hand should be tried when the hand is placed on the paper, before the line is drawn, and the position should be adapted so as to bring the intended

line within the limits. And it will be advisable to commence Drawing by forming the desired line by a series of dots, instead of making the line by one motion of the hand. In this method, the nerves will have less power: steadiness will become a habit, and confidence will result from the impossibility of the line going very far wrong before it is detected. The chance of error is almost removed, by time being afforded carefully to watch the line put down; and by its becoming a matter of indifference whether the line be completed from beginning to end at one touch, or whether it be stopped, and taken up again.

A still more important advantage resulting from this method of Drawing, will be found, when any attempt is made to indicate the texture of objects, by the quality of line employed to delineate them.

Armour, water, and all polished bodies, should be delineated with the finest, most even and continuous line possible.

Flesh and drapery, which though tolerably



smooth, are not so smooth as polished bodies, should be delineated with a firm and moderately even line; but with a softer touch, which will render the line less sharp and de fined.

Rougher objects, such as animals which are covered with hair, birds with feathers, coarser draperies, ground, &c. should be delineated with a broken line, corresponding in degree with the roughness of the object.

And in delineating the general forms of trees, of which the outlines are governed by masses of leaves, small in proportion to the size of the whole object; the hand should be accustomed to a kind of tremulous motion almost as if forming a line of dots. But the hand must be under rigid control at the same time: the irregularity of line must be intentional; this will be made evident by the shape indicated, which should convey the general character of some specific kind of tree.

It should be an invariable rule with students, never to draw, or attempt to draw,

anything without assigning a distinctive character to it. The means of analysing all Characteristics have been given in the previous division of this work; and the means of representing them in this. Practice must be supplied by the student. Nothing more is required to ensure success.

THE

END OF PART

I

LIST OF PLATES.

*** The Figures have not been marked on the plates, but the subjects are regularly arranged to follow in succession, as the words in a page, beginning at the top on the left hand.

C. WHITTINGHAM, TOOKS COURT, CHANCERY LANE.