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HANDBOOK OF DRAWING



by
William Walker

Forgotten Books



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by

William Walker

Published by Forgotten Books 2013

Originally published 1880

PIBN 1000078346

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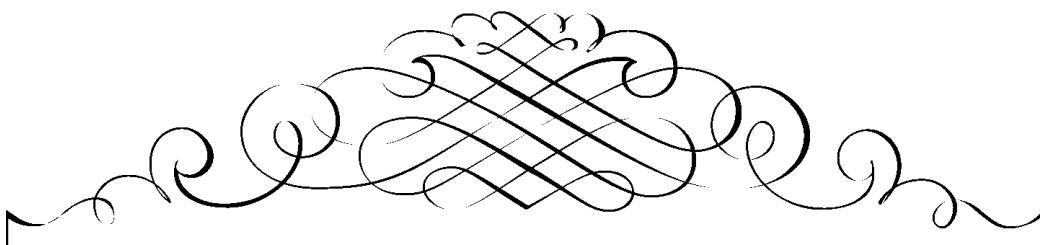
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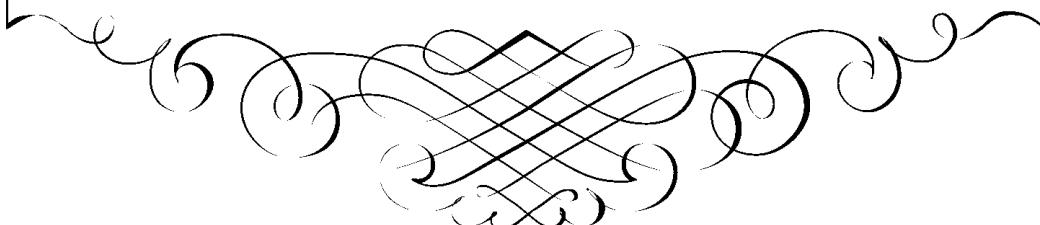


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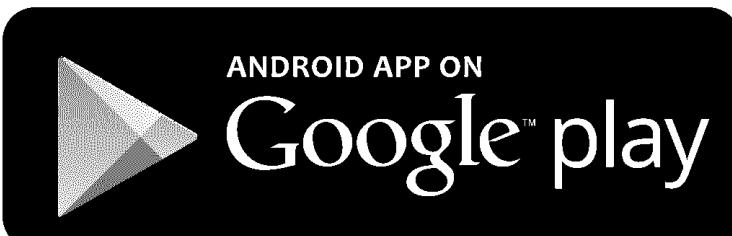
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HANDBOOK OF DRAWING

BY

WILLIAM WALKER

LECTURER AND TEACHER OF FREEHAND DRAWING IN THE OWENS COLLEGE

*WITH UPWARDS OF TWO HUNDRED WOODCUTS
AND DIAGRAMS*

'Art is universal in its influence; so may it be in its practice, if it proceed from a sincere heart and quick observation. In this case it may be the merest sketch, or the most elaborate imitative finish. Either will be whole and perfect.'—GOETHE.

First American from the Second English Edition

NEW YORK
CHARLES SCRIBNER'S SONS
743 AND 745 BROADWAY
1880

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PREFACE TO THE AMERICAN EDITION.

THE very fair proposal of Messrs. Scribner to issue this Handbook in America affords me the satisfactory prospect of extended usefulness amongst the real amateurs of a great country; and I shall indulge the hope that it may meet with as kind and appreciative a reception in America as it has done in England.

WILLIAM WALKER.

THE OWENS COLLEGE,

Manchester, February, 1880.

PREFACE TO THE FIRST EDITION.

THE purpose of this work is to furnish such information on Elementary Art Education as is not likely to be met with in any other compact form. It has been prepared under the guiding principle that *all true education consists in the cultivation of the judgment.*

Books of *Examples*, good and bad, are in abundance ; but the language of Art,—any more than Greek or German,—is not to be learned by merely copying its signs. Art has its grammatical elements and rules, and should be studied in its exact delineative and intellectual aspect, as well as in its more emotional expression. The former will find its sphere in the class-room, the latter amidst the beauties of Nature, or in the studio.

The information here presented, and the practice recommended, will enable the student to make truthful and significant outlines, and drawings from outlines and diagrams put before him in lecture-rooms and elsewhere.

Preface.

The work has been prepared chiefly during intervals of physical suffering, and has many imperfections. Two courses only were open to me—either to let the hours pass away useless to others as to myself, or to bring out the book in its present form, and I chose the latter. The desire and duty to help my fellows are my reasons and apology for issuing this little volume.

WILLIAM WALKER.

Fairlands, Hayfield.

ADDRESS TO STUDENTS.

As a false start, or a wrong bias, may lead to failure, an inquiry or two, which perhaps has not occurred spontaneously in entering upon this new field of work, is here suggested, and a few indispensable facts are stated which may prevent such wrong tendency at the outset.

In the first place, then, let us ask, Why do we wish to learn to draw? To reply, Because we like it, would hardly be deemed satisfactory, or worthy of thoughtful men; but if our reply should be, Because it may be useful, that certainly would be more reasonable. But, suppose our answer should take a higher form, and we should say that we wish to study Art in order to develop in us those nobler faculties which God has given for the appreciation of His works in nature *aesthetically*, as Science enables us to do *intellectually*, then we at once come to the root of the matter; we start with a worthy motive, and may reasonably expect success.

In beginning, then, the study of this new language, let us ask, What course will be most likely to secure the results we seek? The answer would undoubtedly be, That course which would lead to an acquaintance with the fundamental principles on which the Art is based. Just so. And in the pursuit of any subject of this nature we should naturally expect to go through some labour, perhaps drudgery, of preparation, equivalent to learning

French verbs, or writing Greek hexameters, and not unwillingly, provided always that we were certain that such labour would bring us nearer to the desired goal.

It is just in this temper that we ask a student to study Art, remembering at the same time that, whilst French verbs and Greek hexameters will occasionally be useful and pleasant, the language he now proposes to study is closely related to everything about him ; and that, in fact, many of the Arts and Sciences are utterly incomprehensible without its aid. What would be thought of a work on Physics, or Chemistry, or Anatomy, or any physical science whatever, without illustrations ? Language alone is one of the worst means of expressing form, while drawing is incomparably the best. Physical science stands still so soon as it becomes ‘a reasoned statement instead of a sense-subjected fact.’ To a medical student drawing will be as indispensable as Latin ; and even Mathematics would be impossible of acquirement without sensible form.

To learn, there should be action with perception, and enjoyment with power ; for ‘Art is conversant with hand and eye, main sources of power, pleasure, and perception.’

A youthful mind should not stand, phial-like, to receive so much instruction from this master, now so much from that—so much Chemistry, then so much Geology, and so on ; but rather it should be treated as a mysterious agent, which, gathering to itself knowledge of all kinds, weaves it into a new development of that which is the image of God Himself.

INTRODUCTION.

IF it were announced on the Manchester Exchange, or amongst any other large gathering of intelligent men, that not one in every hundred of them could see correctly the appearance of the walls or windows about them, it might cause no small amount of surprise, if not disconcert ; yet such is probably the fact.

Millions of persons pass through life unconscious of the change that takes place in the *appearance* of things around us, yet each time we move an inch a complete alteration in the appearance of everything is the result. Appearances are constantly at variance with facts, and vision, like any other faculty, requires cultivation. It is not because our eyes are open that we therefore see. The mind requires to be furnished with some means by which the eye may be able to judge accurately of the form which every object assumes under various aspects. This continual change of things is an infinite source of pleasure, especially when we are in the midst of landscape, but is so constant and common to us that we fail fully to enjoy it. If there were not variety both in general form and color, as well as in the detailed appearances of things, the world would be full of monotony. An oblong room is more pleasant to dwell in than a square one. A circular room would be wearisome.

The actually different hues and colours in the world is another infinite source of pleasure, but much enjoyment of it is lost because we are not quick to observe, or we have not been trained fully to appreciate. If a knowledge of music, and a well-trained ear, are necessary to a full appreciation and enjoyment of sound, how important is it that the mind should be furnished with all the helps, both of knowledge and feeling (love), so necessary to the appreciation and enjoyment of the charms of form and colour by which we are surrounded. If it be considered necessary that young persons should spend so much time in the practice of music, is it not equally important to cultivate the eye to observe, and the hand to note things in this beautiful world, which would immensely enlarge and enrich our minds with fine thoughts and imagery ?

As the eye is the most important gateway of knowledge, so far as the physical world is concerned, it ought to receive great culture, even with only a utilitarian motive, for the time is rapidly approaching when drawing will *demand* its right place in education in this country. With the Greeks, writing and drawing were synonymous ; and in France and Germany every child is taught to draw just as he is taught to write, and much time is given to the practice of both ; and if England is to hold her own in the Arts she must pay more attention to the right teaching of drawing and the principles of Art as a primary step.

Every purchase we make of anything with a design or pattern about it, encourages good or bad Art, though

we do not think so at the time. We are too apt to buy what pleases us, instead of what is good in quality and pure in design, as well as suited to its place and purpose.

No doubt everybody has taste ; but taste may be good and pure, or it may be bad and false. If those who buy Art, and are in a sense its patrons, do not know what is good, so as to distinguish it from what is bad, it is useless to expect manufacturers to work artistically, or shopmen to sell that which is true,—they must prepare what the public will buy. It is most desirable, therefore, that the public generally, as well as the manufacturer, should know what is right in Art.

True education in man, whether as applied to Art or morals, is that which fits him to become the highest and best of his nature's capability ; first, in view of the Infinite Creator of all things, the 'Father of us all ;' and, secondly, in view of himself and his surroundings, whether of the material universe—the world, or of the spiritual universe, as manifested in man, and perfectly only in the one perfect Man. In this great work surely the study of Art is an important factor.

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HANDBOOK OF DRAWING.

PART I.

CHAPTER I.

ON DRAWING.*

1. THE misunderstanding of the term *free-hand drawing* has led to considerable confusion. It was originally applied to the copying, *without instruments*, of a series of outline designs issued by the Department of Science and Art, and has, unfortunately, become associated with that alone. Rightly understood it has a much wider significance, and should be applied to all drawing where instruments, such as compasses, rulers, &c., are not used. In geometric drawing, instruments are used, and therefore this is not *free-hand* work. Strictly speaking, models, flowers, landscapes, drawn without mechanical assistance, ought to be considered as free-hand drawing.

* A definition of the term '*drawing*' must be very comprehensive if it is not to exclude some art into which drawing enters more or less. Hamerton says :—'If we say that *drawing is a motion which leaves significant marks*, we are as precise as the numerous varieties of the art will permit us to be.'

2. Its elementary study is the first step towards expressing our ideas through the medium of art, and should be practised more or less from earliest infancy as a most useful language, by which the *perceptive faculties* will be quickened, and knowledge conveyed in a sort of short-hand language requiring no translation, and understood by all.* In this respect it has often a great advantage

* Atkinson, the well-known Russian traveller, told the writer that on many occasions he would have been most seriously inconvenienced had it not been for the readiness with which he could use his pencil. The following anecdote, also, will show the advantage of being ready with this universal language. An artist who had neglected to secure his lunch before going amongst some Welsh mountains for his day's painting, after some hours' work began to feel faint for want of food, and seeing a cottage at some distance, went to inquire if he could have a cup of tea. His reception was not an agreeable one, as he was attacked by a couple of curs, which frightened him and put to flight a number of noisy fowls. On the good woman of the house opening the door a few inches the artist made his request for a cup of tea, to which he got the reply, '*Dim Sasanach*' (No English). After again urging his request, and meeting with the same determined, settled, and settling answer, '*Dim Sasanach*', he bethought him of his pocket sketch-book, which had been of like service to him among the mountaineers of Switzerland, and he instantly made a sketch like the following, and showed it to the unwilling dame, who, recognising his



want, instantly opened wide the door, beckoned him into the cottage,

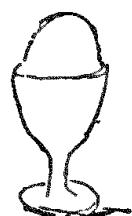
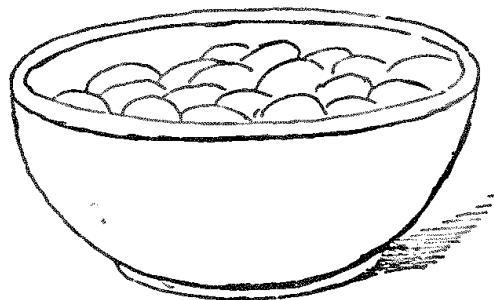
over writing, as will be evident if, as in business, we wish to describe in writing almost any common article of daily use—say a sofa, or a coal-vase—instead of drawing it. This is a strong argument in favour of *all* persons learning to draw as well as to write.

3. The question is often asked, ‘Can every one learn to draw?’ and although it may seem an ignorant question, it had better be answered. All persons who can learn to

and offered a chair. In an unknown language two children, who had concealed themselves behind their mother, were hastily despatched, and soon returned, one with a bundle of sticks and the other with a can of spring water. Very quickly the kettle was boiling, and eakes were baking on something like a Scotch ‘griddle,’ hung from a chain in the chimney. Soon the artist was enjoying himself, and the remembrance of the noisy cackling amidst which he was introduced, suggested to his mind the possibility of making his repast more substantial by the addition of a few eggs; so he politely, but thoughtlessly, asked his hostess if she could oblige him with an egg or two. The inevitable ‘*Dim Sasenach*’ soon showed him his mistake; so, getting out his pocket sketch-book, he sketched something like the following:—whereupon the good woman, charmed at her power of interpreting, went off

to a cupboard, and immediately returned with a large, clean, wooden bowl, filled with eggs, of which the rough sketch will give an idea. Satisfied, refreshed, and again ready for work, the artist prepared to depart, but not before

he ascertained the power of his hostess to understand, without any sketch, the value of English silver.



write can learn to draw. If it were required, ‘Can any one become an artist?’ the question might be answered by another, ‘Can any one become a poet?’ Great painters, like great poets or great composers, may be born, but not made. But though there are not many Beethovens, or Handels, or Mozarts in a generation, there are many persons who add to national happiness by less pretentious efforts than Oratorios and Masses. On the Continent drawing is taught to all children in the best national schools, and it ought to be taught in our own : not because it is insisted on in Continent schools, but because it would be of incalculable service in the business of life to those who had learnt it.*

4. But here arises an important question : What do we understand by learning to draw ? There are various kinds of drawing, and that which may be suitable to one purpose may not be applicable to another. For example, the kind of drawing and knowledge requisite for a man of culture is scarcely that best suited to an artisan. The first and elemental requirement of an artisan is that he should

* The following remarks from Professor Huxley appeared in the *Fortnightly Review*, January 1878. Speaking of the preparation for technical teaching he says :—‘ And especially I should require some ability to draw : I do not mean artistically, for that is a gift which may be cultivated, but cannot be learned, but with fair accuracy. Everybody, or almost everybody, can learn to write ; and, as writing is a kind of drawing, I suppose that the majority of the people who say they cannot draw, and give copious evidence of the accuracy of their assertion, could draw, after a fashion, if they tried. And that “after a fashion” would be better than nothing for my purposes.

• I suppose that in nine trades out of ten it would be useful if he (the student) could draw.’

be able to draw accurately, say a brick, and understand it when it is drawn ; for if he can draw a brick he can draw a box, and if a box, then a table ; and thus he has a safe foundation on which to build his knowledge as it may be required.

5. On the next page is given a supposed order for a common box, which, though very rough (as though drawn in haste), would be clearly understood by an intelligent workman without any chance of error. How great the advantage of drawing in this case is over a written description only, may be felt if the student will try to write out instructions for such a box *without any drawing*—instructions that might not only be understood, but that could not be misunderstood.

6. To those who travel, even a little knowledge of free-hand drawing, as here understood, will be not only useful but delightful. The slightest sketch taken by oneself will, in after years, recall more of the circumstances and associations than a lengthened description, or even a photograph. Illustrations of this kind of memorandum sketch will be found in various parts of the work.

7. But if true education be that which fits a person for the after circumstances of life, then the requirements of an educated man will be something far beyond the power to sketch a few simple objects intelligently. He must have a knowledge of the general principles of Fine Art, and such power in practice as will develop in him that æsthetic faculty without which he can neither fully enjoy, nor accurately judge, in matters of taste.

Order.
 Box for packing.
Deal, $\frac{3}{4}$ inch, not planed
 $2\text{ft. 6in} \times 2\text{ft. 1in} \times 9\text{in.}$
inside measurement.

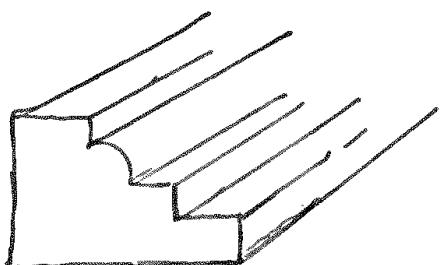
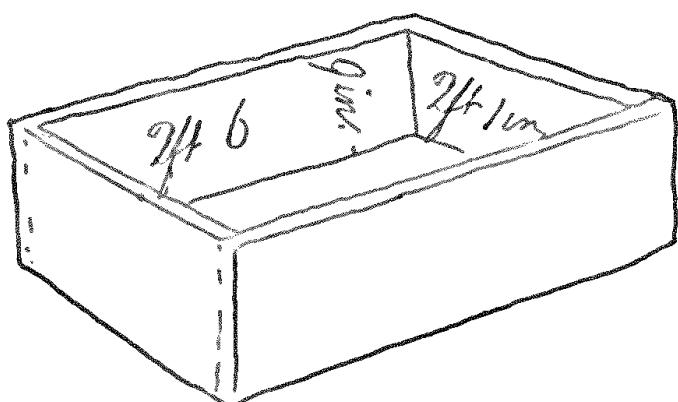
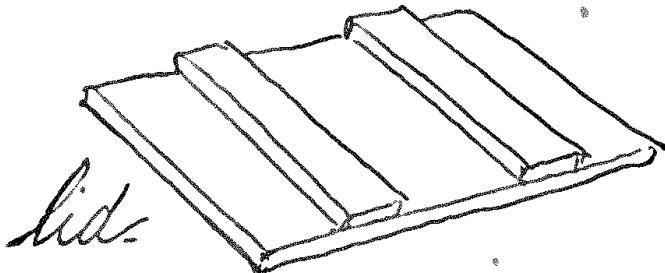


FIG. 1.

FIG. 2.

CHAPTER II.

ON THE EYE.

8. Of the five senses, or gateways of knowledge—seeing, and hearing, feeling, tasting, and smelling—two, seeing and hearing, belong to the intellectual part of our nature, whilst the other three chiefly supply our animal wants. The sense of seeing is at once the most active, the most comprehensive, and the most intellectual of them all. It is the servant of the soul, and through it the mind receives the richest variety of images, or ideas. F. W. Robertson says that ‘the highest pleasure of sensation comes through the Eye. She ranks above all the rest of the senses in dignity. He whose eye is so refined by discipline that he can repose with pleasure upon the serene outline of beautiful form, has reached the purest of the sensational raptures.’

9. A short description of the eye is given at page 9 ; but it may here be briefly stated, that when an object is placed before the eye, the light from it passes through the crystalline lens, and an image is formed on the retina, from whence the consciousness of it is conveyed by the optic nerve to the brain.*

* The number of shocks per second necessary to the production of the impression of colour is as follows :—Red, 451 millions of millions ; of violet, 789 millions of millions. All these waves enter the eye, and strike the retina at the back of the eye in one second.—TYNDALL.

10. The eye of a fish, or of a sheep, is probably as well adapted to the purpose of their life as is that of a human being ; but the lower animals, being chiefly moved by instinct, have their organs available when very young and with little training ; whilst a very young infant, though with the eye perfect as an organ, requires long and frequent practice before it can judge even of distance. The moon and its mother's face probably appear equally near. If a person born blind obtains his sight at fifteen or twenty years of age, he is said to have no idea of distance by sight ; whilst the little fish that gets its food by shooting a drop of water at its prey scarcely ever misses ; and the chick that has only just emerged from the shell pecks away at the crumbs, distinguishing them from grains of sand of similar size and colour.

11. The human eye is a wonderfully adapted, self-acting, self-regulating, and self-minding organ, for seeing things large as mountains or small as motes, very near or millions of miles away ; but it requires training.

If a person were to travel, say, from Liverpool to London, and hold a looking-glass so as to have all the objects reflected in it as they were passed, on arriving in London there would be nothing left on the glass but the last image—perhaps the station ; all the other myriads of objects would be gone. It is just so, in a lesser degree, with many persons who have not learned to use their eyes ; whilst others are more like a sensitised plate in a camera, not only receiving images, but photographing and fixing them by observation.

12. Considered merely as an organ, the eye is a compound lens, consisting of three principal parts, the *aqueous humour*, the *crystalline lens*, and the *vitreous humour*.

The aqueous humour is held in front of the eye by the *cornea*, a transparent, horny capsule, something like a watch-glass in shape. Behind the aqueous humour, and immediately in front of the crystalline lens, is the *iris*, which surrounds the *pupil*. Then follow the lens and the vitreous humour. Behind this is a black pigment, upon which the delicate network of nerves, called the *retina*, is spread. It is this delicate screen, the retina, that receives the images of things with such marvellous rapidity, and conveys them through the optic nerve to the brain.

13. By means of the *iris* the size of the pupil may be caused to vary. When the light is feeble the pupil expands, and when it is intense the pupil contracts; thus the quantity of light entering the eye is to some extent regulated.

14. The pupil also diminishes when the eye is fixed upon a near object, and expands when it is fixed upon a distant one. The image thrown upon the retina is inverted.

15. The eye possesses a power of adjustment for different distances, chiefly by a change in the curvature of the crystalline lens. Two objects at different distances from the eye cannot be clearly defined at the same moment: the adjustment of the eye for seeing one distinctly will cause the other to become indistinct.

16. A line drawn through the centre of the cornea and the centre of the whole eye is called the *axis* of the eye.

17. When an impression of light is made upon the retina it does not instantly subside; but remains for a short time after the cause has passed away. This is called the '*persistence of impression.*' This interval of persistence varies with different persons, and amounts to a sensible fraction of a second.

18. If a succession of images follow each other at intervals less than the time which the impression endures, the images will blend together and form a shady surface, as in the case of the spokes of a wheel when going round rapidly, or the colours in a revolving chromotrope.

19. The image of any object thrown on the retina of one eye differs from that thrown on the retina of the other, because the object is viewed from two separate places. If these two pictures, thrown on to the two retinæ, were combined, we should have the full impression of solidity. This is what takes place in the stereoscope, in which the two pictures always slightly differ. Both eyes, therefore, are necessary to give the idea of solidity and space satisfactorily.

20. A very young child at first sees things *not as they really are*, but *as they appear* (on the exquisite little reflector, the eye), unconscious that they often are *actually quite different* from what they appear. As the child grows, he gradually learns the true or actual shapes of things, and if, whilst very young, he does not draw things,* he will lose what is called the '*innocence of the eye;*' so that

* I don't say, have drawing lessons. See Appendix A, on children's drawing.

when he is older, and attempts to draw things from nature, he will have considerable difficulty in seeing retiring forms correctly, and will have to use the rules of perspective : thus to learn back again, as it were, to the simplicity and truth of child-sight.

There are many intelligent persons who cannot draw the top of a tumbler, or of a table or a book, correctly. In this case the mind (with its knowledge of actual shape) interferes with the image of the retina.* It is a fact that, supposing a young child could hold and guide the pencil sufficiently well, he would draw solid forms in perspective more correctly than an upgrown person, and for this reason, that he sees more innocently or truly.

21. The *power* of the eye for judging,—distance, for example,—depends on frequent and earnest practice. A seaman, who is constantly on the look-out, judges much more accurately of distance than a landsman. When two boys at play have their marbles almost equally near a given hole, they very earnestly take the image into their eye, first of one distance and then of the other, again and again, till at last they may determine with almost certainty which of the two marbles is nearest the hole. The image on the retina is true enough ; the difficulty is for the mind to take a correct ‘reading’ of the image. Aiming at a given mark, as in shooting, or cricket, or billiards, tends to give power and accuracy to the eye.

* Though a plumb-line may be used in drawing, it is really seldom necessary, as the eye, if fairly practised, will soon learn to determine whether or not a line be vertical.

CHAPTER III.

ON SEEING AND OBSERVING.

22. By careful practice, as in drawing, the eye may become astonishingly accurate as a measuring instrument.

Hitherto the eyes have been spoken of as a single organ, for, although we often use both, Art recognises only one, or, more correctly, one point of vision.

If we wish to see clearly the *contour* of any object, especially when near, only one eye should be used, so as to avoid a parallax of vision ; * but if we desire to determine how far an object is from us, both eyes must be used, so as to see, as it were, from two places, for with one eye alone we have little idea of space.

An illustration of this parallax of vision may be seen in the ordinary stereoscope, by placing in it two views exactly the same (*i. e.* taken from exactly the same point). No idea of space will be given beyond what we see without the instrument. But if the two views be taken from two different points, corresponding with the distance of the eyes from each other, the ‘relief’ of the various objects will be perfect, and we shall have a full idea of space.

* What is meant by parallax of vision may be better understood in the following manner :—Hold a pencil or pen at a little distance from you, and look at it with one eye closed, and observe what object or part of the room it obscures from the view ; now, without moving the head or pencil, open the other eye and close the one just used, and it will be seen that the pencil now screens quite a different part.

We observe, then, that to see the contours of objects clearly *one* eye only should be used ; whilst in judging of distance, or of the location of objects in space, both should be used.

23. But there is yet another way in which the eyes should be used in Art, viz. half closed.

When we wish to observe in a picture or drawing the principal masses of light and shade, apart from detail, the eyes should be *partially* closed, so as to admit only the bright rays. A darkened glass is sometimes used by artists for the same purpose.

The light and shade of a picture or drawing thus seen is often spoken of in Art parlance as the '*effect*.' In Fig. 3 is given the '*effect*,' or light and shade, of the illustration forming the frontispiece of this work.

24. From what has been said it will be evident that, although the eye is so wonderfully adapted, and so delicately sensitive for the reception of images, it requires the presence of a mind to read or take from it the impression it presents so constantly.

The needle on the telegraphic dial may be moving ever so rapidly, but to little purpose if there be no intelligence ready and willing to receive the information it may be presenting ; and this leads us to make some remarks on the importance of *Observation*.

25. The power of observing varies much in different

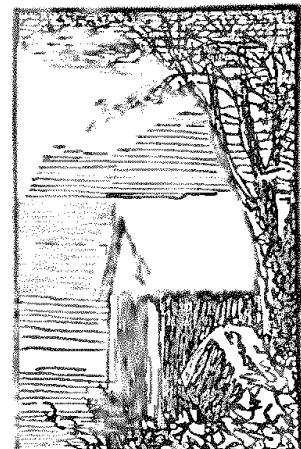


FIG. 3.

persons, but may be greatly improved by intelligent practice. It should never be confined to one class of objects. The physical world, though brimful of beauty for the eye, and of evidences of wisdom for the mind, is a closed book to one who has not learnt to observe ; but to one who has learned to see, and to reflect on what is seen, it is literally an endless source of enjoyment. We may, therefore, naturally inquire what part of a liberal curriculum is most likely to be of service to us in forming and developing this important faculty ? Certainly, whatever other tangible subjects, such as chemistry and physics, may do, that which brings us into immediate contact with Nature and with Art in their more beautiful aspects must hold an important place. This is what drawing, rightly pursued, does. Let us suppose a simple case. In our rambles we pick up, say, a leaf, or a stone, which we wish for some reason to remember. A verbal description alone would be both tedious and unsatisfactory, but if accompanied with a drawing of it, would be understood distinctly and remembered long.

26. Collateral knowledge often helps observation, and Art should be studied in its twofold character, as a science and as an art—as a science to be known, and as an art to be practised. The pleasure we take in any objects, whether of God's or of man's making, chiefly depends on some of the following considerations : 1st, that by what they present to the eye they suggest to the mind something of deep import, as in symbolic ornamentation ; or, 2nd, that which is presented to the eye is of such a form or colour as

to excite our sense of the beautiful—this is æsthetic or sensuous ; or, 3rd, the forms presented to us may be such as to suggest the idea of fitness, either alone or in conjunction with the sense of beauty.

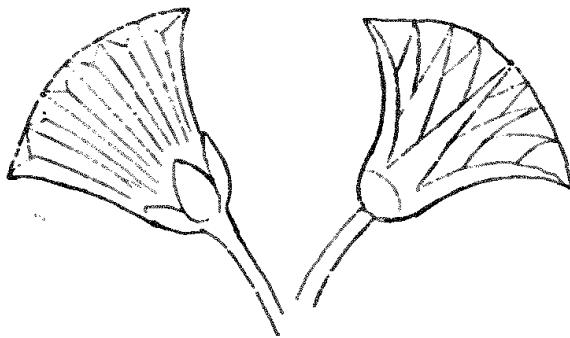


FIG. 4.

27. In Fig. 4 (the lotus-plant) we have a conventional and unpretending ornament, which by itself would not excite much emotion, but when recognised as one of the most significant symbols of Egyptian architecture becomes full of interest.

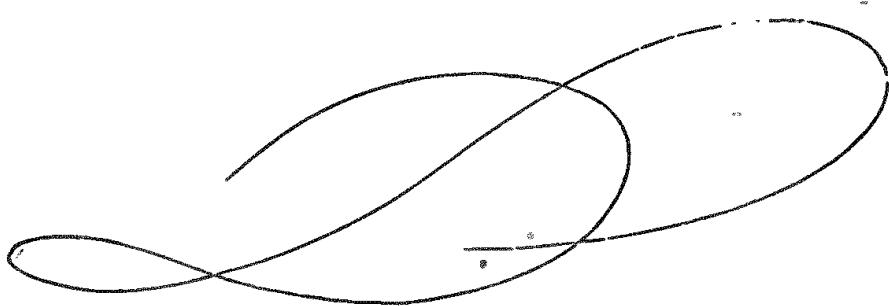


FIG. 5.

Fig. 5 is a form which, apart from any association, is in itself pleasing, as is also the piece of scroll-work in

Fig. 6. But the charm of this latter is greatly enhanced because applied where it not only does the work of a bracket (conveying the idea of fitness), but also because it does it with much grace.

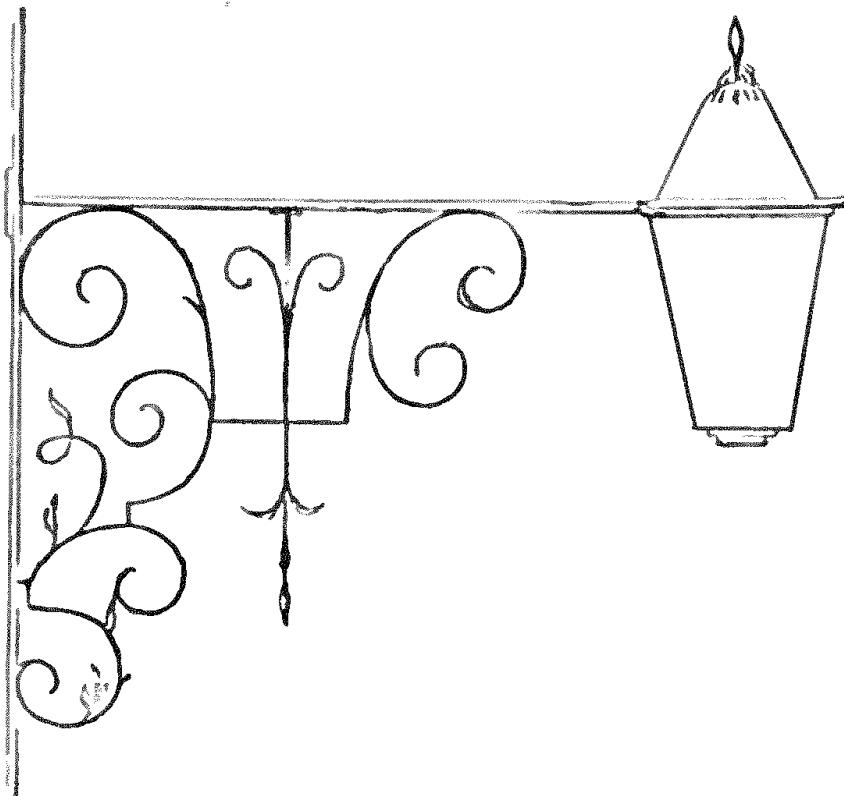


FIG. 6.

It is in thus seeing the *essential characteristics of things* that real observation consists, and it will be evident, therefore, how important it is that the mind should be led not only to see beauty, but also to know what kind of beauty it is, and whence it arises.

28. There is much truth in the remark that we see only that which we look for, and to look energetically we must consciously look for something. This will be better

understood by the following anecdote, which Professor Tyndall gives of Faraday. ‘And this reminds me,’ says Tyndall, ‘of an occurrence which took place in this room at the beginning of my acquaintance with Faraday. I wished to show him a peculiar action of an electro-magnet upon a crystal. Everything was arranged, when, just before the magnet was excited, he laid his hand upon my arm and asked, “What am I to look for?” Amid the assemblage of impressions connected with an experiment, even this prince of experimenters felt the advantage of having his attention directed to the special point to be illustrated.’ *

29. Now, the difference between artistic sight and ordinary sight arises from the fact that people generally do not look for those truths and qualities which artists look for. For instance, a group of intelligent artisans—botanists—met the writer in one of the most beautiful valleys in Derbyshire, and in a conversation admitted that they had not particularly seen the rocks or the hills, nor even the trees—‘They were not in their way.’ They were searching for a little plant they had heard of as being in that locality.

Thus, men use their eyes as channels of information about what they want to know. A farmer looks at the sky to see whether it will rain, and at a field of corn with a view to its value. A drove of cattle will not be seen by him as strikingly picturesque, but as objects having their market value. ‘Money value’ is all that some persons *can*

* Tyndall, *On Sound*, p. 120.

see in the world. With them the æsthetic sense is blind or dead : they have eyes, but no æsthetic faculty behind them ; they are like the man who had bought spectacles to read with, but still could not read, for he did not know his letters.

30. It is an optieal fact that no two persons ever saw the same rainbow, and it is equally true that no two men ever saw the same appearance in any object. If we go to a sketching-ground of artists—say, Bettws-y-Coed or Capel Curig—though the same subject may be painted again and again by successive artists, we shall not find two pictures alike. The objects may have been the same precisely, but in each case the representation will have passed through quite a different mind, with quite a different result.

31. Not to see anything is, so far as that particular thing is concerned, equivalent to blindness. When people talk of learning to draw and paint, they ought rather to say they are learning to *see*, for *that* is the main object of artistic education for amateurs. Artistic sight is not a natural faculty, but may be acquired, and the act of acquiring it gradually reveals nature to us æsthetically, and thus develops this new sense, which, being emotional, supplies pure food for the imagination.

Many persons would be indignant at being told that they knew little about the form of an ox or a horse. Let any one of them, however, sit down quietly and write such a desription of the form of a horse that we may know it in a group. Or, if he find this too tedious, let him take pencil and paper, and try seriously to *draw* one—the one he

knows so well and rides daily. The exercise may be of value to him.

32. Hamerton tells us, that although ‘accustomed to country life, and living summer and winter on a large farm, he never knew anything accurately about horses and cows till he began to make studies of them with a view to painting; and postponed the writing of an article on Rosa Bonheur from the humiliating conviction that, although intimately familiar with all the oxen on the farm, and their labours—personally friendly with them, even, and calling them by their names—he had not, in the deep, critical, and artistic sense, *seen* them.’

33. Observations are of little value without comparison, and for comparison we must have *standards* in the memory. It is recorded of Rosa Bonheur, that when she first began to study animals she bought a sheep, and kept it always by her in a Parisian apartment, and studied it in every detail till she knew it by heart; and no doubt it became her first standard. The haste and restlessness of the present age are such as to make us impatient of anything but the gorgeous and sensational. We should seek for the quieter, but not less wholesome and enduring, pleasure of rambling, sketch-book in hand, through some of our old English scenery; for *the true art of seeing and enjoying rests chiefly in sensitiveness and power of sympathy, and the true value of observation is in the noble thoughts that it excites within us.* It is in this way that we would have students cultivate a love for Nature in her simplicity, and a habit of observing accurately her subtle, hidden teachings.

CHAPTER IV.

ON HOLDING THE PENCIL.

34. THE hand, as a prehensile or handling organ, varies much in different individuals. In some, the fingers and thumb are long and mobile, whilst in others they are comparatively short and stiff; but practice in the latter case will soon surmount almost any want of physical adaptation. One of the most skilful performers on the pianoforte in this country has fingers so short that he can only reach an octave.

Much, however, depends on the way in which the pencil is held in drawing. Only one general rule can be given, and it is this—that it should be held in that position which is best adapted for the particular work to be done; certainly not with the fingers near the point, or with

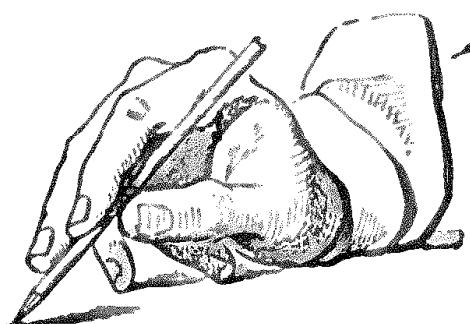


FIG. 7.

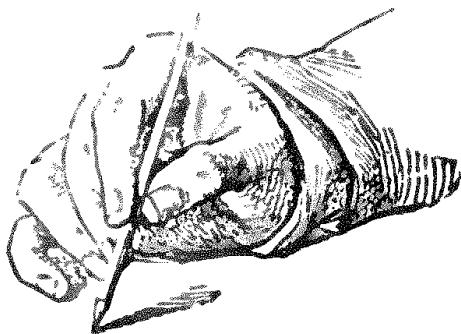


FIG. 7 a.

the knuckles up as when writing, thus (Fig. 7), but rather as in Fig. 7 a. Sometimes the pencil, being held between the thumb and first finger, and supported by the

long one, should pass along the first finger in an upward direction ; sometimes it should pass under the hand, held also by the other fingers, thus (Fig. 7 *b*), according to the

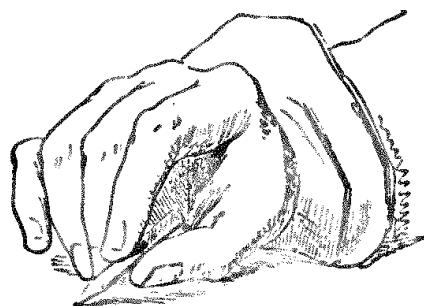


FIG. 7 *b.*

kind of work to be done ; and in all cases it should, as far as possible, be worked from the shoulder, especially when drawing at an easel.

As excellence in Art-work greatly depends on the tools or instruments used, the sharpening of the pencils is important. A set of pencils nicely pointed is quite a temptation to

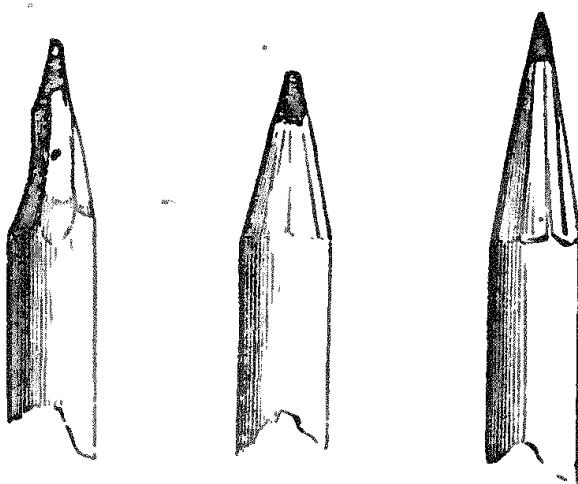


FIG. 7 *c.*

draw with delicacy and refinement. They should never be cut like the first two in Fig. 7 *c*, but like the third one, or even with a still finer point, except where it is intended to

shade broadly with the side of the instrument—then the wood should be left uncut on one side, so as to support the lead and prevent it from breaking. After the cedar is cleared away a small file may be used, or one fixed in a box, as in Fig. 7 d.

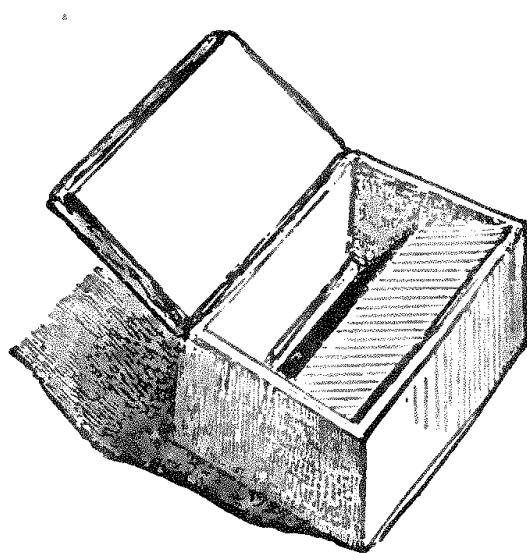


FIG. 7 d.

CHAPTER V.

ON LINES.

35. By a line is not here meant the abstract idea of length without breadth or thickness, but an elongated mark or stroke made by some instrument on a plane or surface.

36. There are only two kinds of lines, straight and curved, and by means of these all the infinitely varied and beautiful forms in creation may be indicated. If you look round the room, you will not find any object or pattern that may not be described by these lines.

37. A straight line may be defined as a point continued in one direction, or as the nearest defined distance between any two points.

Although there are really no lines in nature, we find the *idea* of the straight line in crystals, buildings, and in many things made by man, in which utility is the chief purpose; because generally it is easier to fit two plain or straight surfaces than two which are curved or irregular, as, for instance, in a box, or in bricks.

38. A curved line is one in which the direction is constantly varied. It is found chiefly, but not altogether, in things that are considered beautiful, as in leaves, flowers, the human form, &c.

39. There is beauty, however, in crystals, and even in the square; but the beauty of the square arises partly from

a sense of exactness, for if it be not exact it ceases at once to give pleasure and to be a square.

40. Both straight and curved lines are felt to be most beautiful when in combination, as in some kinds of architecture, vases, flowers, and trees.

41. When forms are made with the straight line only (as in Fig. 8) they are called *rectilinear*; when made with

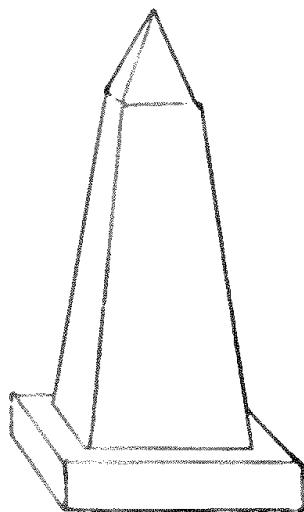


FIG. 8.

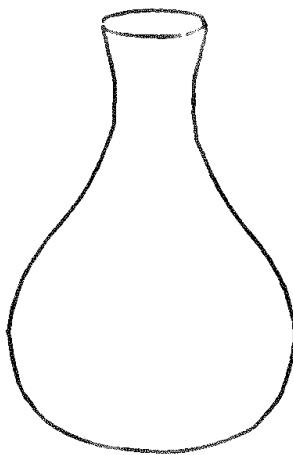


FIG. 9.

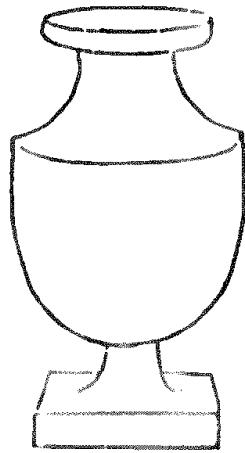


FIG. 10.

curved lines (as in Fig. 9) they are called *curvilinear*; and when composed of both straight and curved lines they are compound forms (as in Fig. 10).

42. A straight line can be placed only in three positions, viz. perpendicular, horizontal, and oblique or slanting. The perpendicular and horizontal positions never vary, and may therefore be considered and used as standard lines. Oblique or slanting lines may incline more or less, and the degree of inclination can only be estimated by comparing them with either perpendicular or horizontal lines.

43. In copying an example or a model, therefore, it is evidently absurd to begin with slanting lines : all the *standard* lines should be first drawn, and the slanting ones judged of by them. The importance of constantly testing all lines by those which are either perpendicular or horizontal can scarcely be too strongly insisted on, as there are no other means, in free-hand drawing, of attaining accuracy. (See, also, ¶ 105.)

44. By means of these two elemental lines all superficies and all solid forms may be suggested. If we continue a line at an equal distance from a point it will result in a circle, which is the archetype of all animal and vegetable forms,—the simplest and most economical form in creation, and perfect in its completeness. It is, however, an unity admitting no variety, and therefore has not in it the element of infinity, which consists in variety rather than in numbers. The square may be considered as the archetype of crystals and of constructed forms, such as buildings. The highest piece of future architecture—the New Jerusalem—is described as being ‘four square.’ This figure, however, like the circle, being fixed—admitting of no change—cannot be considered beautiful *per se*, but only in its application as to structure, and as a contrast to the curve. The most beautiful and the highest forms in Nature and in Art are made up of a combination of these two forms modified by elongation, and by the admixture of one with the other. This combination of the straight with the curve is found in its highest development in the human form.

CHAPTER VI.

ON OUTLINE.

45. OUTLINE may be understood to be the mere contour of any form (as Fig. 11). It may also mean a sketch with

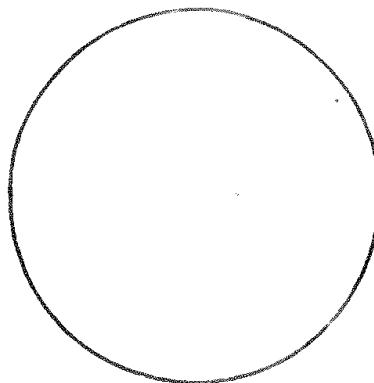


FIG. 11.

lines to indicate its general and leading characteristics, thus :—

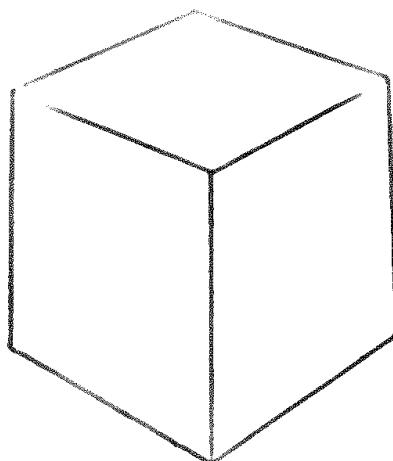


FIG. 12.

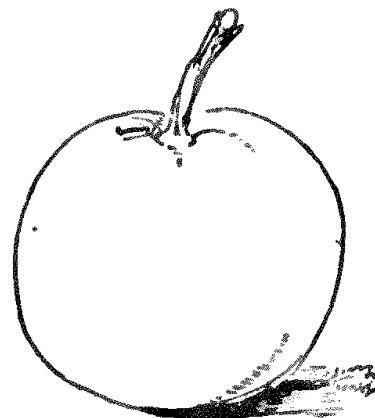


FIG. 13.

Some objects may be clearly indicated by outline alone,

as leaves, &c. ; whilst others cannot be satisfactorily expressed without shade—the sphere, for instance.

46. A flat contour may be greatly modified by a few indicative lines or markings on its surface ; for example, Figs. 15, 16, 17 are the same in contour as Fig. 14, but their character is greatly modified by the different markings.



FIG. 14.



FIG. 15.



FIG. 16.



FIG. 17.

Thus it will be seen that outline is most important, and often very effective, as it suggests to the mind an idea of many things which it would require long time and much thought and labour fully to describe. (See page 6, ordering a box.)

47. In drawing a Head, the first twenty lines will indicate more than a hundred lines can do afterwards ; for the former will give the principal facts of eyes, nose, mouth, &c., whilst the latter can only add *lesser* facts.

It is scarcely possible to overrate the importance of correct form as indicated by outline, inasmuch as no amount of shading will make a wrong sketch right.

48. The first efforts at Art with primitive man have always been in *outline*, just as we find in children's work. The aim is to get at the fact which the mind recognises,

rather than the appearance on the retina of the eye—to get the fact clearly stated without much regard to the means—and it is in this sense that drawing in its earliest employment was a kind of writing. The Greeks used the same word for writing and drawing, and there is little doubt they considered the processes the same. All the arts of design or drawing in their early development are essentially conventional, inasmuch as they are produced by lines, and there are no lines in nature. There does not appear to be any evidence to show that the earlier nations, such as the Babylonians, Assyrians, or Egyptians, had any knowledge of the fuller expression of form by means of the gradation of shade. We find them outlining their forms, and almost invariably in profile; then filling up the forms with flat tints of colour. Thus, until the time of the Greeks, the whole civilised world seems to have been satisfied with the impression of form only by outlines and flat tints.



CHAPTER VII.

ON SKETCHING.

49. THE first great mistake which young students in Art make, is in not taking sufficient time to place accurately the points which determine the principal parts of a drawing. Suppose a man were about to build a house, the first thing he would do would be to plot out the ground-plan most carefully and accurately ; otherwise all his house would be wrong. And when building, he would first secure the corners, testing them with the plumb-line and square before proceeding with the walls. So, in drawing, very much time, and error, and rubber, and patience, would be saved if young persons would only be persuaded to be sufficiently careful in plotting out, or fixing accurately, the chief lines and points in a drawing.

This can only be done by a constant use of right angles, real or imaginary, and by what is known as ‘blocking in.’ If the work to be copied be of the nature of scrolls (as in Fig. 5) or of leaves (as in Fig. 40), then straight lines should be used in every available part. This is shown by the lines, *a*, *a*, &c. (Fig. 18). This plan of using right angles, and of ‘blocking in,’ is very useful when drawing from casts, as well as from the flat.

Ordinarily it is best to commence near the middle of the drawing, with some leading line or object, and then to work to the right and left. The exact centre of a picture is

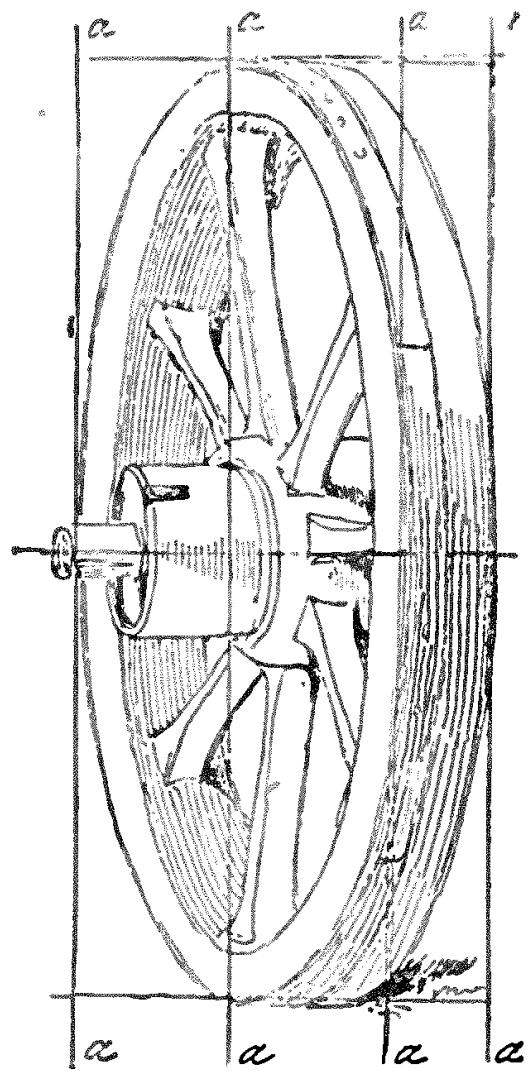


FIG. 18.



FIG. 19.

readily found by drawing diagonal lines from corner to corner of the paper, as in Fig. 19.

50. If it should happen that there are no important lines near the centre of the drawing, as in the woodcut (Fig. 20), then the principal horizontal lines should first be drawn, and the chief objects sketched in upon them. Never until the work is accurately laid in should the details be added.

Fig. 21 affords an example of forms which it would be almost impossible to reproduce accurately without the aid of perpendicular lines, by which to judge of the various curved and inclined lines, both of figure and drapery.

51. In drawing the human figure, it is always better to use as much as possible straight lines, as at *a* in Fig. 22, and never dotted lines as at *b*. It is only by the juxtaposition of a straight line that we can fully and accurately judge of the value of a curved one.

52. When the subject to be sketched has a clear and keenly defined contour, the lines used should be drawn cleanly and firmly at once, as in the various perspective figures in this work; but when such objects as tree-stems, rustic figures, &c., have to be sketched, then, instead of a cold single line, several approximate lines may be used (as in Fig. 23, *a*), but never dotted lines (as at *b*).

Objects composed of curves, such as Gothic windows, arches, &c. (Fig. 24), may be readily drawn by first setting up a framework of straight lines, by which to determine the degrees of curvature.

Fig. 20.

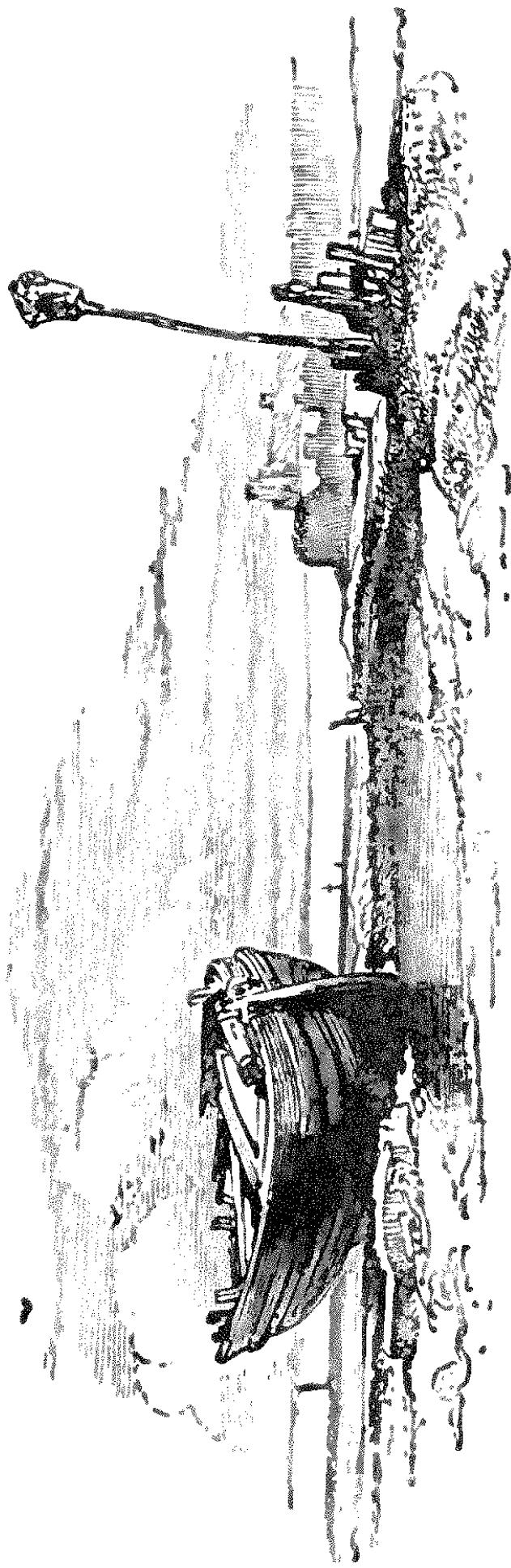




FIG. 21.

Showing the value of contrasting straight lines with curved ones.

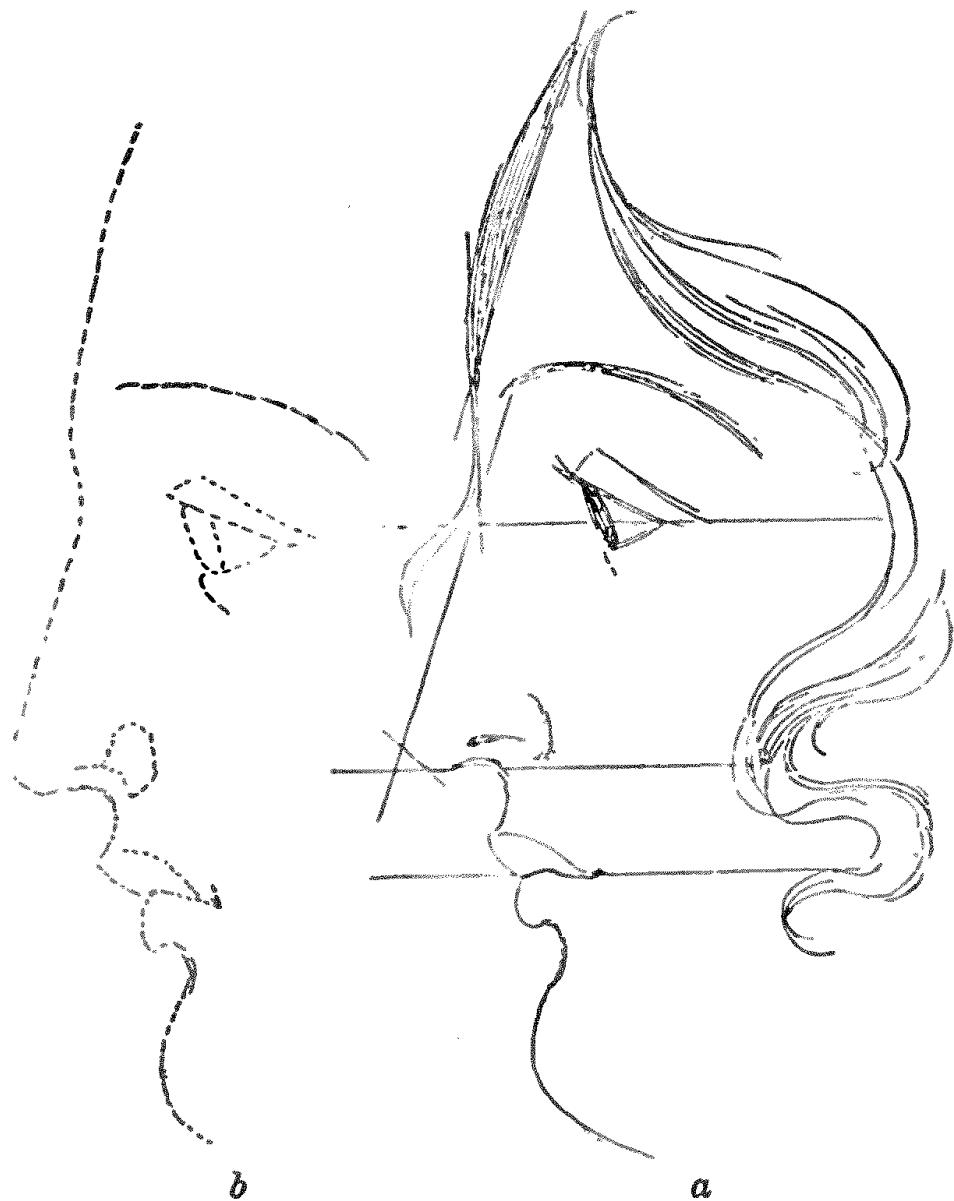


FIG. 22.

Faces should be drawn with straight lines, as at a ; never with dotted ones, as at b.



FIG. 23.

Tree-stems, especially when rough, may be sketched with several lines, as at a, but never with dotted ones, as at b.

53. The reason why in some cases a single line should be used, and in other cases several lines, is, that the eye inevitably follows a single and rigid line ; but where there are several lines, the eye rests on the surface included by them, as it does in nature ; the form is understood, and some idea is obtained of the texture and character of the surface.

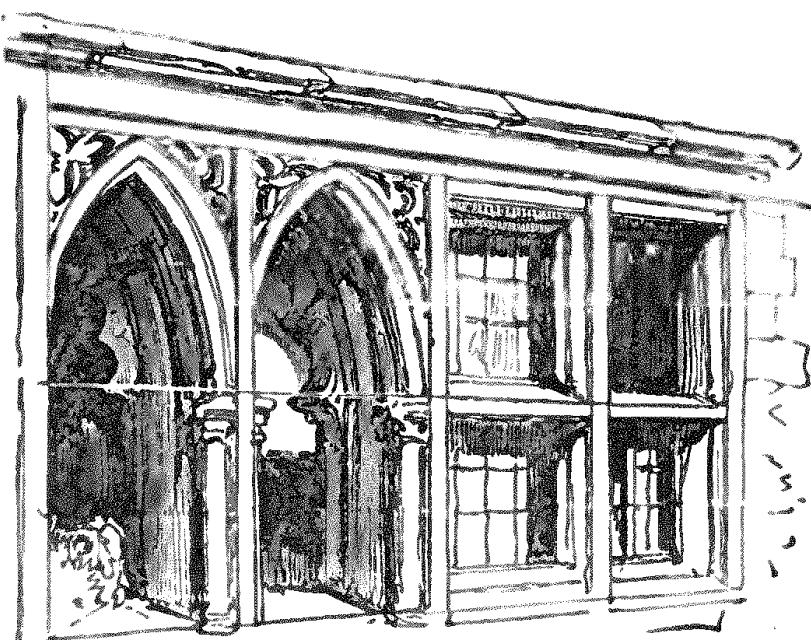


FIG. 24.

54. Any mechanical aids that may have been used in obtaining an accurate form should be cleanly removed before any shading is added, and the sketch or outline itself should be reduced to such faintness as not to interfere or obtrude itself in the completing of the work.

55. Although these remarks have reference principally to sketching from flat copies, they apply also to drawing from the round, and from Nature.

CHAPTER VIII.

ON LIGHT AND SHADE.

56. 'LIGHT AND SHADE' in Art should be considered as the means of modelling the surface confined by contour ; for *outline* is to *contour* what 'light and shade' is to surface —the outline leaves an object superficial, the 'light and shade' makes it solid ; and roundness and projection are the natural outcome of 'light and shade,' which takes away the appearance of flatness of the surface on which the drawing is made. It is nevertheless true that this modelling of a surface may be strongly indicated by lines only, but never fully expressed without 'light and shade ;' and in nature we are largely dependent on the same means for our knowledge of the projection of one thing from another, as, for instance, of the nose from the face, or of the forehead over the eyes. We become conscious of the wrinkles or creases in a face or on a piece of paper only as they may be revealed by the light and shade that is on them.

57. Before treating of light and shade as applied to Art, it may be desirable to state a few facts with reference to light and its action on bodies in various circumstances.

58. Light is defined as an imponderable agent which makes objects perceptible to the sense of sight, but the particles of which are separately invisible. Thus, although we

see things by means of light, we cannot see the light itself. If an object be placed before the eyes, and there be no light, it is of course invisible ; but if a ray, or a number of rays of light, fall upon the object, they are instantly broken by it, and partly absorbed and partly reflected in all directions. Some of these reflected portions entering the eye reveal to us the object, or, in other words, we can then see it. Whether the object is very light or dark will depend upon its nature, and the number of rays which it absorbs into itself, or whether it reflects into the eye. Some objects have the power of absorbing many and reflecting few rays, as will be shortly seen.

59. It must be remembered, however, that in drawing and painting, our highest light, which is white paper or white paint, is very much darker (less light) than white *light*, as may be seen by holding a piece of whitest paper in juxtaposition with the blue sky, or even a grey cloud ; and this is one reason why in Art we cannot compete with either the tender gradations or the scope or range of Nature, from her highest light to her deepest dark.

60. When any part or plane of an object is so placed that an equal number of rays are thrown from each part of that plane into the eye, it will appear equally light ; but when the object is so placed as to reflect fewer rays from one part than from another, there is gradation of light into shade ; and although shade may be generally defined as absence of light, yet, as there are degrees of light, so there are degrees of shade.

This will be better understood by reference to Fig. 25. Let a, b, c, d, e , represent equal spaces or planes on any object. Illumined from *, it is evident that as more rays fall on $a b$ than on $b c$, this latter plane, $b c$, will be less light

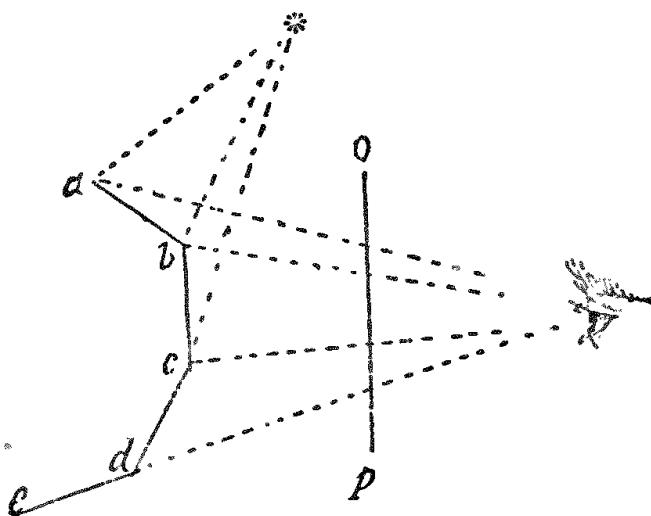


FIG. 25.

than $a b$. Further, as $c d$ receives scarcely any rays it will appear very dark, and $d e$, receiving none, will be invisible or black.

61. An object may be *actually* very light or very dark, but it will only *appear* so to the spectator in proportion to the number and intensity of the rays received on the retina. The quantity of rays that could be reflected into the eye from these various planes is indicated on the vertical line, $O P$. It will be seen that as $c d$ receives no direct rays from *, it can throw into the eye only such rays as it may happen to receive from surrounding objects.

The illuminating of objects may be further illustrated

by the diagram below (Fig. 26), where the lines, $a\ a\ a$, represent rays of light, and A B and c, planes intercepting those rays. It will be apparent that as the plane, c, intercepts all the rays, it will be lightest; but as B is placed obliquely to the rays, it cannot be so light; whilst A, being in the direction of the line of rays, must necessarily be quite dark.

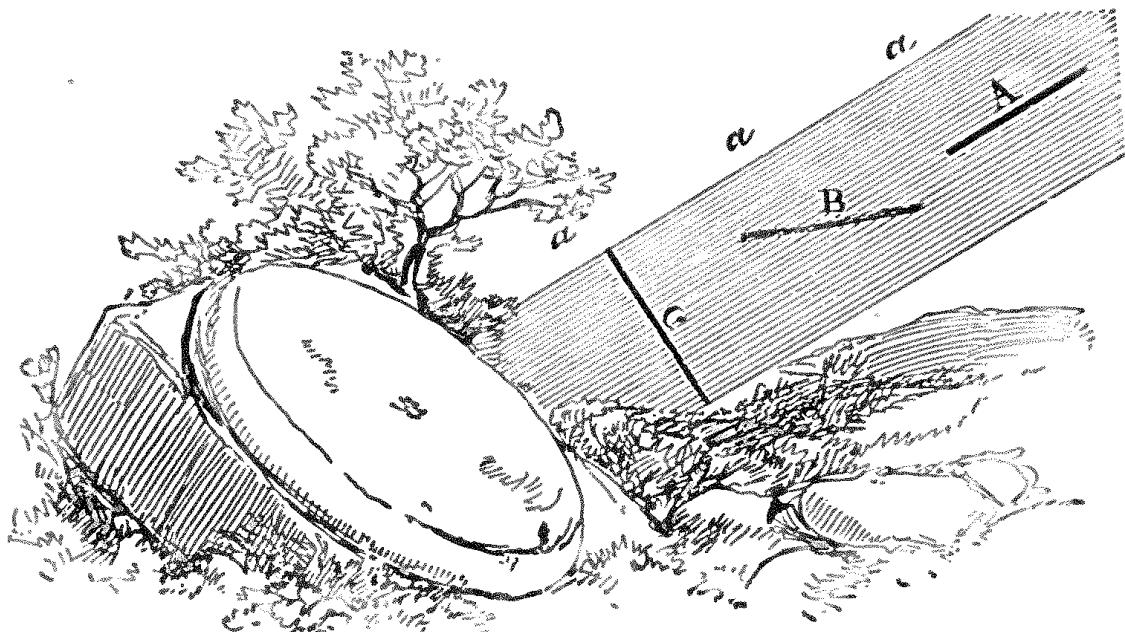


FIG. 26.

62. But there is another fact which must here be observed. When objects are not illumined from one point or focus alone, as the sun, but from surrounding objects, also, and from the particles of atmosphere, that secondary illumination is called reflection, and thus much visible shade is, in fact, but reflected light.

The atmosphere is seldom pure; even our bluest skies are said to be composed of infinitesimally small particles of matter, by which the rays of pure white light are broken.

Clouds formed of particles of vapour break and scatter the rays in all directions.

63. In some respects shade and shadow are one and the same ; for instance, they may both be defined as darkness, or absence of light, and they generally convey the idea of evenness — of an equal and unbroken tone of colour. Moreover, they both, however light or dark, have a degree of depth, transparency, and repose, which in Art should always be expressed.

As a matter of convenience in the practice of Art, and arising in part from its nature, it is desirable to divide this darkness, which we now speak of as shade, into shade, which is natural, and shadow, which is accidental.

64. All opaque objects receiving the light have some portion of their surface turned more or less away from the light, and have therefore an inseparable darkness. This is termed *natural shade*. But when the darkness is caused by an object intervening between the light and some other object it is called *accidental shadow*. For instance, in Fig. 27 you will see the accidental shadow of the hoop on the jar. This would of course be moved on removing the hoop, whilst the shade natural to the jar would remain.

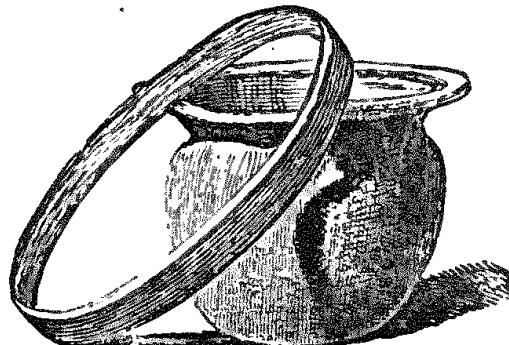


FIG. 27.

65. There is another term used in connexion with this subject which is very important, and but for which all

shades and shadows would be absolutely black : it is *Reflection*, which has been already referred to above.

By Reflection, then, is meant simply light thrown back from one object on to another.

The strength of Reflection varies greatly, according to circumstances, but in some degree it is almost always present.

White and polished surfaces reflect the most, whilst dark and opaque ones, such as black cloth, &c., throw back but little light. Even particles of matter floating in the atmosphere receive and throw off rays, and by these rays from all sides the parts of objects turned away from direct illumination are rendered visible.

As rays of light from illuminated surfaces are thrown off in straight lines in all directions, whether as direct or reflected rays, the position and proximity of objects to each other is very important in Art.

Generally, the greater the light is the stronger the reflections are, and, consequently, all shades affected by these reflections will be lighter.

This is a very important truth, and is so often lost sight of by young students that a few words of further explanation may not be out of place, and as no knowledge is better retained than that which is experimental, the student may gain experience in the following manner.

66. Get several pieces of white cardboard, say six or eight inches long, and as many inches wide, and cut them half through, so that they will fold and stand upright

(something like Figs. 28 and 29), and let one of them so stand on any *white* surface, as a sheet of white paper, and if possible in sunlight. Let another be placed in like manner on a *dark* surface, as a dark table-cover. Now make a comparison of the two, and it will be found that in the first case (Fig. 28) the lower part of the shaded side is much lighter than the upper part, because many of the rays of light from the white paper are thrown back or reflected

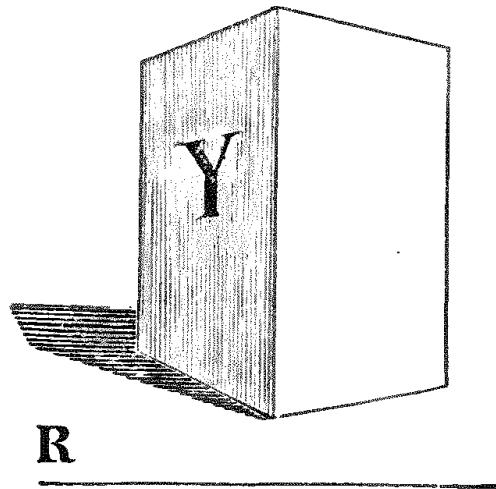


FIG. 28.

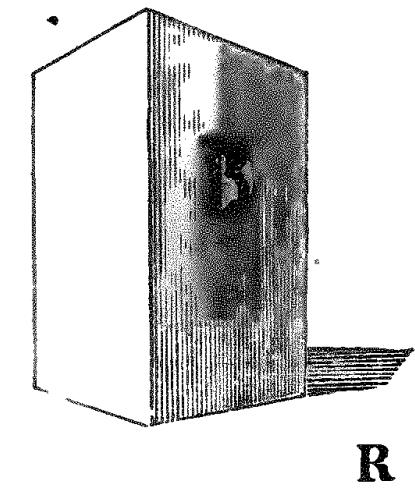


FIG. 29.

against it; whilst in the other case (Fig. 29) little or no perceptible change takes place, because the dark cloth, instead of reflecting the light, absorbs it. Except for reflection, the shade side of objects would inevitably be black—in fact, invisible.

67. If the student will now make the experiment with coloured surfaces, he will learn more fully the universality of these laws. Let Y (Fig. 28) represent the cardboard coloured, say Yellow, and R, the surface on which it stands,

coloured Red, and as before let it be placed in sunlight. It will be observed that the lower part of the shaded side, χ , is now of an Orange hue, because some of the Red is thrown back or reflected into the Yellow.

If, as in Fig. 29, the cardboard is coloured Blue, and the surface on which it stands Red, then the lower part of β will appear of a Purple hue: and so on, according to the colours and the nature of the material used, *ad infinitum*.*

68. It has been observed that substances vary greatly in their power of reflection. When rays of light fall upon an object, some of them are absorbed by the object, and the remainder are reflected in all directions.† It is these reflected rays thrown on the retina that enable us to see objects. This absorption of light takes place in all bodies more or less, and even water, when very deep, will almost completely absorb rays of light in certain degrees of incidence, and appear black. The difference between the highest known transparency and the deepest opacity (say, pitch or tar) is one of degree merely.

* The laws of reflection of colour, here referred to, apply only to *pigments*, and not to pure light, where some singular phenomena present themselves. For instance, Helmholtz has shown that Yellow and Blue rays thrown together into each other produce White light. In painting, however, we mix Blue and Yellow *substances* to produce Green.

† At a perpendicular incidence water reflects only 18 rays out of every 1000. When the rays strike the water obliquely, the reflection is increased. At an incidence of 40° , for example, water reflects 22 rays; at 60° it reflects 65 rays; at 80° , 333 rays; while at an angle of $89\frac{1}{2}^\circ$, where the light almost grazes the surface, it reflects 721 rays out of every 1000.—*Vide* Tyndall on *Light*, 2nd ed. p. 17.

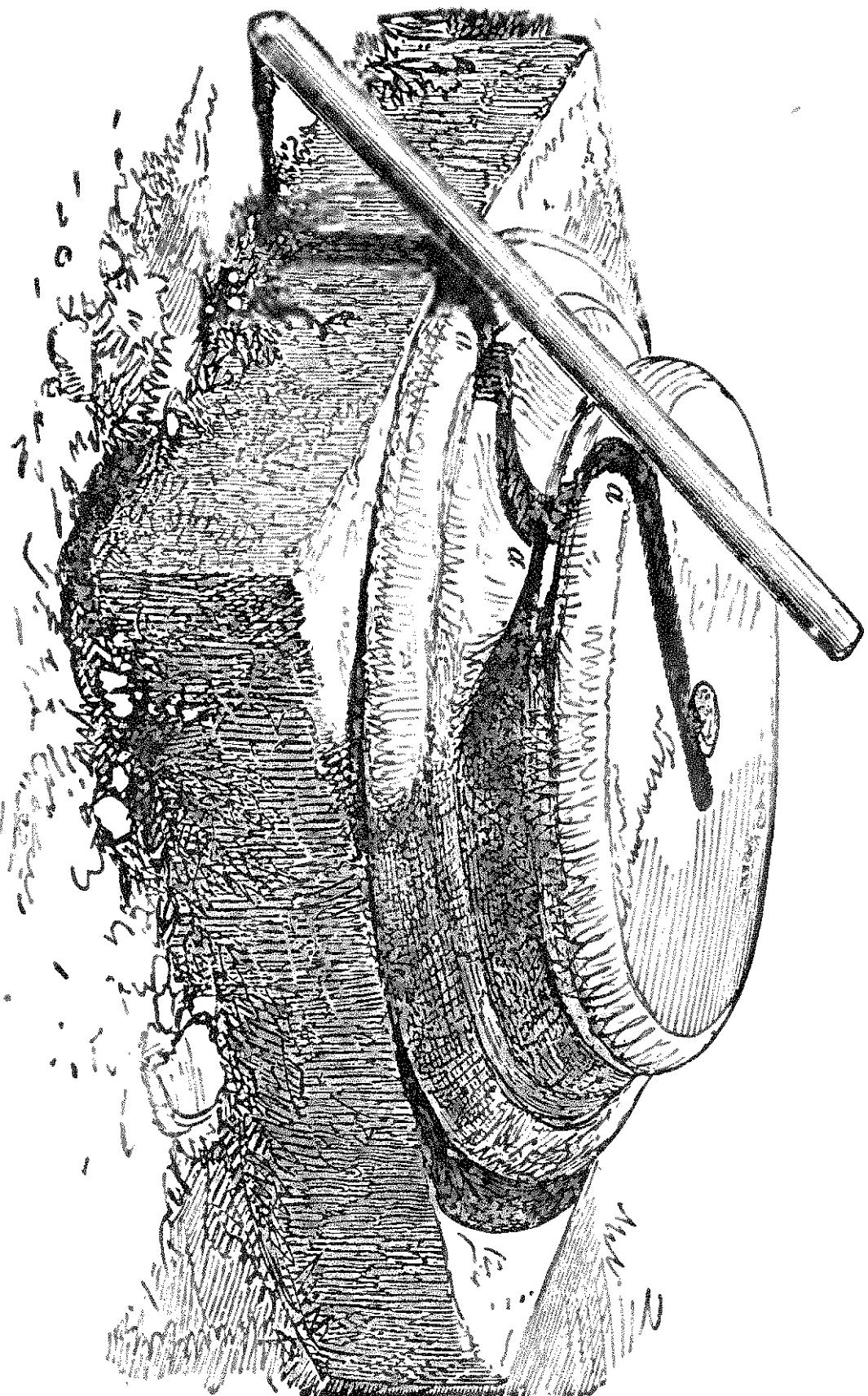
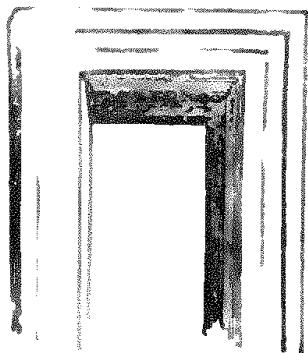


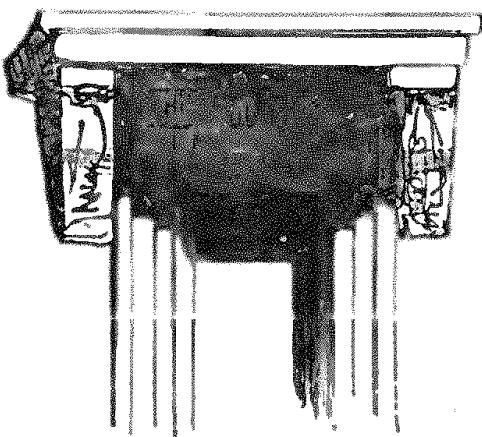
Fig. 30.

It will be evident, then, that if in Nature these laws are invariable and ever present, we can only hope for success in our efforts in proportion as we express them in our work.

69. We have said that when an object is interposed



Ex. 2.



Ex. 1.

Fig. 31.

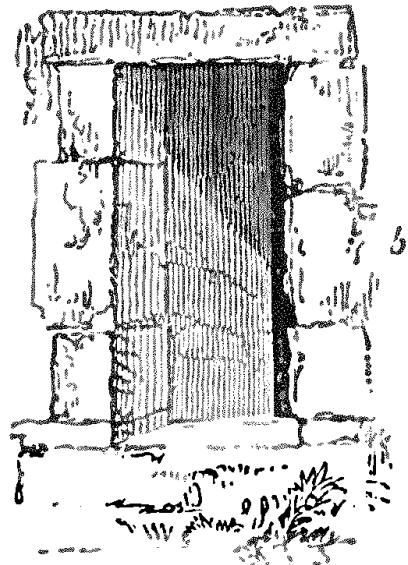
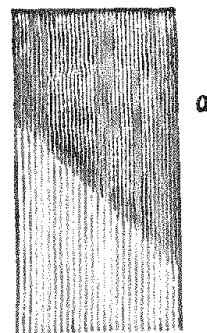


Fig. 31 a.

between the light and another object, the darkness so caused is called accidental shadow (see ¶ 64). *Shadow* does not usually reveal so much the shape of the object casting it as the shape of the *surface on which it falls*, as may be seen in Fig. 30, where the straight stick casts an

irregular shadow, according to the shape of the surface. Also, in the doorways (Fig. 31), the framework of both is the same in appearance, until, as in Ex. 1, a shadow is cast which at once reveals to us the depth or retirement of some portions of the mouldings. Usually the darkest part of a cast shadow is close to the object casting it. Fig. 31 *a* shows in a simple manner how the comparatively flat shade and shadow, *a*, may be made into a retiring space by the addition of a few accessories, as in *b*. Not only does a cast shadow reveal the surface over which

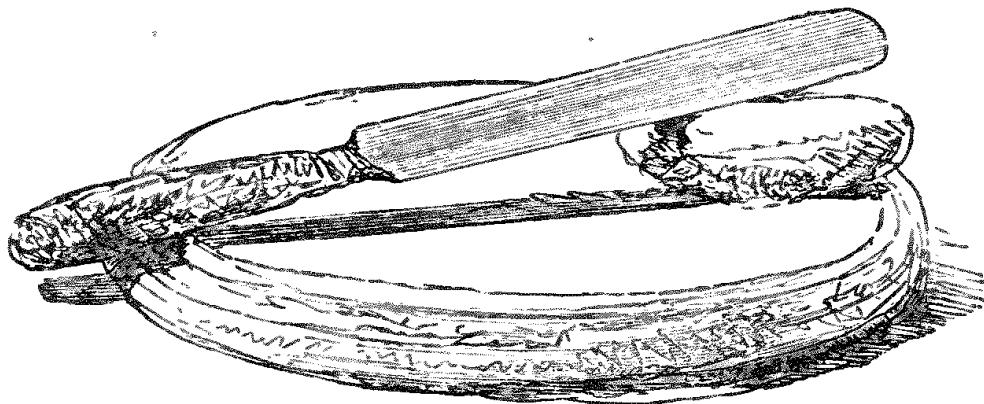


FIG. 32.

it passes, but it is *usually* well defined at the edges, as well as darkest immediately next to the object casting it. Evidence of this may be seen in the wooden platter and knife (Fig. 32). Sometimes, however, when the object casting the shadow stands away from the surface on which the shadow falls, the *edge* of the shadow is darkest, as at *a* in Fig. 33, where the shadow at *a a* is darkest at the bottom.

70. Shadows are ordinarily darker than shades, especially in sunlight and under a clear sky, and for this reason :

—Light passes through *pure* air invisibly;* but if there be particles, as of dust, or of water in suspension (cloud or vapour), these particles, receiving the rays, scatter them in all directions, and some falling on the shadow prevent it from being absolutely black.



FIG. 33.

71. When, however, the light is not bright, and there are clouds breaking up and scattering the rays they have not absorbed, the shaded parts of objects will be dull, and the shadow from them undefined.

* This may be readily shown thus:—In a room totally dark, bore a small hole in the shutter, so as to let in light *from the sun*. The beam of light will be invisible. Now cause a little dust, or smoke, or vapour from a kettle, to rise, and the beam of light will instantly become visible.

When the local colour of the objects is dark, and unreflective or absorbent of rays, these laws are not so apparent, and it is for this reason that white or light models are the best for students to work from.

72. The attention should now be drawn to another very important property of shade—its gradation on round

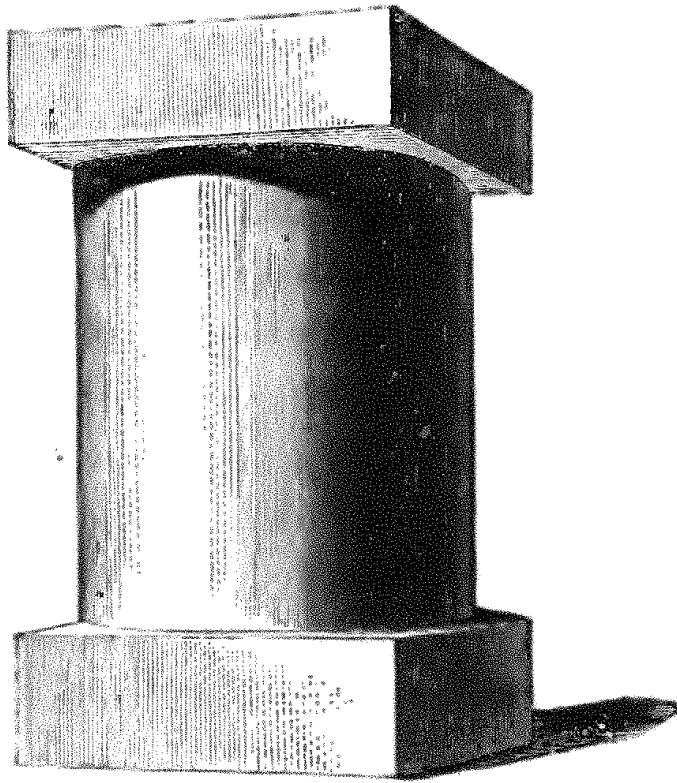


FIG. 34.

objects. We have already said that in all cases shade should be perfectly even and free from spottiness. This fact applies to shade under all circumstances, on round as on flat surfaces. The simplest form on which gradation can be seen is on a cylinder, such as the pillar (Fig. 34), or on a roll of white paper, where the gradation is in one direction only. If you have a sphere, such as an india-rubber

ball, you will see that the shade graduates in all directions, but regularly; whilst on an egg, or on the parts of a face, the gradation is much more complex.

The great aim in the working of graduated shade, however, should be to keep it not only even, but *tender*, for all fine work is delicate, and it is better to sacrifice some of the roundness of appearance than the delicacy of work. The shade on an egg is actually imitable. The shading on the pedestal in Fig. 34 must not on any account be taken as an *example*—it is quite too imperfect.

73. There is one more property in the use of *cast* shadows which may be briefly noted, namely, that they tell us the direction from which the light comes, and often the location of the object which casts the shadow. It is evident, for instance, that in Fig. 34 the light falls from the left-hand side, because the shadow on the ground from the pillar is on the right-hand side. If the shadow from an object assumes the shape of a cone, we infer that the illuminating body is wide in proportion; but if the shadow diverges as it leaves the object, we conclude that the light is small in proportion—as it might be of a candle.

74. The student may illustrate this for himself in the following experimental manner, by means of a bat's-wing flame, or by a flat paraffine flame. Let any object *narrower* than the width of the *flat* side of the flame be placed so as to cast a shadow on to a piece of paper on the table; it will be seen that it assumes the shape of a cone, and that its edge is somewhat softened. When the *edge* of the flame is turned towards the object, the shadow is sharp and clear,

and if the object be wider than the flame, the shadow will form a divergent cone.

75. In most of the illustrations given it will be observed that the shadow touches the object that casts it, and thus indicates that it is on the ground. In the two following illustrations (Figs. 35 and 36) the two pairs of feet are

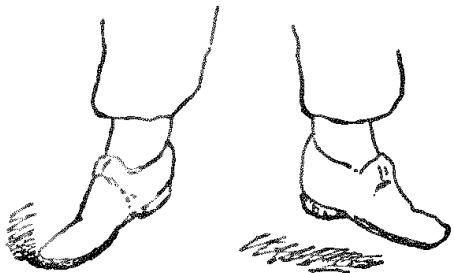


FIG. 35.

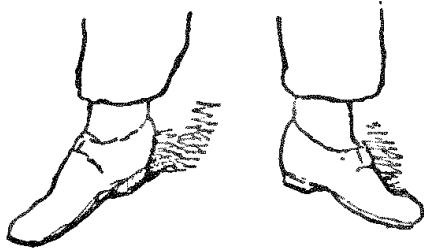


FIG. 36.

precisely the same, but by the shadows which they cast they are made to appear different.

76. Although there are no lines in Nature, it is often necessary to use them in expressing shade in drawing. These lines, however, should always be used in the direction of the surface they are intended to express : never as in Fig. 37, but as in Fig. 38 ; or even better, Fig. 39.

SUMMARY.

77. This chapter on Light and Shade is so important that it may be desirable to give a summary of it.

78. Solidity, roundness, and projection, are the natural outcome of light and shade, and we are greatly dependent on it for our knowledge of projection.

79. Light is an imponderable, invisible agent by which we see objects.

80. Light is in itself invisible, but becomes visible as it impinges on anything.

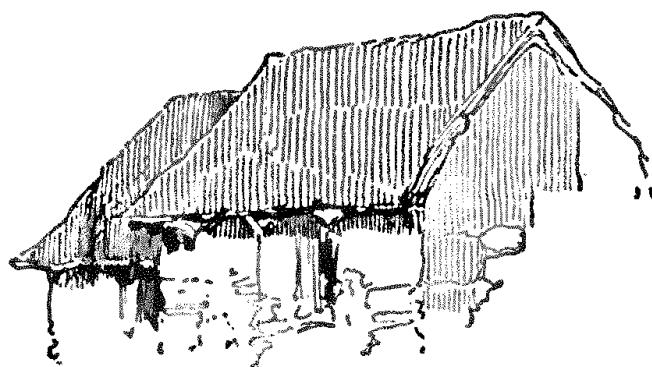


FIG. 37.

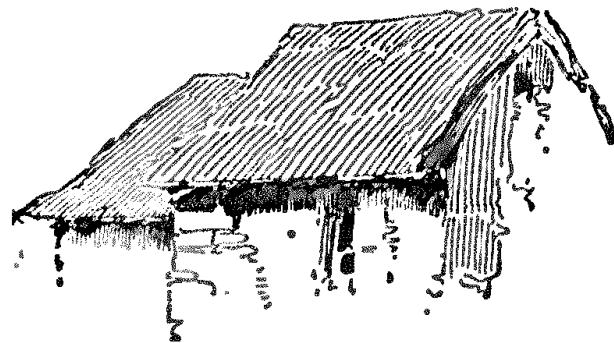


FIG. 38.

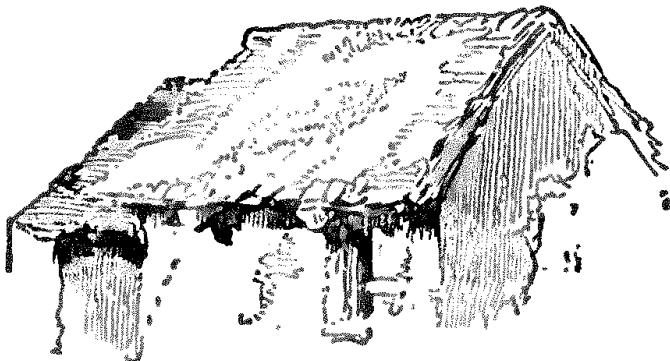


FIG. 39.

81. We see objects by means of the rays of light which are reflected from them into the eye.

82. Objects *are* light or dark in proportion as they absorb many or few rays, and they *appear* light or dark according to the number of rays they reflect into the eye.

83. Few objects appear quite black on their shaded side, owing to light being thrown upon them from surrounding objects or from the atmosphere.

84. Shade may be defined as absence of light in various degrees.

85. For convenience we divide shade into *natural shade* and *accidental shadow*.

86. Reflection is light thrown back on to an object from its surroundings.

87. The laws appertaining to ordinary white light apply also to its component parts—blue, red, yellow, &c.

88. Experimental results with prismatic colours and with pigment colours differ very much.

89. The difference between the highest known transparency and the densest opacity is said to be one of degree only.

90. Shadows usually reveal the surfaces on which they fall more than the shapes which cast them.

91. Shadows are ordinarily clearly defined at their edges, and darkest close to the objects casting them.

92. Graduated shade conveys the idea of roundness, and the simplest form of it may be seen in the cylinder, where the gradation is in one direction only.

93. In shading objects, tenderness and delicacy of work should be aimed at rather than darkness.

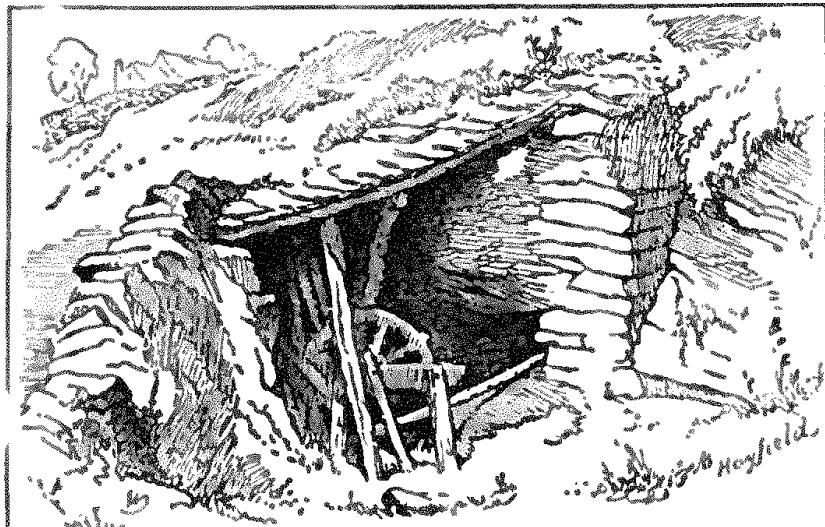
94. Shadows indicate the direction from which the

light falls on an object ; and not unfrequently the size of the light, whether great or small, in comparison with the object.

95. Shadows often to some extent locate the objects casting them, by showing that they touch a surface, or that they are removed from it.

96. When the light on an object is strong or bright, the shades light (showing much reflection), and the shadows clear, the idea of sunlight is conveyed.

97. We have hitherto spoken of light and shade only as applied to *objects*. Its application to, and uses in a picture, must be briefly treated in another chapter.



CHAPTER IX.

ON DRAWING FROM FLAT COPIES.

98. FEW departments of education seem to have been more entirely misunderstood than Drawing, and the practice of teaching it. By some it is thought that if good examples, whether of heads or landscapes, are provided, and the student has only patience enough to make a good copy, all is well. Now we do not deny that there are advantages to be derived from careful copying, but it should not for a moment be supposed that this alone is Art education. We have elsewhere said that the study of Art is twofold, a science and an art—a science to be known, and an art to be practised. But the two must operate in combination with each other. A language is not learned by merely copying its alphabetical characters, however skilfully, but by obtaining such a knowledge of its grammar as will enable the student to understand its structure and apply its rules. Few things can be more mischievous to a beginner than setting him to copy heads, such as Julien's, or landscapes, such as Hubert's, and especially such as those bearing the name of Raze. Even the copying of Harding's trees, without attending to the instructions contained in the text, can be of little advantage. The usual result of such a practice with thoughtless and stupid persons is idle deception, inasmuch as they

imagine that they have done something worthy or creditable ; whilst with intelligent and inquiring minds it soon ends in disgust, for, although they are unable to devise a better way, they are conscious of the worthlessness of this as a means of real development.

99. It may be inquired, then, Ought flat copies to be used at all ?—and, if so, what kind should they be, and how ought they to be used ? We reply, that much advantage may be gained by copying good examples *rightly*. We do not say merely correctly, but rightly ; not by the slavish and laborious imitation of an example, stroke for stroke and point for point, but by the honest carrying out of the *intentions* and *spirit* or *motive* of the example. Let it ever be remembered that really conscientious effort is as important in Art as in other studies, and its neglect can only tend towards moral delinquency.

100. The Department of Science and Art has issued an almost exhaustless series of outline studies—some of them very graceful—the copying of which affords excellent exercise for eye and hand, and is best suited to intending designers : this, in fact, was their original purpose.

On the other hand, busy publishers have issued an endless mass of lithographic examples, in landscapes, in heads, in flowers, &c., which seem generally to have been prepared more with a view to effect than truth. However these may be regarded by the student, he cannot do wrong in adopting a course that will *educate* his faculties in all that appertains to truth and beauty. It is proposed to sketch such a course here.

CHAPTER X.

SUGGESTIONS FOR A COURSE OF STUDY.

101. IN laying out a course of exercises for the student, it will be perceived that all his faculties will be called into use:—

- (A.) The eye to see contour or outline truly, and the hand to trace accurately what the eye sees.
- (B.) The mind to perceive delicate, even, and subtly varying shade, and the hand to produce it with a point—pen, pencil, or brush.
- (C.) The mind to distinguish the *appearances* of things, and the hand to sketch them from nature.
- (D.) The mind to learn the essential characteristics of things.
- (E.) The judgment to have regard more to the *purpose* of doing (viz. improvement) than to what is done (the drawing).

(A.) Taking this proposed course in detail, we find flat outline resolving itself into—

1. Rectangular figures, such as squares, parallelograms, &c.
2. Curvilinear symmetrical forms.
3. Mixed or compound forms.
4. Natural objects that are flat, such as leaves, and flat copies of objects.

102. In this course it is not to be understood that the entire stage of outline drawing must be completed before beginning the shading exercises or the sketching from objects. All three may be prosecuted simultaneously with advantage.

103. Outline is the simplest means by which form may be suggested or represented, and as an exercise it is best to practise it from outline drawings or from *flat* models. If a student can draw a square and an oblong (parallelogram) accurately, he may proceed at once to symmetrical and curvilinear forms, such as Fig. 40 (*a* and *b*), only much larger.

104. The order of procedure in which such outline drawings should be executed is as follows :—

1. ‘*Block in*’ the general shape, deciding upon the proportions.

2. Draw all the parts definitely.

3. Rub down all the lines with a piece of bread till they are only just visible, and then make the *true* outline, delicately but clearly.

105. To ‘*block in*’ the general shape, the student should proceed much as a sculptor would in preparing his marble ; first hewing out the form roughly, and, in the sculptor’s case, rather larger than will be ultimately required, but *always securing the correct general proportions*, and afterwards completing it. In Fig. 40, *a*, half the figure is left, only ‘blocked in.’

This method of working is very useful when enlarging or reducing a drawing. In enlarging or reducing always ob-

observe the *proportions* of the copy by dividing it into halves, quarters, or thirds ; then ‘block in’ these quantities of such size as may be determined upon. (See Fig. 40, b.)

106. The ‘blocking in’ need not be done with long curved lines, but with shorter straight ones—truth of quantity and form being the principal aim ; but afterwards,

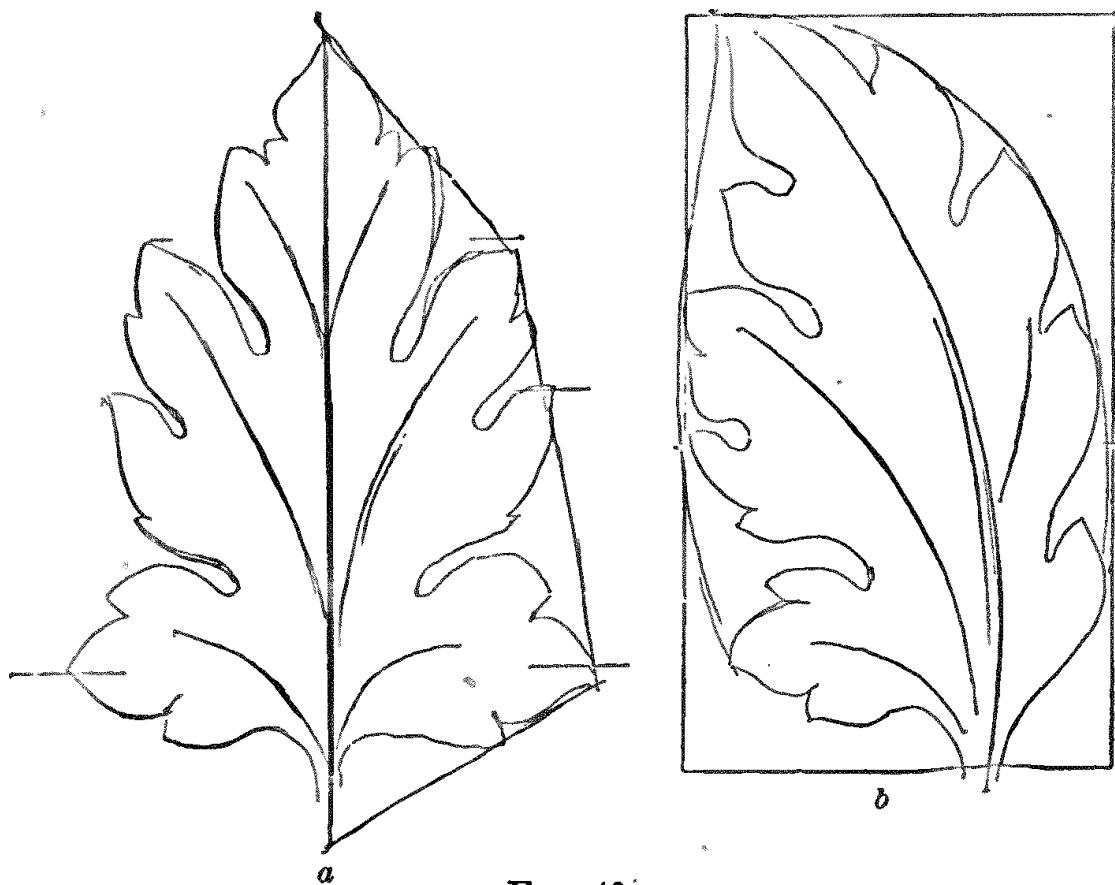


FIG. 40.

when the whole has been subdued with bread and made almost invisible, the pencil should be passed several times over a considerable part of any line *without touching it*, so as to get the hand into an easy and ready position for drawing with neatness and precision the final line. There should be no gradation or expression ; all should be *equal* in

depth and regular in appearance. But when copying projecting objects, such as boxes, boats, &c., from flat examples, squares should be used as guides, and varying emphasis may be given to assist in making some parts retire and others stand forward (as in Fig. 41).

When an example is copied the same size as the original, it is a good plan to test its accuracy by means of tracing-paper. This, however, should never be done till the copy is carefully made.

(B.) *The 'mind to perceive,' &c.*

107. The power to see and feel delicately is as important in shading as it is in form, and is the first step towards real success.

The student may begin first with a small piece of equal or flat shading, enclosed in an oblong of, say, one inch by one and a half. This enclosed space may be filled with equal shade in various ways. If the lead pencil be used, the space may be first filled with long, *soft* (never hard or wiry), parallel lines or bars, nearly touching each other, and afterwards the interspaces filled evenly up with a *finely-pointed* pencil. If a pen or the point of a brush is to be used, the work should be what is technically called '*cross-hatched*', that is, short lines in one direction are crossed with short lines in another direction; but as lines crossing at great angles

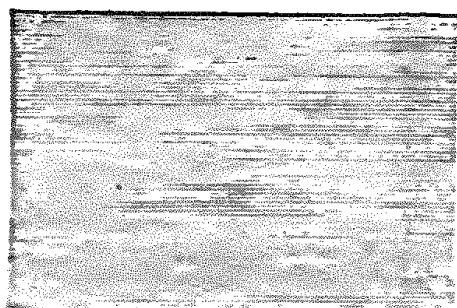
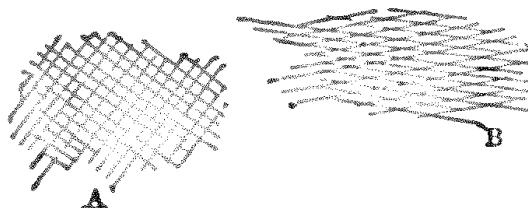


FIG. 41.



produce contrast, the angles formed by the lines should be very acute, as at B, and never as at A. When this



cross-hatching is quite dry the lines may be again crossed, till all the light spaces are filled, and the

whole area made perfectly even.

Sometimes, when the pencil is the instrument to be used, and the paper has sufficient texture or grain on its surface, a faint flat shade is laid over the whole space with a *stump*, made of leather or of paper, and then the work is completed with the point of pencil or chalk.*

108. On correcting errors.—In this shade exercise the student may find that some parts will require amending; for each exercise should be worked at till *quite even*. Suppose some part is too dark or spotty, the dark part should be touched gently with a crumb of bread rolled into a shape like— or, if this should fail sufficiently to remove the error, a small hole should be cut in a piece of stiff paper and laid on the drawing; then the offending dark part may be removed with bread or artists' gum (india rubber), and the light thus made stippled up to the required shade. In pen-work the knife must be used for scraping down any dark patches.

109. Gradation.—The second exercise in shading is

* This latter mode has been introduced into the Schools of Art throughout the country by the newly-appointed and energetic Art Director, Mr. Poynter, R.A.

similar to the first, but more difficult : for an oblong must be filled in with a perfectly even but graduated tint, the change from light at one end to dark at the other being *by imperceptible degrees*, like the shade on a chalk cylinder or on an egg.

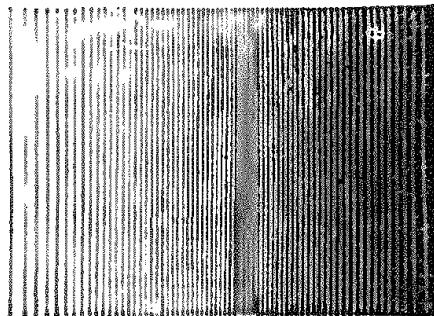
The power of graduating delicately is very important, and should be practised again and again till perfect mastery is obtained,—once obtained, however, the student may know that he has made real progress.

When the stump is used in graduating a surface, it is best to proceed as follows :—First, lay a perfectly flat, even, light tint, over the parts requiring shading, and afterwards proceed to lay in the darker parts, so tenderly as not to be easily perceptible. Never, when shading light objects, such as china, eggs, plaster casts, &c., make the shades dark, but always light and tender. All good work is *delicate*, though not feeble.

(c.) '*The mind to distinguish,' &c.*

110. If the student has read the Introduction to this volume, he will have learnt that very few persons can see at all truly, and that this is no fault of the eye, but of early training. It would be well if he would now read again the remarks 'On the Eye' and 'On Seeing.' (Chaps. I. and III.)

111. It is evident that no representation of an object



on paper can appear quite the same as the original does ; for in nature the image of the object is presented to the mind from two points of vision, represented by the two eyes, and is really a blended image of two views. This, of course, cannot be put down on paper,* for *Art recognises only one eye*. It is, therefore, better for the student at first, when sketching the outline of any form, to use only one eye, and to treat the object as though it were perfectly flat. Some students find it a help to imagine a piece of glass placed in front of them, and the contours of objects traced on the glass. For students who have much difficulty in seeing things as they appear, the ‘Diascope’ (see Appendix), or a piece of glass with squares ruled on it, will be of great service.

112. It is in this stage of his work that the student will feel the disadvantage of not having drawn *from objects* in his childhood ; and every opportunity of sketching objects should now be seized, not so much in making set and formal studies, as in jotting down very frequently the shape of anything about him, and on any paper that happens to be conveniently at hand. A common, cheap pocket sketch-book, carried in the pocket ready for use, will be convenient.

113. As to systematic work, it is best to go through a regular course of *object drawing*, making such application of perspective rules as artists do ; an explanation of which will be found under the head of ‘Artistic Perspective’ in the present work.

* This is seen in the Stereoscope.

We may, however, here state, for the benefit of beginners, a few facts in connexion with the appearances of some simple elementary forms.

If a square sheet of paper or cardboard be held in front of the face and parallel to it, the actual shape of the square will be seen (Fig. 42); but if it be laid on the table, still keeping one edge of the paper parallel to the spectator, it will appear foreshortened

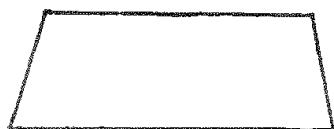


FIG. 43.

(Fig. 43). If it be raised a little from the table, keeping it quite

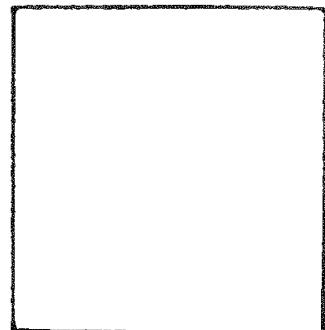


FIG. 42.

horizontal, the figure will appear narrower and narrower, as at *a* (Fig. 44), until it is raised to the level of the eye,

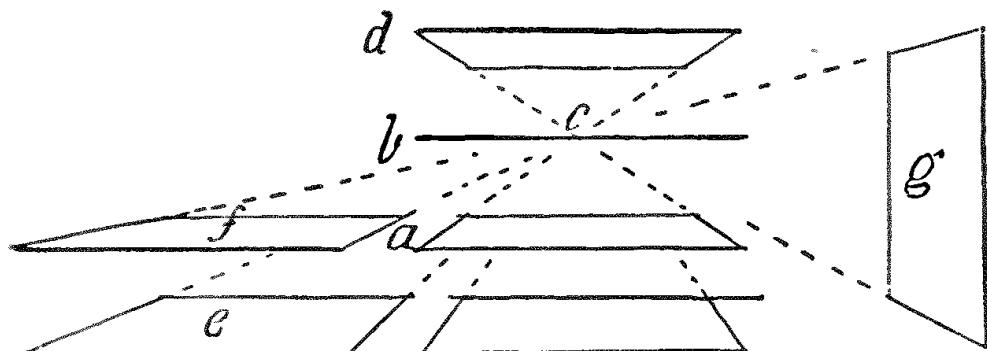


FIG. 44.

when the square is lost in a line, as at *b*. Raising it higher, it assumes the shape seen at *d*. If the retiring side lines of each square be continued or ‘produced,’ they will all appear to converge towards a point in the centre of the line, *c*, exactly opposite the eye of the spectator. This is parallel perspective.

114. If we now place a square piece of cardboard on each side of the first one, and *still parallel to the spectator*, we shall find a similar result, as shown at *e* and *f*, where all the receding lines appear to converge towards the point opposite the spectator's eye, which in parallel perspective is called the vanishing point, and usually marked v. p. Of course, the same remark would apply to the circle, if placed in any of the squares.

115. If the square cardboard be placed with one edge on the table, and exactly opposite the spectator, and its plane vertical, the sides will not be visible, and it will have to be represented by a vertical line. If, keeping it in the same direction exactly, it be moved a little to the right hand or to the left, the plane becomes again visible, as shown at *g* in Fig. 44; the retiring lines converging towards the v. p. (vanishing point) opposite the eye.

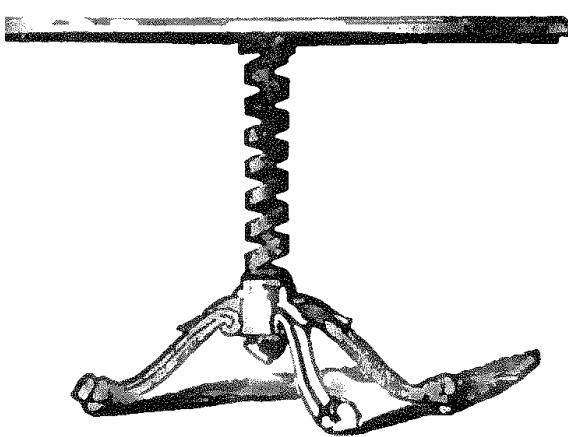


FIG. 45.

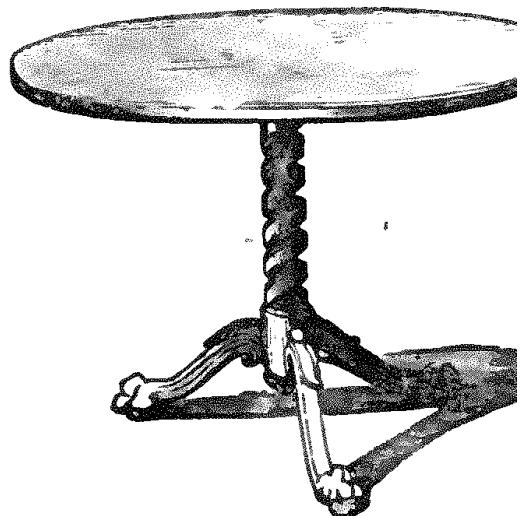


FIG. 46.

116. We have a similar result of foreshortening in the two views of the round table (Figs. 45 and 46),

and in the four retiring planes of the transparent cube (Fig. 47).

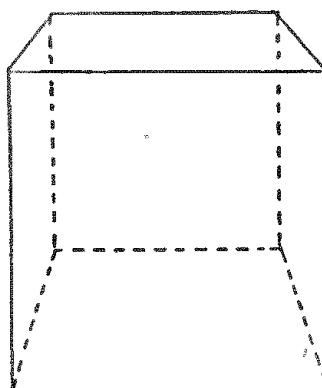


FIG. 47.

117. Now let the square cardboard be laid on the table, with one corner towards the spectator: the appearance will be as seen in Fig. 48. As the cardboard is raised

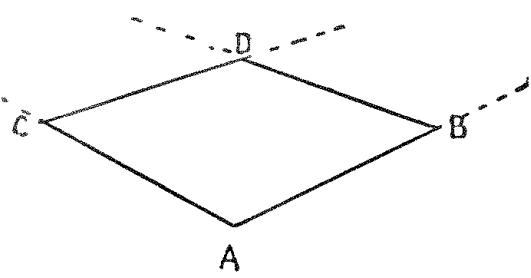


FIG. 48.

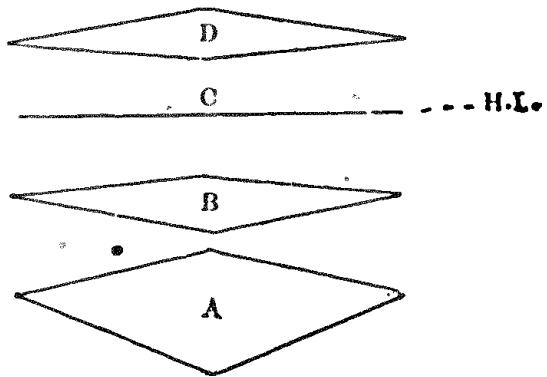


FIG. 49.

more nearly to the level of the eye (still keeping it horizontal), it will appear narrower (as A, Fig. 49). Raising it almost to the level of the eye, it assumes a shape as at B; and finally, when it is exactly level with the eye, the whole square is lost in the line, C, and forms part of the H. L. (horizontal line). If the card is raised above the eye a little, its shape will appear as at D. It will be observed,

that in this view of the square the retiring lines go in two different directions, to the right and to the left, but that all those *lines which are parallel to each other recede to the same point*. This view of the square is called angular or oblique perspective.

118. In this instance the two outside corners are at the same distance from the spectator, and therefore on the same level. Further, if the retiring lines on each side be extended, they will meet on the level of the eye (H. L.), at the same distance on each side from the square.

Suppose, now, that the square cardboard be placed so that one outside corner is further from the spectator than the other, we shall have a result as follows (Fig. 50):—

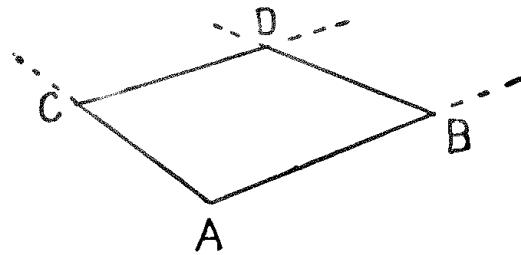


FIG. 50.

The corner, c, will be higher than b, and the line, a c, shorter than a b. The angle, d, is not over the nearest angle, a, and the receding lines, a c and b d, when continued, terminate on the 'H. L.' much nearer to the figure than do the lines a b and c d.

119. A few careful exercises drawn from the square cardboard, or from a square of wire, placed in various positions, will prepare the student for entering more fully into the drawing of cubical objects, such as boxes, chairs,

houses, &c., by rule, as shown in the chapter on ‘Artistic Perspective.’

120. In drawing from objects the student should be careful not to alter his position when viewing his model, as, of course, it will appear different from each new point of view. Sometimes beginners use an ‘eye-stand’ (like Fig. 51), which is simply a strong upright wire on a stand, on which a piece of card slides up or down: a knitting-needle stuck into a pincushion, or into a block of wood, will do. In the card is a hole, through which to look at the object again and again without danger of changing the ‘point of view.’

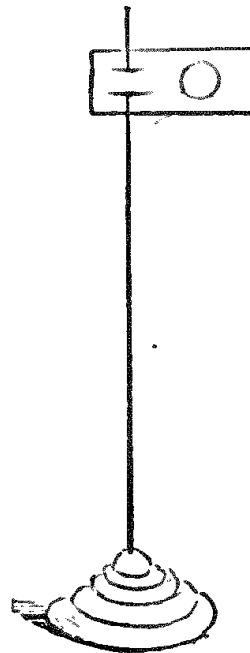


FIG. 51.

121. One of the principal difficulties that the beginner meets with in drawing from objects is in determining the apparent width of their *retiring planes*. Only experience will enable him to overcome these difficulties, though he may be greatly assisted by using the Diascope, or a piece of ruled glass before referred to. The most common mistake is in making retiring planes too wide, as in the chair-seat in Fig. 52, instead of like Fig. 53, which is more agreeable.

122. In drawing cylindrical forms, such as mugs, basins, &c., a frame-work should always be made, so as to keep the lower lines curved in relation to the upper lines. Such frame-work may be drawn as in Fig. 54, or as in Fig. 55. It is a good plan for the student to consider the

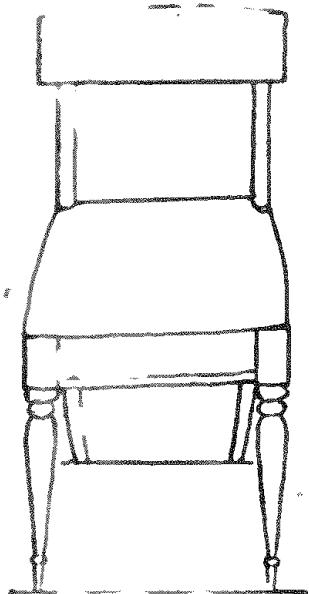


FIG. 52.

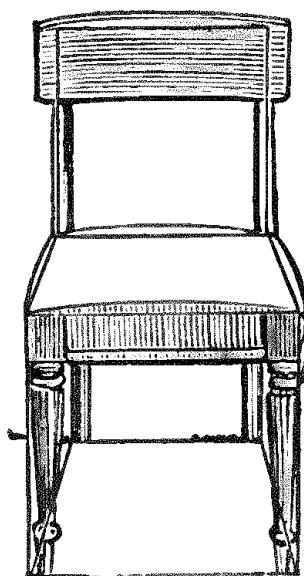


FIG. 53.

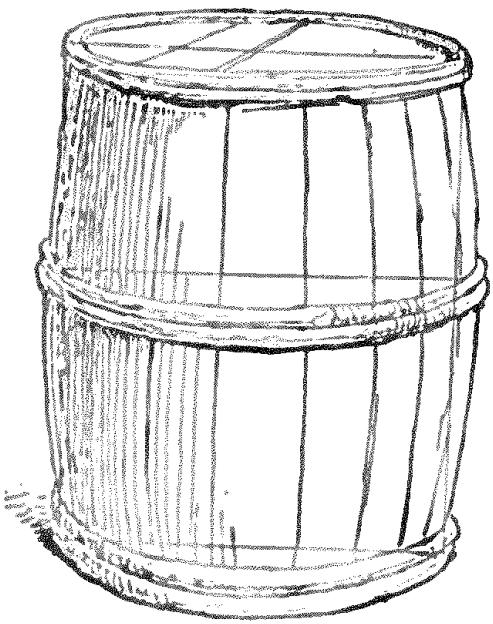


FIG. 54.

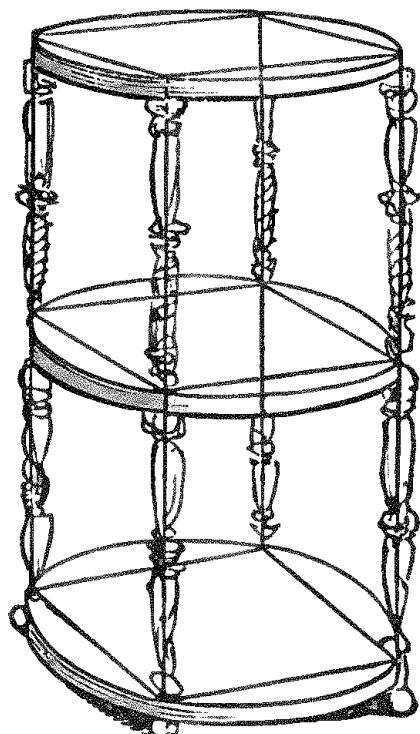


FIG. 55.

object as transparent, and draw it accordingly. The common error in drawing forms of this kind is shown in Fig. 56, at A, where the two outside vertical lines are longer

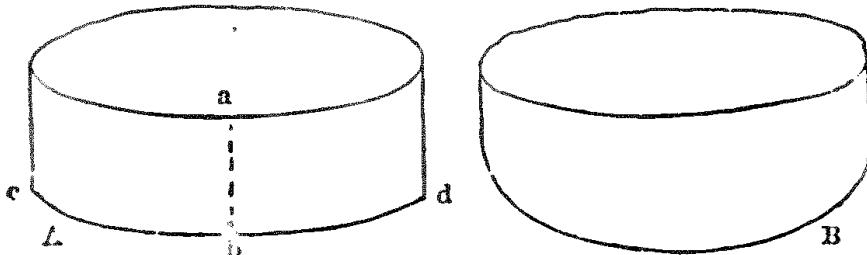


FIG. 56.

than the nearest line, *a b*, and where the lower curve terminates at each end in a sharp corner, *c d*.

123. The habit of imagining a plane of glass for the picture plane, between the spectator and the object, and viewing it only with one eye, will often greatly assist in ascertaining accurately either the inclination or the curve of a line.

124. The square, the cube, and the cylinder, form the basis for drawing most other regular forms, and should, therefore, be carefully studied and well mastered before attempting irregular and intricate objects. When the student has gone through this course conscientiously, he will be fitted to proceed to the study of any special department of Art, as landscape, figures, &c.

(D.) '*The mind to learn,' &c.*

125. Another stage in this course will be to gain the habit of so looking at natural objects as to be impressed with those properties or qualities about them by which they are most clearly distinguished from other objects and

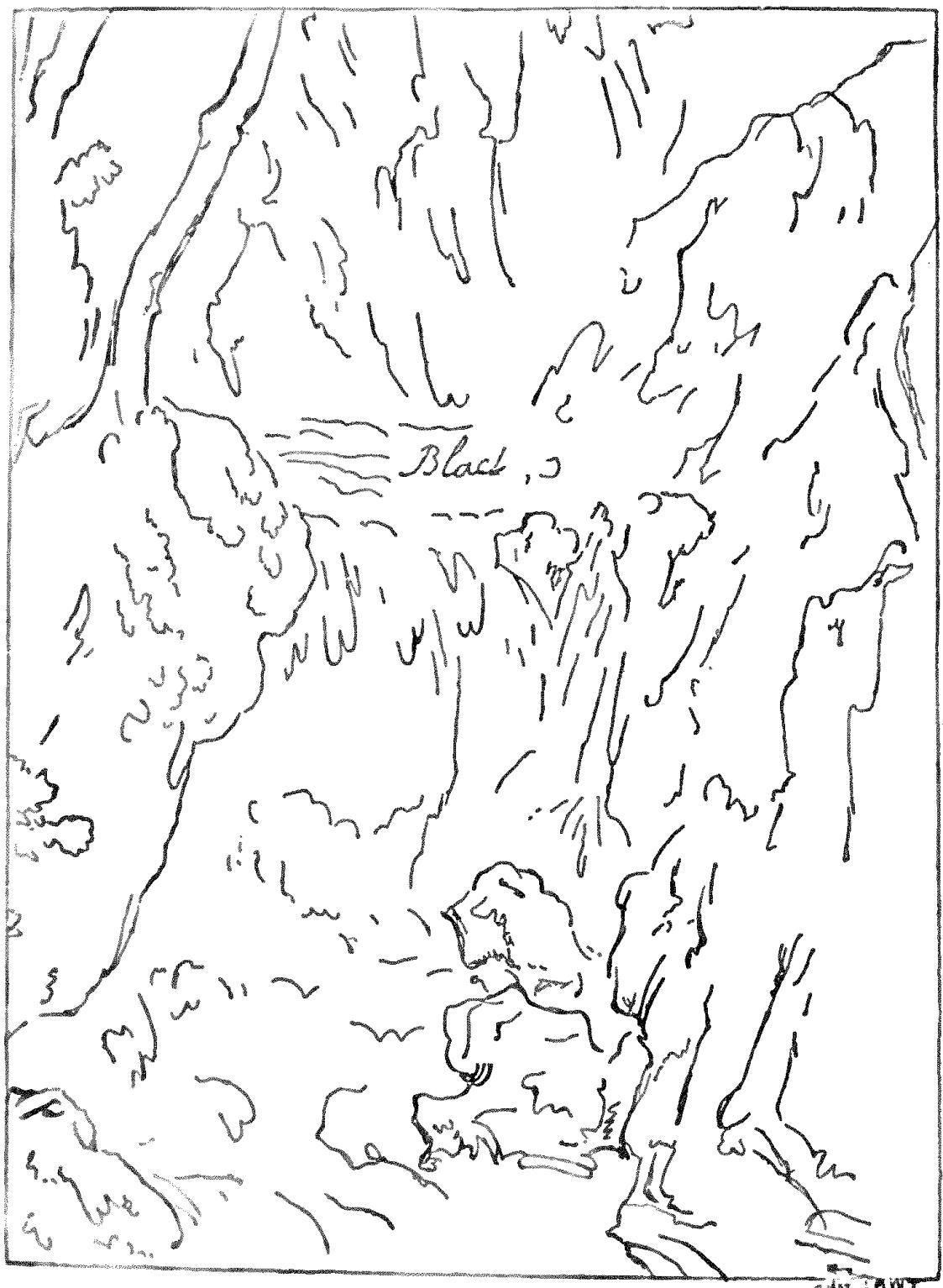
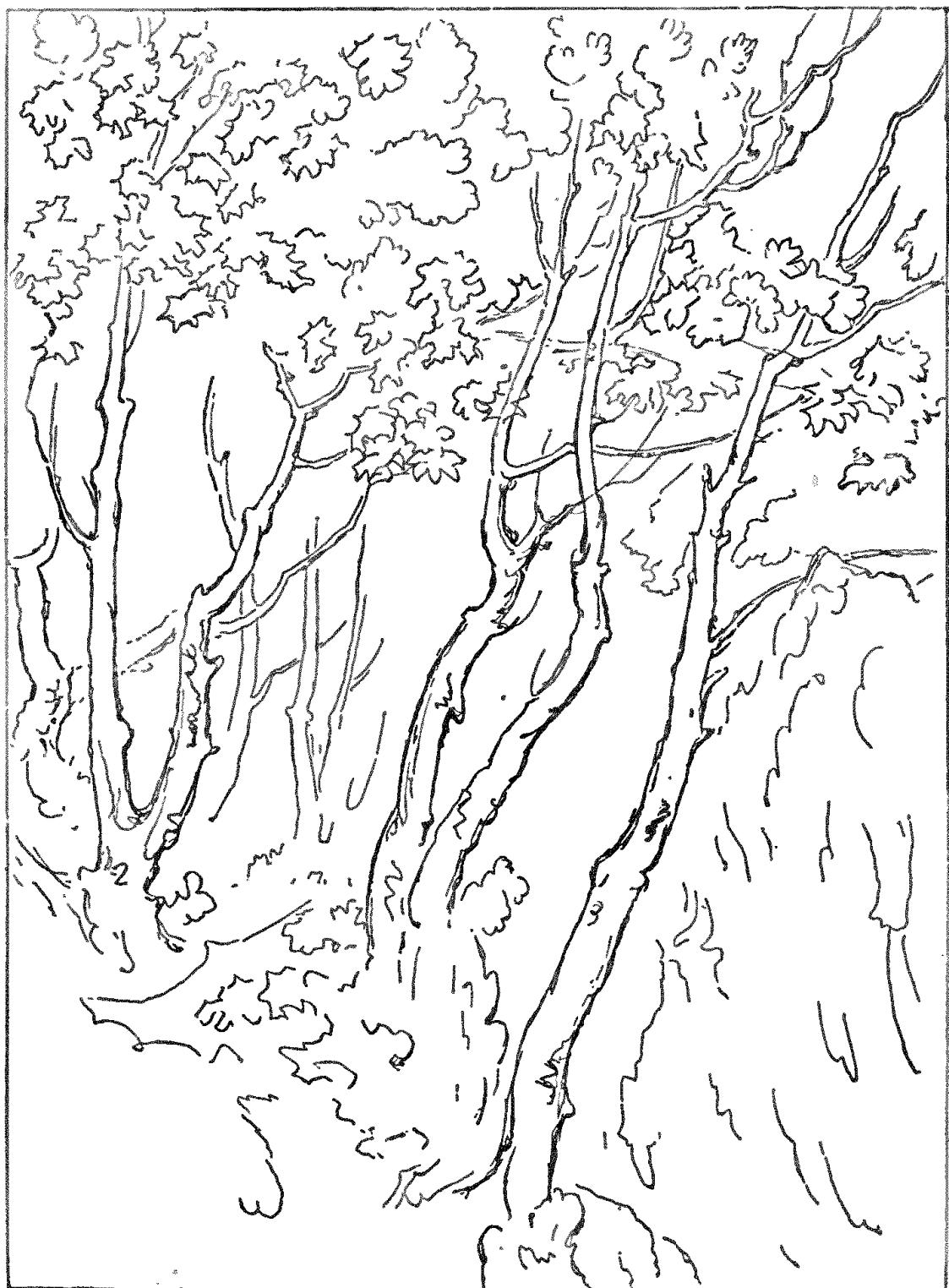


FIG. 57.



After J.M.W.T.

FIG. 58.

from one another. In a simple way this is explained at some length in Chaps. III. and XVI., ‘On Observing Nature’ and ‘On Character.’

This habit is but another term for the power of seeing, which has been elsewhere spoken of. It should be begun in childhood, in what are known as ‘object lessons,’ and in some of the exercises of the ‘Kindergarten’ system. A student who has not had such advantages, nor the great advantage of watching others draw, may do much for himself by a few set exercises, both from drawings and from nature. Some good examples of what is here meant may be found in several of our comic serials, where the peculiarities which are strongly characteristic of a thing or of a person are slightly exaggerated, and which, though grotesque, have in them much truth.

126. The power of observing the essential characteristics of a place was one of Turner’s most striking peculiarities. Wherever he went he was perpetually observing and sketching ; and although some of his sketches were almost unintelligible to others, to himself they were full of meaning. A curious example of this (a Sunrise) is shown by Mr. Ruskin in *Modern Painters*.* The illustrations given in Figs. 57 and 58 are from a slight pencil-sketch of a Waterfall by Turner, in the possession of the author. They are as nearly as possible like the original as the mode of reproduction would allow, and bear evidence of the fact that he had a definite intention in every stroke of his pencil.

* Vol. v. p. 187.

(E.) '*The judgment to have,' &c.*

127. The unreasonableness and impatience of ignorant persons, in expecting large results from small and brief exertions, have been most mischievous to those who have had to do with Art, whether as teachers or as students. A would-be amateur applies to a teacher for a few lessons, to enable him 'just to dash off a few telling effects from nature with his brush. He has never drawn much, and does not care for the pencil ; all he wants is just to be able to paint effectively and quickly.' Now, in such a case as this, one of two things is certain—either that our would-be amateur must be wonderfully gifted, or that the teacher must be uncommonly stupid to have taken so many years to acquire that which is to be learned in a few lessons.

In all true artistic feeling, the *pursuit*, not the result, is the *reward*; for where Art is rightly pursued, it produces a continual satisfaction in the fact that, however slow, there is progress, and that progress is sure; and although the work done may have no mercantile value whatever, it may be regarded as the effort of an immortal mind striving to improve itself, and, therefore, precious.

128. After going through such a course as is here sketched out, the student will find that his eye and hand have been brought under strict discipline, his perceptions quickened, his feelings made sensitive, and his whole being brought into sympathy with truth and beauty in Nature and in Art. He is thus prepared to enter with confidence of success into any technical application of drawing, or is able to develop his faculties for still higher enjoyments in that outward manifestation of God which we call Nature.

CHAPTER XI.

ON CONTRAST.

129. CONTRAST and gradation in Art may be considered as almost opposite terms—the former revealing, and the latter concealing, many forms and facts. Contrast is exciting and irritating, whilst gradation is soothing and agreeable.

In order properly to understand contrast, the student would do well to make it an experimental inquiry.

130. If, at night, the upper portion of an open book be held vertically against the strong light of a lamp, and the rays from the lamp be allowed at the same time to enter the eye, the letters on the upper part of the book will be invisible, or nearly so, whilst the characters on the lower part of the page can be readily seen. The rays of light entering the eye, being so strong, cause the ‘pupil’ to be contracted, and the rays from the book are too feeble to render the letters visible.

131. The eye is similarly affected, but in a less degree, in the following diagram (Fig. 59).* Let Λ and Λ' represent two pieces of paper, shaded with a perfectly even and equal tint. Let B and B' likewise represent two similar pieces of paper, with a similar perfectly even and equal tint, only *darker* than Λ and Λ' . Now let them be placed

* Chevreul on Colour.

as in the diagram, when it will be seen that the order of darkness will be as follows :—A 1 will appear the lightest ; A 2, darker ; B 3, darker still ; and B 4, by its juxtaposition to A 1, darkest of all.

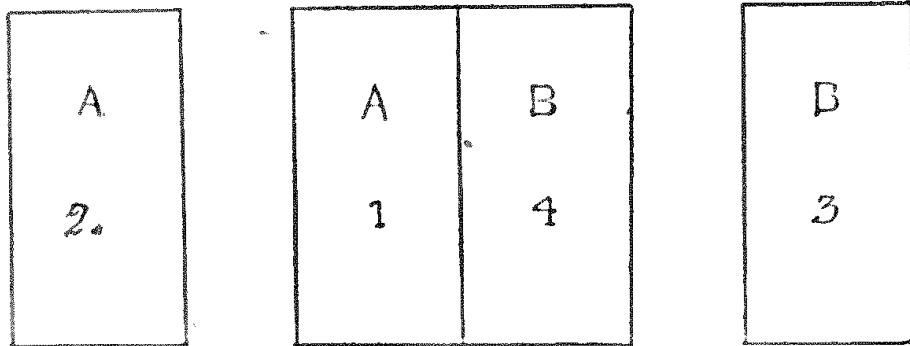


FIG. 59.

132. This force of contrast will be more strongly apparent in the following experiment, which, if made on a moderately large scale, may also be a good exercise for the student. Obtain a number of strips of paper, and let them be lettered, numbered, and cut into widths bearing a similar relation to those marked A, B, C, &c., in Fig. 60.

A	B	C	D	E	F	G	H	I
3	5	4	3	2	1	0	1	2

FIG. 60.

Let G remain clear. On all except G lay a perfectly flat wash of colour (say Sepia) ; now, on all except F, G, and H, lay another flat wash. On all except E, F, G, H, and I, lay a third. Lay a fourth wash on A, B, C, D ; a fifth on B and C ; and, lastly, a sixth on B.

Place these strips in juxtaposition quite neatly on a sheet of white paper or cardboard, and in the order here given. If rightly done they will, when viewed from a little distance, have the appearance of a fluted column.

133. The strongest contrast in Nature is of white against black and black against white, as may be seen in Fig. 61, where the white space in the centre of *b*, looks

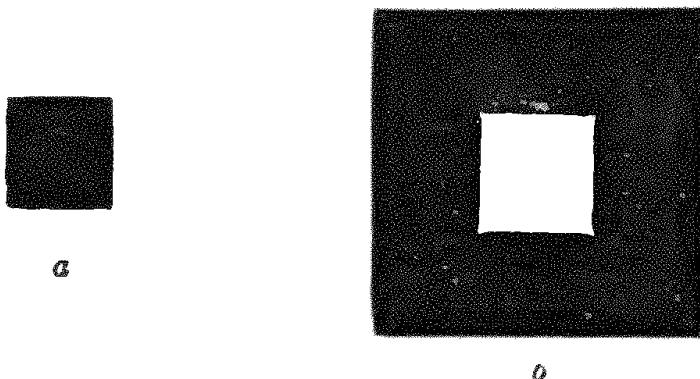


FIG. 61.

lighter than the surrounding paper, and *a* looks darker than it would if laid on a tinted or dark surface.

134. Contrast in Art, however, has a much wider significance than when applied to light and dark alone, and is powerfully felt in the opposition of colours, of objects, and of properties and qualities of things.

Fully to illustrate the contrasts of colour would require very many coloured diagrams, and extend far beyond the limits of this work.

The student may, however, assist himself by making experiments with various coloured pieces of paper or cardboard; and, if he wishes to pursue the subject further, may consult any of the following works:—Field's treatise on

Chromotography ; Grammar of Ornament, by Owen Jones ; *Principles and Practice of Art*, by J. D. Harding ; or one of the many works on Decorative Art.



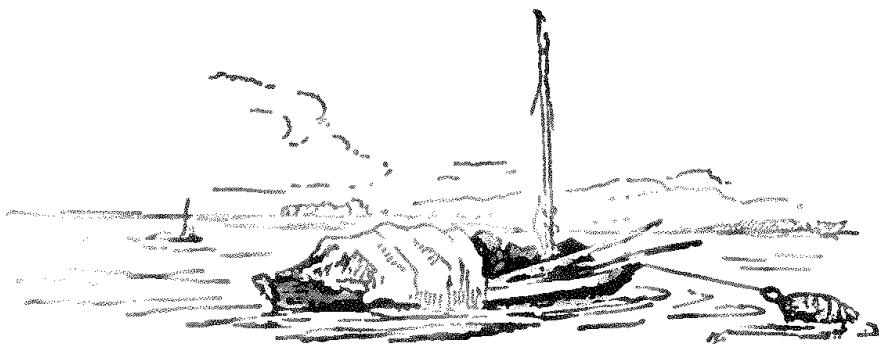
FIG. 62.

135. The *forms of objects* are contrasted with each other to make them mutually more strongly felt, as when a straight line is set against a curved one, or a square figure

against a round one. The value of this kind of contrast will be felt not only in the dancing figures (Fig. 62), but especially in many of the landscapes in the work. (See Composition, Chap. XXIV.)

136. The *properties* of various bodies are often set in contrast with each other in Art ; as, for instance, the soft, thick, round masses of moss on a roof of hard, square slates, or on a rock ; or a tender spray of leafage by a sturdy stem ; or a hard, flat wall.

137. Contrast in *size* is frequently used to enable us to judge of an unknown quantity by means of that of which the size is known and fixed. This may be seen in the arches on page 84. A portrait of Tom Thumb could only be correctly estimated by comparison with ordinary figures or objects, whose magnitude is known ; and in like manner the stoutness of Sancho is used to make the lanky length of Don Quixote more strongly felt.



CHAPTER XII.

ON RELIEF.

138. By the term ‘*relief*’ is simply meant the separation of an object from that which is behind it ; and in drawing it is obtained by making the edges of the shading perfectly even and clear, and not necessarily by contrasting strong dark against strong light.

139. In Nature we seldom see things in relief by violent contrast, but constantly by tender and varied, but clear opposition ; by which we become so perfectly conscious of their shapes, and of their location in space, that the eye no longer voluntarily follows the outline. It is scarcely possible to trace the precise *contour* or limit of many objects, unless they be either superficial or strongly and equally light or dark throughout their entire surface.

140. The term ‘*relief*’ is also used in relation to colour, where we say one colour is ‘*relieved*’ or set against another ; but we think it less legitimately belongs to drawing and painting than to sculpture, where one object is distinctly separated from another *in the solid*.

141. In sculpture proper, which has been well said to be ‘an art which can conceal nothing,’ the figure is insulated, and stands quite clear of any background : it is sculpture in the round.

142. Other terms, such as ‘*basso relieveo*’ ‘*alto relieveo*,’

and ‘mezzo relieveo,’ are commonly applied to any work of sculpture connected more or less with any plane surface or background. Basso—low or flat—relief has a very slight projection from the background. Alto relief, on the other hand, is not only rounded to the full bulk, but has generally some portions of the figure detached from the background. Mezzo relief—a style between the other two—though rounded to considerable bulk, has no part entirely unattached to the plain surface behind it.

143. The finest examples of these different kinds of relief, from various Greek temples, may be seen in the British Museum. The commonest examples of bas-relief is a coin—a penny, a shilling, or a sovereign.

144. The gates of the Baptistry of San Giovanni at Florence, known as the ‘Ghiberti Gates,’ show beautiful examples of relief, though the introduction of landscape is considered by many critics a misapplication. Our own Flaxman produced probably the finest reliefs of modern date, of which his ‘Shield of Achilles’ is a notable example.

145. One of the clearest indications of excellence in the Greek bas-reliefs is, doubtless, that in addition to the exquisiteness and perfection of work, the forms are so skilfully arranged as not to cast shadows that would interfere with their clear manifestation.

CHAPTER XIII.

ON SIZE.

146. MANY students puzzle themselves by not knowing how large to make a drawing or a sketch, and also by a confusion of the idea of size with that of proportion.

147. By *size* is meant merely magnitude : *proportion* is the relation which one thing bears to another.

148. The size of a sketch or drawing is to a great extent optional, though depending chiefly on the nature of the subject, and partly on the time at the disposal of the student as well as his power, and the ultimate purpose of the drawing. Let us suppose he wishes to represent the lamp on the table before him—it will be equally right to draw it any size, from one to six or eight inches ; but if the object be large, such as a house, an elephant, or a tree, then he must consider how it will be best placed on his paper, without being too little on the one hand, or too overwhelming on the other.

149. There are, however, some objects, such as fruit, flowers, &c., which should, when possible, be drawn the same size that they actually are in nature. Suppose we wish to draw a cluster of grapes, and we make them only the size of peas, there will be danger that at first sight they will be mistaken for currants. A hen's egg on a small scale might be mistaken for the egg of some smaller bird.

150. Objects in a drawing may be made to appear large or small by the juxtaposition of some other objects

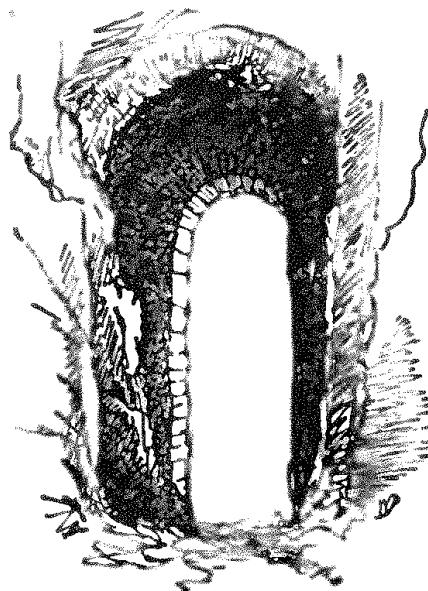


FIG. 63.

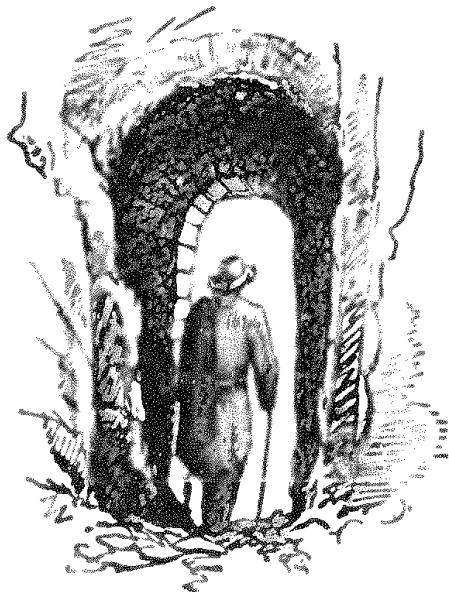


FIG. 64.

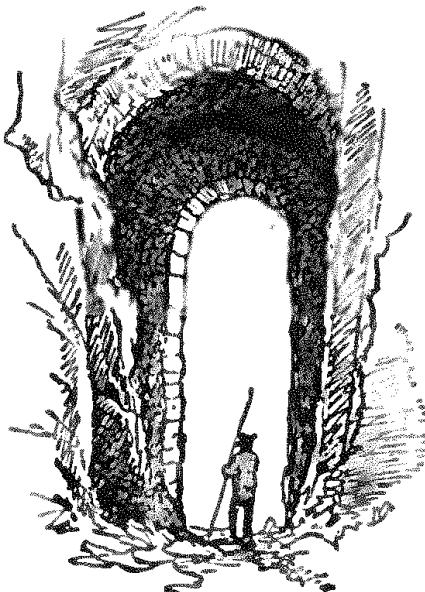


FIG. 65.

of known size. The mind instantly sets up a comparison, and judges the indefinite by the definite. In Fig. 63 is a sketch of an archway, of which we have no means of

knowing, even approximately, the size—it may be five, ten, or fifteen feet high. In Fig. 64 the same arch is given, but it is at once seen, by the figure passing through it, that it is probably about six feet high ; whilst in Fig. 65 the same arch, by comparison with the figure, is judged to be about twenty feet high.

It is important when sketching from nature objects whose sizes may be variable, to sketch also something near, the size of which is always the same. In Fig. 65 a ladder would be sufficient to determine the height of the arch, without the figure, for the ‘rounds’ of a ladder are always about nine inches apart.

151. Many persons on visiting, for the first time, the mountains of Switzerland, are not deeply impressed with their magnitude, till by a process of inferential reasoning—comparing the tiny-looking chalets on them with their surroundings—it dawns on the mind that the mountains must be large. In like manner the magnitude of a grand mass of distant *cumuli* is scarcely perceived, except by a similar process of reasoning. It has been stated elsewhere that some of these masses reach an elevation of twenty thousand feet from the earth.

It is evident, then, that only by a process of reasoning can we make ourselves accurately acquainted with the size of many objects—the clock-face, tree, mountain, or moon.

CHAPTER XIV.

ON PROPORTION.

152. THE simple meaning of the term ‘proportion’ is the relation which one thing bears to another ; but the application of the term in Art is both wide and varied.

There may be such a relation between the various parts of an object as to produce in the mind a consciousness of beauty, arising solely from the relation of parts to each other and to the whole, and quite independent of any function to be performed. An illustration of this is seen in the kaleidoseope, and in many kinds of ornament. In this case it is an appeal to the æsthetic faculty alone.

153. A second sense in which the term proportion may be used is when it is applied to the varied relations of parts or things to each other in view of something to be accomplished or done ; as in a column to support a superineumbent weight, or a horse to draw a load, or an athlete to run a race. In this case the appeal is made not to the feelings, but to the intellectual faculties and the judgment.

154. An object may have fixed and unalterable proportions, as in the sides and angles of a square. In some cases the proportions are variable, as in the human figure, the proportions of which differ much, the male from the

female, and various male forms from each other, as the Discobolus, or the wrestler from the Athlete.*

In Architecture the various parts of a building should bear such a relation and adjustment of parts to each other and to the whole, as to produce on a pure and unbiassed mind a sense of agreeableness, satisfaction, and rest.

155. The diameter of the Doric column is large in comparison with the length of the column, and conveys to the mind the idea of solidity, durability, and deep repose. The Corinthian column, containing more diameters than the Doric, suggests to the mind the idea of *elegance* and repose.

A horse may be said to be in good proportion when the parts bear such a relation to each other that it is well adapted to its purpose, whether of speed or power. But to speak of a horse being in good symmetry indicates a confusion of ideas, for the term symmetry refers to the corresponding sides or parts of a thing. (See Symmetry, Chap. XV.)

156. The proportions of A and B in Fig. 66 are exactly the same, and, therefore, though they are different in size, they are the same in shape.

Proportion in Art seems to be almost equivalent to 'harmony' in Music. It will gener-

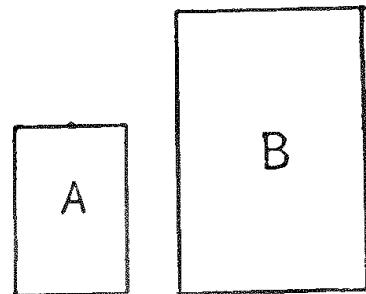


FIG. 66.

* The proportion in length of the Discobolus is said to be seven heads; an Athlete might be eight. There is an interesting chapter on this subject in the *Handbook of Pictorial Art*, by the Rev. St. John Tyrwhitt.

ally be found that those forms whose parts are arranged on certain definite proportions—where the whole and each particular member is a multiple of some simple unit—are most satisfactory. Those proportions will be most beautiful which the eye can least readily detect, provided, as we have said, that they be multiples of some simple unit. Thus, the proportions of a square being all alike, as 1 to 1, it is the most palpable and least pleasing. The proportion of a double square, or 4 to 8, though better, will be less beautiful than the more subtle ratio of 5 to 8; so also, 3 to 6 than 3 to 7, 3 to 4 than 3 to 5.

157. ‘Harmony of form,’ Owen Jones says, ‘consists in the proper balance and contrast of the straight, the inclined, and the curved;’ but what this ‘proper balance and contrast’ is we are not told: and though Hay, in his various works, especially in his *Principles of Symmetrical Beauty*, gives a great number of figures by which to secure beautiful proportions, the changes that may be made with a few different lines—like the changes that may be rung on a given number of bells—are so great and so subtle as far to exceed the power of the eye to calculate, but not of the æsthetic faculties to appreciate, and the mind then reposes in the sensation of the beautiful.

CHAPTER XV.

ON SYMMETRY.

158. THE term ‘symmetry’ (so often misapplied) should be allowed its true significance, viz. the correspondence of two opposite sides of a thing.

It seems to be a law of Nature, that almost every individual thing shall be composed of two *laterally* similar parts in its outward appearance. As the internal arrangement is often different from the external appearance, as in animals, &c., it would seem as though it was intended as a designed principle of beauty. This similarity of parts is found constantly amongst flowers and trees; and in the decoration of our houses, both on the walls and in the furniture, we find this law of symmetry quite a necessity.

159. A distinction must be made between the symmetry of the parts, and the symmetry of the group or cluster. Take man, for example—a compound form, a group of trunk, limbs, and extremities. The outer *contours* on each side of the body correspond with each other, whilst the *contours* of the sides of each arm do not correspond, nor the *contours* of the two sides of legs and feet. Whatever part of the group is balanced by a similar member on the other side is itself without symmetry. The arm, therefore, is in itself not symmetrical, because it is balanced by a similar member on the other side; but

the head, which has not this plurality, is perfect in the repetition of the two halves. The two ovals (Fig. 67) will illustrate this principle more clearly.

160. So also in the arrangement of groups or clusters of any objects, — the mind does not require an exact repetition of forms, so much as the recognition of the *law* of repetition. In a triptych, for instance, the two outer panels may contain different subjects, provided that they

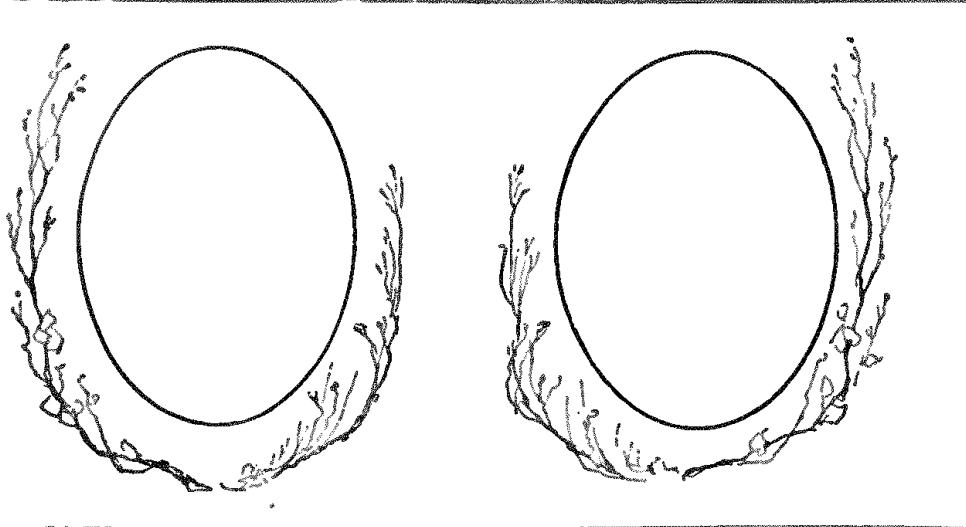


FIG. 67.

bear some relation to each other, and do not interfere with this law of repetition. It would, however, be manifestly wrong to have a figure subject in one panel and a landscape in the other.

161. In the spandrels of a Gothic doorway, the geometric lines forming the spandril will give the idea of repetition ; then the subjects filling the spandrels may be different, but must be the same in treatment, and should bear some relation to each other, or to the edifice they are intended to decorate.

162. It will be evident, then, that as we must obtain from Nature the principles intended for our guidance, and as in most beautiful natural objects there is found the correspondence of one side to another and reciprocal balance, so in all our works, whether of Fine Art, properly so called, of architecture, or of adornment simply, we are bound to recognize, in some degree, this beautiful law of symmetry, which seems to lie at the foundation of all true ornamentation.

We cannot ordinarily apply this term to an animal (to a horse, for instance), as indicative of some special excellence of form, for if it were not symmetrical it would be simply monstrous.

163. In a limited sense the term may be applied to Landscape, as when the ‘balance’ of a picture is spoken of, which means such a disposition of parts, whether of light and shade, or of colour, as shall prevent us from feeling that one side of the picture is heavier than the other.



CHAPTER XVI.

ON SECURING CHARACTER IN ART-WORK.

164. If we look at the furrows in a ploughed field, or at a fissured rock, we shall see a good illustration of this very descriptive word ‘character.’ Used in relation to Art, it means all those peculiarities, whether of age,



FIG. 68.

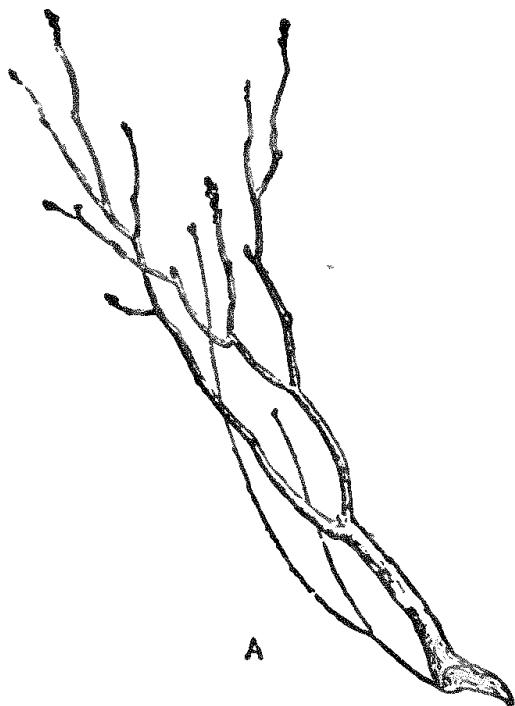


FIG. 69.

newness, roughness, or any other qualities which most strongly impress themselves on the mind, and by which the object is remembered, or its representation recognised. For instance, if we consider the two bits of twig given in Figs. 68 and 69, which at first sight are not very dis-

similar, we shall soon discover that whilst the one is full of life and promise, the other, wanting those markings which indicate life—the buds—is actually dead.

165. In making a drawing, whether from a copy or from Nature, it is a good plan, before beginning, to write on a separate paper the leading peculiarities by which the work is distinguished or characterised, that in our representation of it we may not so much copy the strokes of the example, as the *intentions* of those strokes.

Thus, Expression in Art is but another word for Feeling, and is more clearly explained than defined. When we endeavour to make a perfectly straight line, or produce a piece of perfectly even shading, considerable care is required to keep such equal pressure of hand that no part may be darker than the rest; but when we attempt to represent, say, a tree, we have to ask ourselves what about it most strongly impresses our minds—in other words, what are its characteristics? These we endeavour to put down with such feeling or sympathy as we can command. In the case of a tree, our efforts should be directed to the expression of *leafiness* and rotundity, more than to an imitation of the leaves; but it will be evident that some knowledge of the shape of the leaves, of their arrangement on the twigs, and of the way in which the branches strike off from the stem and from one another, will be necessary to enable us fully to get at and depict it, not only as a tree, but as some particular kind of tree, such as oak or ash.

166. In like manner, if the subject be a mossy rock, we

should strive to express ideas of softness and thickness of moss, and the hardness and angularity or rotundity, the solidity, and the granularness of the rock.

If a thatched roof be the object, the essential qualities will be those of thickness, weight, age, &c. ; and failing to express these, however carefully the object may be *copied*, it must be considered a failure.

167. Speaking generally, character is most clearly seen on the light parts of objects and at their edges, but chiefly

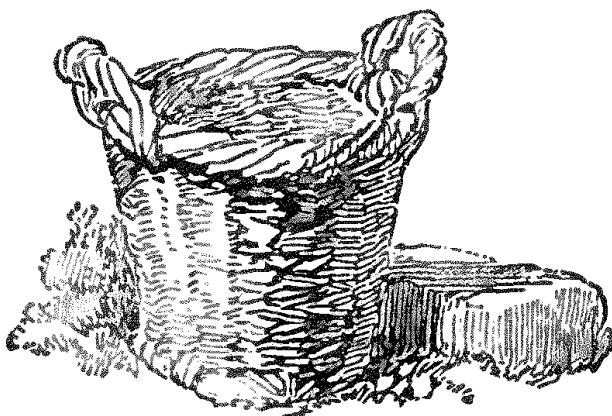


FIG. 70.

where the light and shade separate—as may be seen in the hamper (Fig. 70).

168. In drawing from Nature it would be as impossible as useless to put *all* down that is before us—the camera can do that for us: it is the business of Art to select and express those essential and striking truths by which a scene may be identified by the mind and impressed on the feelings.

CHAPTER XVII.

ON TASTE.

169. VOLUMES have been written on this much disputed word. Mr. Ruskin says,* and we cannot do better than quote, as far as possible, his words,—‘Perfect taste is the faculty for receiving the greatest possible pleasure from those material sources which are attractive to our moral nature in its purity and perfection. He who receives little pleasure from these sources wants taste; he who receives pleasure from any other sources has false or bad taste.’

If an object, a form, or a colour be right, it *is* right, independently of our intuitive choice or ‘taste.’ If we admire it, our taste is good or pure; if we do not admire it, our taste is bad.

170. The term ‘taste’ must not be confounded with that of ‘judgment,’ which is a term expressing a definite action of the intellect. We may reason whether a thing be right or wrong, and arrive at a definite conclusion; but this is not ‘taste.’ ‘All exertions of the intellect are totally distinct from taste, properly so called, which is the instinctive and instant preferring of one material object to another without any obvious reason, except that it is proper to humanity in its perfection so to do.’

* *Modern Painters*, Vol. I.

171. This intuitive faculty may be affected to an unlimited extent by the circumstances of life. A child educated amidst the surroundings of the true and the beautiful in Art is much more likely to develop into a man of good taste than one who continually has about him only the common and not beautiful objects of life. But this faculty can be developed by direct effort, as well as by the subtle influence of things of beauty ; and we ought, therefore, to make ourselves acquainted with those principles or laws by which objects may be determined to be

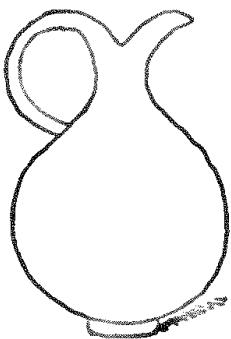


FIG. 71.

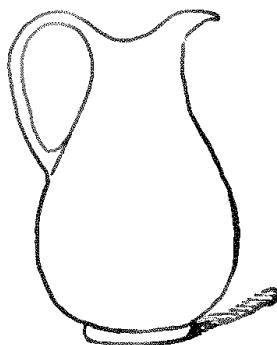


FIG. 72.

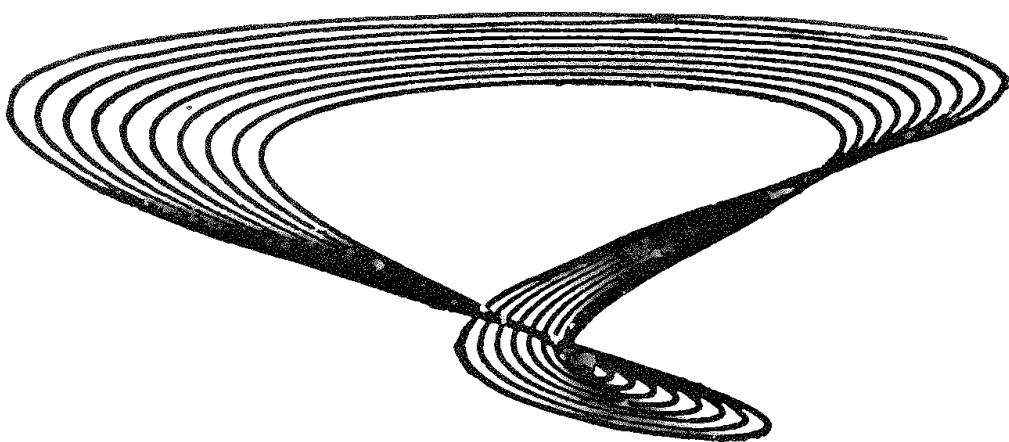
right or wrong. It is possible that of the two slight sketches (Figs. 71 and 72), some persons might at first sight prefer the first : if so, the taste is bad. If we proceed to analyse them, we shall soon arrive at a definite and unalterable decision that the second is the more beautiful, both on account of the variety of its *contour* and from its suitableness. Whether or not it might be made more beautiful by, say, a little alteration in the proportions or in the curves, would be ascertained by a mixed exercise of the feelings and intellect, under the control of the judgment.

172. Taste, then, is the instant and spontaneous operation of a faculty of our moral nature, which is good or bad in proportion as it is affected agreeably by that which is pure and beautiful, or by that which is false.

173. We are liable, however, to be misled by the artificial value which ‘the World’ puts on some things. When we are told by the learned connoisseur that ‘that little china vase, only twelve or fifteen inches high, cost 800 guineas, and would fetch 1000 guineas at Christie’s tomorrow,’ we are in danger of having our judgment prejudiced ; and before accepting the stated pecuniary value of the vase as its *real* value, we ought to satisfy ourselves with regard to its true excellence, and ascertain wherein that excellence consists.

Our willingness to be pleased, and to please, in speaking of matters of Art, should not be allowed to lead us into the position of the enthusiastic old gentleman who, when his friend remarked, as they passed through a picture-gallery together, how beautiful *that* was, replied ‘Oh ! very beautiful, very beautiful indeed ; which is it, sir ?’ Let us know clearly and distinctly what we are to admire, and why. Is it beauty of form or colour ? or is it the antiquity of the object ? or has it a history ? If it possesses any of these qualifications, it may rightly command our attention ; but the reason of its worth must be distinctly maintained. It is not ‘pretty’ because fashionable, nor beautiful because old ; if it has age or history it may be venerable. If we are told that it was excavated from the ruins of some ancient city, it is interesting as a relic ; or it

may be the work of some once famous but now extinct pottery, and has been in the possession of some royal family, and, moreover, is the only specimen of the kind known to exist ; then it becomes a thing of history, and we must admire it accordingly.



CHAPTER XVIII.

ON STYLE.

174. **STYLE** in drawing is what ‘manner’ or ‘hand’ is in writing. One person may draw in a broad style (not necessarily bold), as with a piece of charcoal ; another in a fine style (not niggling), as with a pen. It has nothing to do with *truth* of work, for a drawing may be broad and true, or fine and false, or *vice versa*. Some styles of working, however, may be peculiarly adapted to the expression of some particular kinds of truths : for example, nothing could be better than the reed pen, used as Prout used it, to express the kind of truth that he aimed at in his old buildings ; or than the common, coarse, whitish-brown paper that David Cox was so fond of, and used in some of his wild wind and moorland pictures.

175. But the term **style** may apply not only to the manner of particular individuals in their way of working, but also to Schools and communities ; as, for example, the ‘Byzantine style’ of ornament, or the ‘Dutch style’ of painting, and the ‘Elizabethan style’ of architecture.

Not that Schools are determined or known by their style alone, but by their *motive*. The motive of some of the early Italian Schools was fidelity of imitation—so, also, the Dutch Schools ; the motive in Art as represented by Fra Angelico, Bartolomeo, and others, was expression ;

whilst colour seems to have been a chief motive of the Venetian School.

176. It will be seen, therefore, that inasmuch as Style is but the *mode* of expression employed by a person or a School, and is not either the expression itself nor what is to be expressed, it is of secondary importance, and indeed entirely subservient to MOTIVE.



CHAPTER XIX.

ON MOTIVE.

177. On *Motive* in Art-work, whether in a child or a School, depends the ultimate issue in good or ill, truth or



FIG. 73.



FIG. 74.

falseness. The motive exhibited severally in the two little woodcuts (Figs. 73 and 74) would, if pursued, be whole-

some or disastrous. In the first one, our child aims at something clever, regardless of individual truth ; whilst in Fig. 74, truth of flower, of stone, of tree, is strongly aimed at, though feebly expressed : the ultimate issue of such aim, however, would be natural and healthy.

178. There is a well-known law in morals which seems closely to apply to Art. ‘ All virtue and goodness tend to make men powerful in this world ; but they who aim at the power have not the virtue. Again : Virtue is its own reward, and brings with it the truest and highest pleasures ; but they who cultivate it for the pleasure-sake are selfish, not religious, and will never gain the pleasure, because they never can have the virtue.’* The same formula, transposing the word ‘ Art’ for ‘ virtue,’ seems to hold good here.

If this be true—and we scarcely think it can be doubted—the *motive* of the student should be a very high and pure one. As Ruskin truly says, ‘ Every action, down even to the drawing of a line or utterance of a syllable, is capable of a peculiar dignity in the manner of it, which we sometimes express by saying it is truly done (as a line or tone is true), so, also, it is capable of dignity still higher in the MOTIVE of it. For there is no action so slight, nor so mean, but it may be done to a great purpose, and ennobled therefore ; nor is any purpose so great but that slight actions may help it, and may be so done as to help it much, most especially that chief of all purposes, the pleasing of God. Hence George Herbert :—

* Shairp, *Culture and Religion*, p. 61.

“A servant with this clause
Makes drudgery divine ;
Who sweeps a room, as for Thy laws,
Makes that and the action fine.”

‘Therefore, in the pressing any manner of acting, we have choice of two separate lines of argument : one based on the inherent value of the work, which is often small ; the other on proofs of its acceptableness, so far as it goes, to Him who is the origin of virtue.’* Better far for the student that he be a disciple of George Herbert or Fra Angelico, both in humility and motive, than of Salvator Rosa, with his grand effects but monstrously impossible geology, or of Gustave Dore, with his insinuating and dangerous exaggerations.

179. Regarding this last-named artist we wish not to be misunderstood. That Gustave Dore is a remarkable genius there can be little doubt. His creative power is wonderfully prolific, and his imaginative faculties are marvellous. As Dante’s exponent he stands alone, and as the illustrator of *Don Quixote* he is unrivalled. We do not much care, even, if in *Elaine* a female figure seven or eight feet high appears ; the error does not dawn on us at once, and in many cases is never noticed. Here is the legitimate sphere for the imagination, which has its laws, and we are not aware that he often goes beyond them. But this imaginative faculty is just what entirely unfits him, we think, to become a representer of *facts*, and it is for this reason we protest against him as an illustrator of the Bible.

* Ruskin, *Seven Lamps*, p. 5, Introduction.

Here we do not want man's imagination ; we want facts, and such clear statement of them as will help our judgment to the realisation of the truth. There is more help and comfort in Holman Hunt's sketch of an Eastern workshop, which forms the frontispiece to Canon Farrar's *Life of Christ*, than in all the dramatic imaginings that hold a thoughtless public all a-stare during several years of London exhibition seasons.

180. We may as well explain here a little more fully what is meant by motive. It is generally understood that the purpose of a picture is in some way to teach, instruct, or enlighten, and in this way painters may be our teachers. Let us, then, for a moment consider what is done by two classes of men—taking Holman Hunt as representative of the true. He proposes to instruct us concerning the 'Scapegoat' in Leviticus, chap. xvi. An ordinary painter of the sixteenth century might supply himself with materials from his own country, probably not unmixed with anachronisms ; and not a few nineteenth-century artists would be content with such materials as could be gathered in a tour through Switzerland, or the Riviera—possibly visiting a friend's shooting-box in Scotland for a background. Holman Hunt, however, must go to the land where the scenes about which he is to instruct us were enacted ; and not only so, but to the very dreariest of the weary scenes of that waste wilderness below the Dead Sea, that not only his eyes may see, but that his whole soul may be imbued with the sentiment he would press upon us. What was the result ? A picture of which Fashion, in

her blindness, for once spoke the truth, though she could not appreciate. The picture was ugly!—no interest in it!—the goat wretched!—and so on. How could such a subject be otherwise, and yet the truth? How could a wilderness with sin in it be otherwise?—and should not that creature look wretched that is represented as bearing a nation's sins?

181. When Millais exhibited his picture of 'An Enemy Sowing Tares' in the Royal Academy, about twelve years ago, it was hung high, and people said, 'What an ugly thing!' The sower looked bad, and it was dark and gloomy, and there were wretched-looking reptiles crawling about. And yet how could the picture of such a deed of darkness be otherwise, and at the same time true?

182. If pictures are to read to us lessons, we might inquire what lesson are we to learn from 'The Otter-hunt,' by Landseer, or 'The Boar-hunt,' by Schneider, or 'The Bull-fight,' by Ward? Grand in their exhibition of artistic power, but what of their teaching? What is the difference between the teaching of 'The Otter-hunt' and a visit to Hurlingham on a *fête* day? or between that of a boar-hunt and a place at a pigeon-shooting match near a Lancashire town? And are these the pictures to be hanging on the walls of our homes, to be seen by our children? Surely, in our house decoration we might use a little more thought and common sense.

Further, it should not be forgotten that in an illustrated work the artist or illustrator always gets the attention of the reader before the author does, for the picture

appeals instantly to the eye on the opening of the page, whilst the truth which the author presents has to be obtained from the type by a much more laborious process. How important, then, that painters and illustrators should be true men ! Many people look at illustrations, but do not read the text ; few read the text without looking at the illustrations.

183. Returning, then, from this digression, we cannot too strongly urge on the student the importance of examining his motives in pursuing Art, that they may not be either thoughtless or selfish, but such as will develop in him the faculty of appreciating that which is true and of avoiding that which is false.



'In the acorn lies the Oak.'

CHAPTER XX.

ON BEAUTY.

184. ‘BEAUTY’ and ‘goodness’ are names we give to that which approximately satisfies our taste or our conscience. Just as appetite of the intellect is stayed by truth, so our æsthetic and moral faculties are capable of like satisfaction in the recognition of beauty and goodness. It is sometimes said that that which is beautiful or good to one, may be the opposite to another. This, we think, is a fallacy. Truth and goodness are entities quite independent and unchangeable; but our faculties for the appreciation of truth and goodness may be untrained or perverted, or they may be cultivated to the highest point of sensibility. As we have elsewhere stated, they are *capable* of education, and they suffer by neglect. If any object—such as a vase, for instance—be beautiful or ugly, it is so independently of all opinions, for it is a matter of *fact* and not of opinion. We cannot justly say that it is a matter of *taste*, for taste may be good or bad, and cannot alter the *fact*; and if we wish to ascertain what the fact is, it must be by the gathering together of evidences, and the exercise of a sound judgment on those evidences. When Mr. Ruskin says, ‘Any material object which can give us pleasure in the simple contemplation of its out-

ward qualities, without any direct and definite exertion of the intellect, I call in some way, or in some degree, beautiful,' we cannot but think that very much depends on the 'us'—that is, whether *we* (the 'us') have true or pure taste.

185. Dugald Stewart says, 'Notwithstanding the great variety of qualities—physical, intellectual, and moral—to which the word *beauty* is applicable, I believe it will be admitted that, in its primitive and most general application, it refers to objects of sight.'

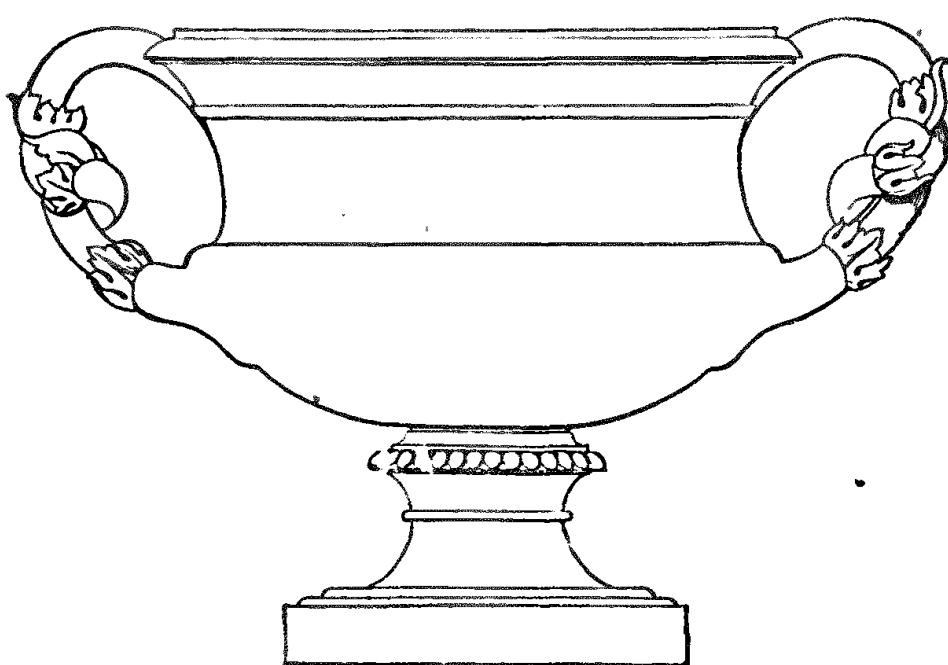
186. Besides beauty of form, there is beauty of colour, of composition, of light and shade, and of expression; all of which are referable to certain principles. The various constituents that go to make up beauty are infinite, but there are some few which are generally present in anything we call beautiful, and are briefly referred to in various parts of the work, especially in the next three chapters.

'All our moral feelings are so interwoven with our intellectual powers that we cannot affect the one without in some degree addressing the other; and in all high ideas of beauty it is more than probable that much of the pleasure depends on delicate and untraceable perceptions of fitness, propriety, and relation, which are purely intellectual. . . . Ideas of beauty are amongst the noblest which can be presented to the human mind, invariably exalting and purifying it according to their degree, and it would appear that we are intended by the Deity to be constantly under their influence, because there is not one

single object in nature which is not capable of conveying them.' *

187. To a right and full enjoyment of beauty, whether in Nature or in Art, there must be a knowledge of the philosophy of Nature, and of the principles of Art. But to this end there must also be the operation of the feelings, made sensitive by the intelligent practice of Art; thus the mental faculties, the feelings, the eye, and the hand, act in concert.

* Ruskin, *Modern Painters*, Vol. I.



CHAPTER XXI.

ON FITNESS.

188. IN a perfect sense of beauty of form, fitness constitutes an essential element; for though many things may in themselves be beautiful, yet from the want of fitness in their application they may become at least nugatory.

In all complete works there must be a sense of agreement and suitability of parts, not only in their individual forms, but in their kinds. An Italian greyhound is a beautiful creature, but would be quite out of place in a stable; and a calf, though very picturesque in a lane, would be oddly out of place on a lawn.

189. We must not forget, however, that this idea of fitness is of a twofold kind, in one case appealing to the senses, in another to the intellectual faculties and the judgment. In the former case a number of objects may be so related to each other, as to give the idea merely of agreeableness, like sounds, apart from all function, and give pleasure; or, an object not essentially beautiful in itself may become so to the mind by the recognition of its adaptation to perform some particular function. Take, for instance, the hand for handling, or the foot for walking: if we are acquainted with the mechanical appliances of the foot in walking, we are charmed, and look at it, apart

from its form, as a thing of beauty ; and in proportion as we know and are charmed with Nature's appliances in the human foot, so shall we be disgusted with and intolerant of the utter vileness and tyranny of fashion, in dictating to a world of reasonable but unreasoning votaries, heels two inches higher than the Wise Designer saw fit to make them.

190. The principle here referred to will apply not only to architecture, sculpture, painting, and ornament, but to almost everything by which we are surrounded. Thus it will be seen, then, that in a work of true art there must be a fitness, both in form and in function, of the various parts composing it, which must precede everything else. The walls and furniture of our rooms, the floors and carpets on which we tread, the crockery and silver on our tables, the ornaments on our mantel-shelf, and even the very fire-irons themselves, all should be subject to this principle. How often do we see highly elaborate fenders and pokers —the latter so heavy and ornate that a deputy has to be appointed, which is sometimes, in irony, called the ‘curate.’ About the hearth there should be as little ornament in *‘relief’* as possible. And as the carpet is intended as a surface to be walked upon, all striking patterns on it should be avoided. The principle will apply continually, because (as will be shown in Chap. XXVI.) it is founded in truth.

CHAPTER XXII.

ON VARIETY.

191. VARIETY in Art, as in Nature, is one of the chief sources of beauty, and forms one of the trio of essential elements in its production. Like every other essential quality in Art, it is subject to laws naturally belonging to it—for without obedience to law there can be neither beauty nor truth. The extent of its operation is simply infinite, and infinity is a characteristic of Nature. No two things, from a blade of grass upwards, are exactly alike. Variety seems to be a necessity of our nature. This is well shown by the late J. D. Harding,* ‘by supposing a number of beautiful women to be seen together, and that each merited the appellation. It would be found, on examination, that, however great the number, they all varied; and that this variety, in fact, constituted the aggregate beauty of the whole number, and was inseparable from it. Again, supposing we could select one from among them, who by universal consent was admitted to be the *most beautiful*, what beholder would desire that some magician’s wand should make the rest exactly like her? Who, if such a change could be effected, would not feel a desire to return to that variety which must ever be the captivating constituent of beauty, both in the individual

* *Principles and Practice of Art.*

and in the aggregate? Without the one, we cannot have the other. Were beauty always to take the same form and expression, the eye and the mind would be fatigued by its perpetual recurrence. But, as variety is given to beauty, and is inseparable from it, the eye and the mind are excited and gratified by fresh and unanticipated combinations of form and expression.'

192. Mr. Harding afterwards proceeds to show, in a

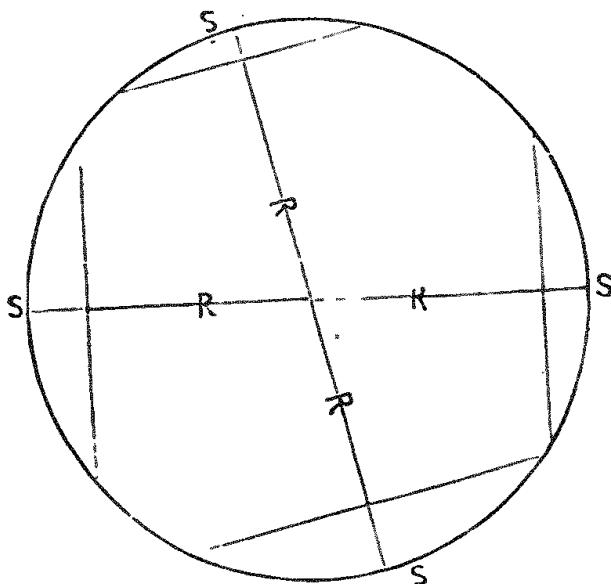


FIG. 75.

palpable manner, that variety is an indispensable constituent of beauty, and that perfect beauty is constituted of infinite variety, thus:—‘On cutting segments of the circle of different sizes, s s s s, we shall find that the curvature of the arcs is precisely the same, whatever may be the difference in size; since, from the construction of the circle, the circumference is, during its whole circuit, equally distant from the centre, and consequently all the radii, R R R R, are of equal length, and the curvature is in

every point the same. This form, therefore, cannot be the *most* beautiful, because it wants variety.

'On the other hand, if we cut segments from the egg, s s s s, we shall find that, whether their chords be equal or not, their curvature and assumed radii, R R R R, are unequal, so that no part of any segment would repeat part of another, or of itself on the same side; for as the curvature of these segments is perpetually changing,

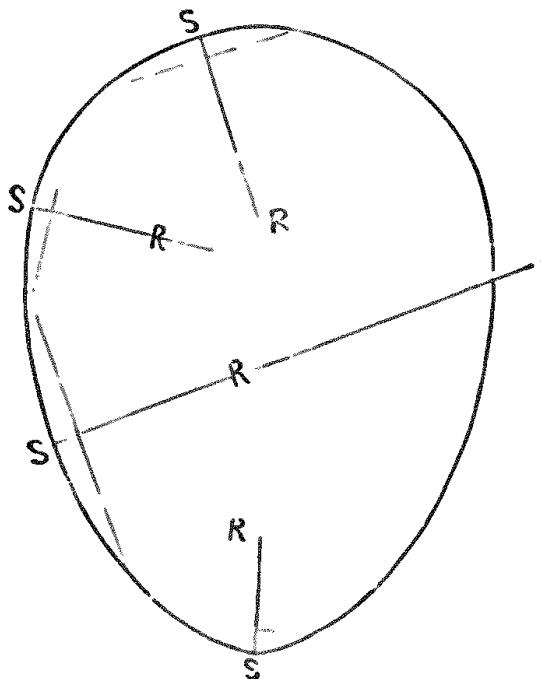


FIG. 76.

they could not be represented by radii such as I have been here obliged to place in order to make myself understood. Here, then, is greater variety, and therefore more beauty. This, so far, is only offering the test to the eye, or the limited power of the compasses; but if, instead of this, we take a mental view, we shall feel yet more thoroughly conscious of the sameness of curvature in the sphere, and of the infinite variety which

the ovoid, or egg form, admits of. If we should conceive segments infinite in number to be cut from a sphere, we should still have the same curves ever occurring; but should we conceive an egg so cut, the curvature and radii of the segments would be of infinite variety, and consequently, of the two, this is the *most* beautiful form.' He then demonstrates how the most beautiful of Nature's works, the human form, is made up almost entirely of ovoid forms.

193. To get a correct idea of the infinity of this beauti-

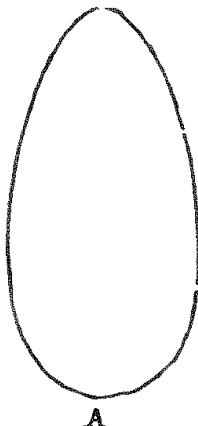


FIG. 76 a.

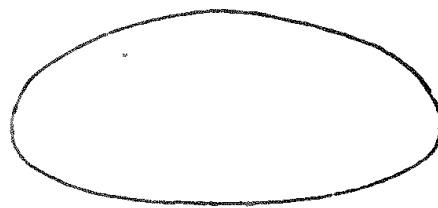


FIG. 76 b.

ful figure, which combines in one so much variety with the law of symmetry, we must not confine our observations to one form or proportion of the ovoid. It will be evident, when we consider it mathematically, or when we attempt to construct it, that as the longitudinal and transverse diameters can be varied in every possible relation, so we may obtain, not only one ovoid with constantly varying curvature, but an infinite variety of ovoids, from the very elongated (Fig. 76 a) to the very compressed (Fig. 76 b), each having the law of infinity stamped upon it.

Ovoids of various proportions may be made by an instrument specially adapted for that purpose; but they may also be roughly made as follows (Fig. 77):—

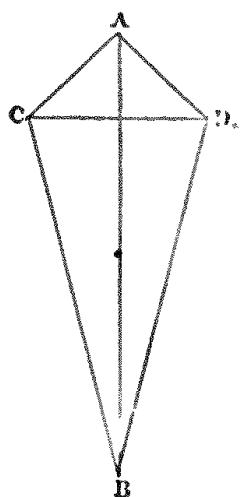


FIG. 77.

Draw any line, $C D$, and bisect it as with the line $A B$. Now fix pins at the points, $A B C D$, and tie a string tightly round them. Remove the pin at C , and the string will lie loosely about the three remaining pins, $A B D$. If a pencil be now introduced within the string, so as to restore it to its original tension, and be carried round so as to keep it always equally stretched, it will trace the ovoid, or composite ellipse.

It will be evident that the shape of the ovoid will depend on the relation to each other of the two isosceles triangles, $C A D$ and $C B D$. If the angles, $C A D$, for instance, be, say 108° , and $C B D 27^\circ$, we shall have a form suited to the human face; but if we make $C A D$, say 120° , and $C B D 15^\circ$, we shall have a shape suited to a tall vase or jar, and *vice versa*.

The student is recommended to work out for himself this simple plan for constructing an ovoid.

194. It is the judicious combination of lines giving infinite variety that has caused so many Greek forms, especially vases, to remain unsurpassed during all the Art efforts of 2300 years.

It would occupy too much space in a work of this kind to follow this element of variety throughout its almost endless applications, not only in ornamental art, but also in

architecture, sculpture, and painting. It applies equally to the form of a leaf or to the shapes and modelling of a mountain—not only to shapes, but to the quantities and directions of shapes, and in composition (as in the Rhine boats below), and as we shall presently find, it is in constant requisition.



CHAPTER XXIII.

ON UNITY.

195. IN the consideration of the various elements, the combinations of which are necessary to secure beauty in a work of Art, it will be found that they almost inevitably overlap or impinge on each other to some extent.

Variety has been spoken of as productive of beauty; but this variety must not run riot, and be introduced merely for its own sake, but under certain restrictions and relationships, so as to allow—or, perhaps, rather to suggest—the idea of Unity.

This idea of Unity, or oneness, which is the subordination of all the parts to the completeness of the whole, is as essential in a work of pictorial art as in a piece of music. We find it, like a cord, running through and tying together all nature; and it seems to have been a divine idea in the creation of all things, binding organic forms, from the highest to the lowest, in one complete cycle; and although the completeness of any individual natural form may in itself convey this idea of unity, it is only one of an infinity of individuals, the whole of which are governed by this same idea. And thus it is that in contemplating any object, we do so with the conviction that the designer of this one object was also the designer of the whole visible universe. Unity, then, being that

which connects all individuals into one whole, is the element which expresses and produces completeness.*

196. In Art, as in morals, the mind may enjoy for a time, but cannot obtain rest in the incomplete or in the imperfect, and the higher the work, the more strongly is the necessity of completeness felt: it is like a beautiful piece of music performed with the omission of a few notes at the beginning and ending of it.

197. A *sketch* may be incomplete, but the mind, taking cognisance of the fact that it does not aim at or pretend to completeness, enjoys it as a fragment, or as a part only of some whole.

198. The idea of unity has nothing to do with uniformity, but is an aggregation of differences which form one whole.

* There are some extraordinary parallelisms and relationships recently discovered between sound and form confirming this idea, but they are scarcely suited for an elementary work of this nature.

CHAPTER XXIV.

ON COMPOSITION.

199. ‘COMPOSITION may be defined to be such a collation of the several objects in a work of Art, both relatively to each other, and with respect to the whole, that each and all may most efficiently contribute to the perfection of the general design.’ It may also be defined as the *help* given by everything in the picture to everything else to make a whole.

Composition brings to us a higher degree of beauty, and therefore of satisfaction, by the association of objects in such a combination as will most agreeably and most powerfully affect us; but in every case the objects must be so arranged as to appear perfectly natural, both with reference to the things introduced, and to the places they severally occupy in the group.

200. We will endeavour to illustrate this in a familiar manner. Let us empty on to the table before us the contents of a general and promiscuous pocket. We may have something like what is given in the rough sketch (Fig. 78),—several keys, including a railway key and a watch key, a knife, a railway pass-book, a piece of lead pencil, and several coins. Now we at once find that we have more objects of the same kind than are necessary for a group, and so we proceed to eliminate by taking

away several coins (which are repetitions of the same form), and several keys. The objects for our group now feel more under control. But we inquire, What natural relation exists among them? None, except perhaps between the knife, pencil, and book; and so we remove the coins and the keys. We further discover that as the knife happens to be a fruit knife (silver), it bears no relation to the pencil, or book; nor, finally, the pencil to the 'Pass'; and so these also must be eliminated. In

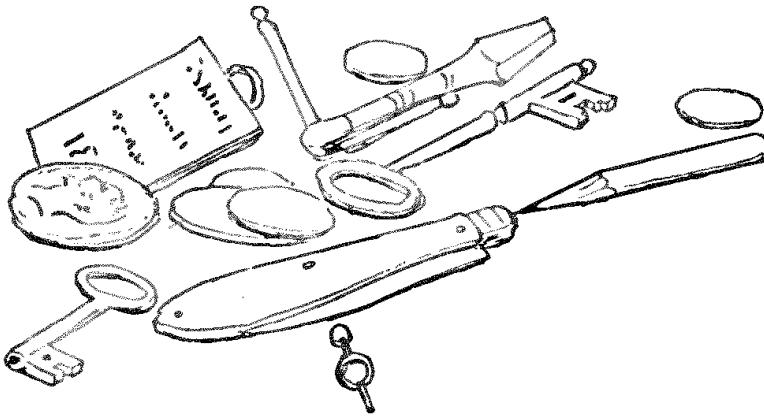


FIG. 78.

fact, out of the whole of the dozen or more articles, we cannot form a natural and consistent group.

201. We will try again, however, beginning with a single object, say a piece of ordinary lead pencil, and inquire what will naturally go well with this. A knife, or a piece of eraser, or a pocket-book,—any or all of these; and we try to arrange them agreeably: but we find, as they lie flatly on the table, we have no upright object with which to vary the group, and so we add, say, a tumbler with water in it. But as this tumbler bears no relation to the other objects, we may instantly, by intro-

dueing a paint-brush into the group, suggest a relationship, and especially if we show also a bottle of Chinese white.

We have now materials for our proposed composition which bear some relation to each other, and we will proeed to arrange them.

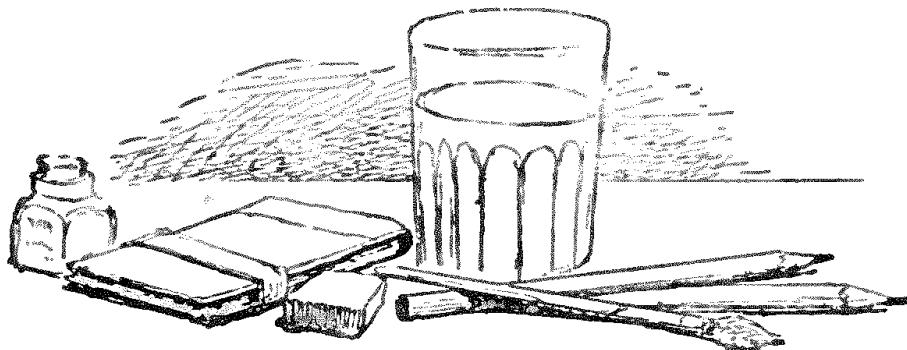


FIG. 79.

They may, perchance, be as in Fig. 79 ; but though this may be said to be natural, or according to Nature, it will not satisfy the necessities of Art. We had better

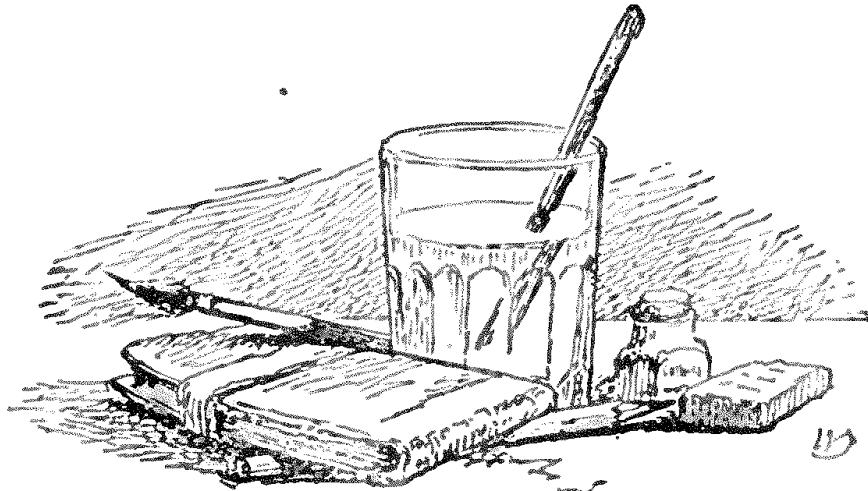


FIG. 80.

begin by letting the principal object occupy the chief place, *near* the centre, and then arrange the other objects about it so as to secure both variety and unity. We have done so in Fig. 80, with a satisfactory result.

202. The relation of the parts of a composition to each other, and to the whole, may, perhaps, be better under-



FIG. 81.



FIG. 82.



FIG. 83.



FIG. 84.

stood by considering them as lines only. If we place two or more lines parallel to each other, we shall not feel that they bear any real relation. If we place them as in Fig. 81, we shall feel that they more oppose than combine; and by placing one line perpendicular to another we have them in strongest contrast, as in Fig. 82; whilst if we place them as in Figs. 83 and 84, they compose towards each other; and thus combining, we may go on till we get to Fig. 85 (our Crocus), one of the most beautiful, simple flowers we have, which conveys the idea of variety with unity, and in some degree of symmetry also, though not absolute, as in Fig. 86. But how, it may be asked, will this apply to landscape?

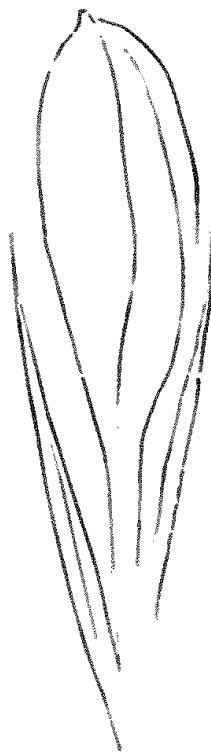


FIG. 85.

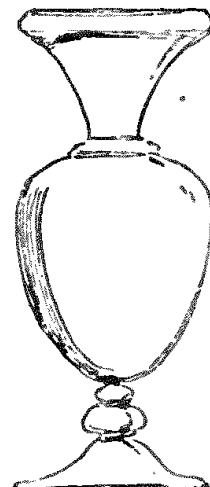


FIG. 86.



FIG. 87.



FIG. 88.



FIG. 89.

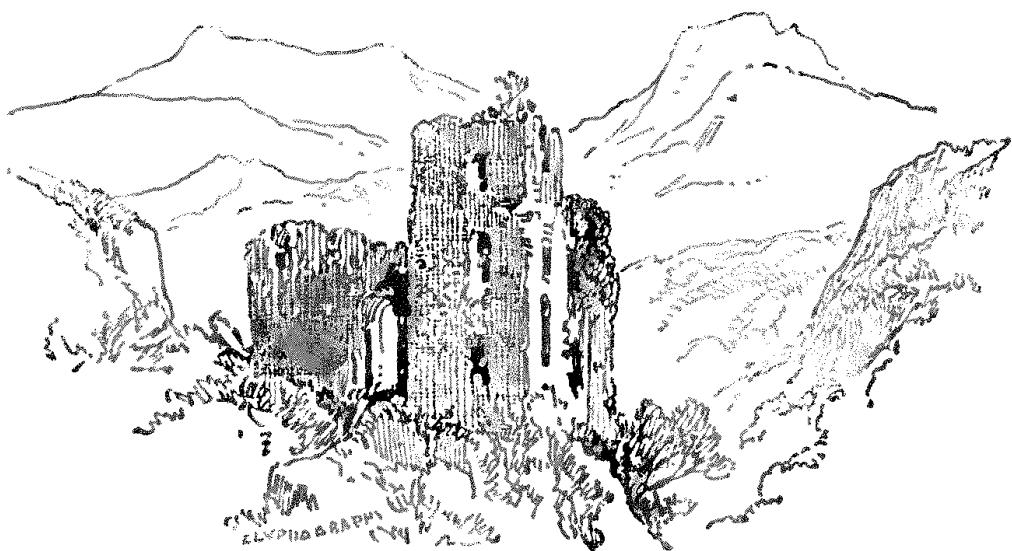


FIG. 90.

Let Figs. 83 and 84 be placed horizontally, as in Figs. 87 and 88, and we have at once the general direction of the lines forming the foundation of Figs. 89 and 90,



FIG. 91.



FIG. 92.



FIG. 93.



FIG. 94.

FIG. 95.

and also for Fig. 91. If we analyse the two following examples (Figs. 92 and 93), we shall find that they resolve themselves into the simple elementary lines of

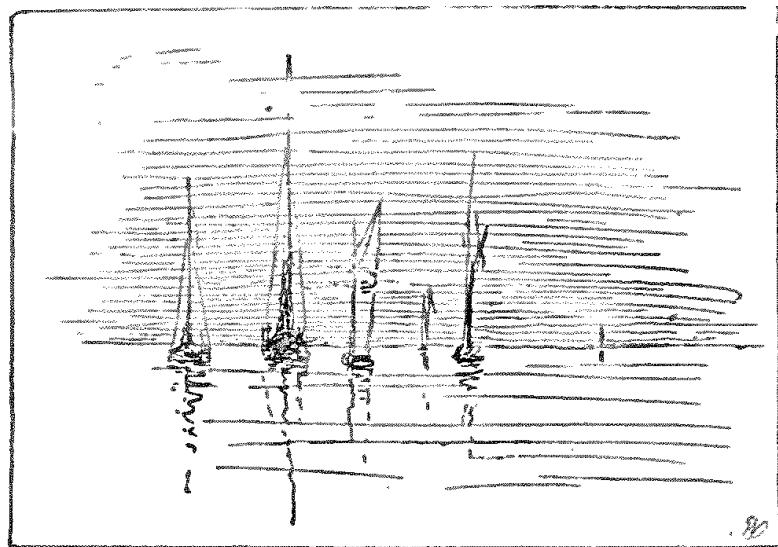


FIG. 96.



FIG. 97.

Figs. 94 and 95. It is by such means that the mind may often suggest what the feelings require, but cannot discover; for the mind and the feelings should act in concert in the production of a work of Art as well as in its analysis.

203. There are some qualities and characteristics which are more readily expressible by lines and by light and shade than others. The sentiment produced by these is sometimes easily traced to its exact source. To some extent the ideas of repetition and monotony associate themselves with that of stillness, which is allied to repose; and stillness is a condition of things with which we may become quite familiar—a condition in which Nature is

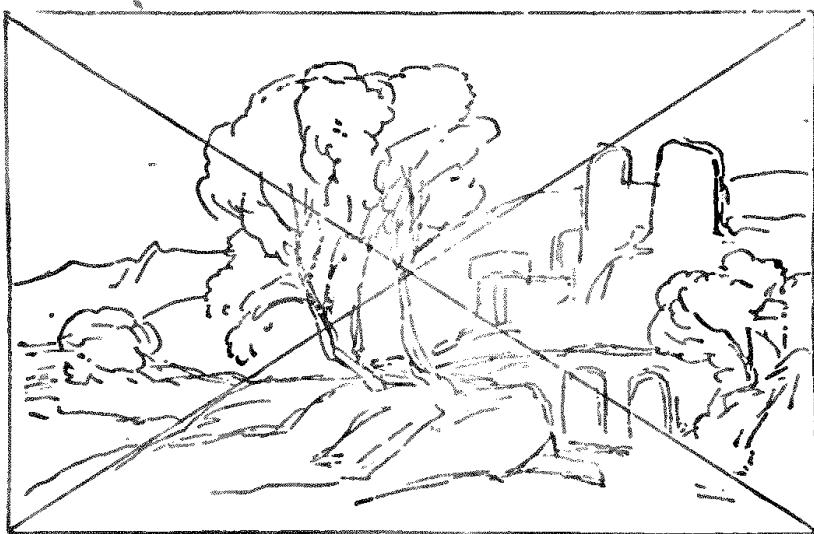


FIG. 98.

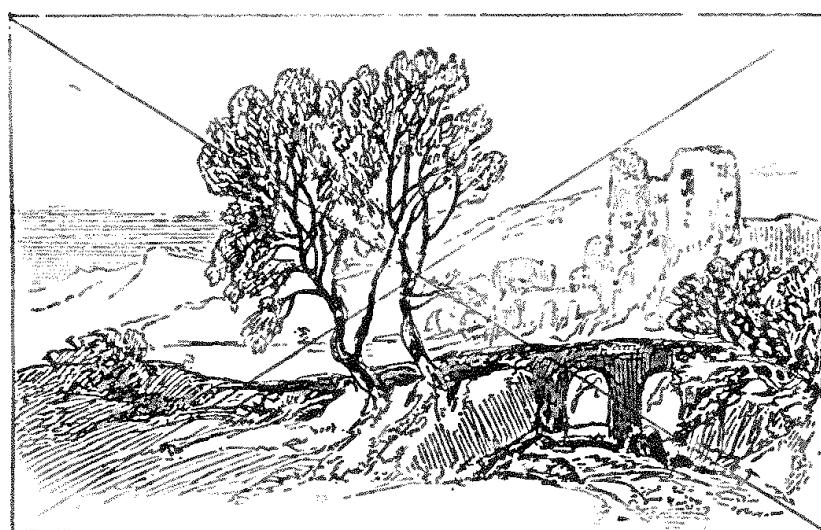
most easily represented by a tone of shade, by repetition of lines, and by certain positions of lines, as in the rough sketch (Fig. 96); whilst contrast of light and dark, and opposition of lines, as in Fig. 97, give rise to a contrary feeling.

204. If we take any rectangular parallelogram as our picture, and divide it into equal parts, as in Fig. 98, the intersection will mark the part of the picture space which is the weakest place for the principal object of a pictorial composition, for it divides the picture into two equal

halves. In the case of merely ornamental design, where exact symmetry is an important constituent, this of course does not apply.

By dividing the parallelogram into thirds or fifths, we shall obtain what may be called the strong positions of the picture; but if some of these parts or positions on one side are occupied with points of interest, the corresponding parts on the other side become neutralised for any equally important feature of interest.

205. Thus it will be seen that the various methods of composition, especially in landscape Art, have for their aim the introduction of pleasing, or at least mentally satisfactory qualities, without disturbing what we might almost call the idiosyncrasies of Nature. For rules and helps we should ever study, not so much the customs of men, as the works of Nature herself. Whichever way we look, we always find in her the assertion of three grand laws,—Fitness, Variety, and Unity.



CHAPTER XXV.

ON LIGHT AND SHADE AS APPLIED TO GROUPS OF OBJECTS AND TO PICTURES.

206. IN Chapter VIII. the remarks on ‘light and shade’ had reference only to individual objects: we are now to see how light and shade operate on objects, individually or grouped, when considered in relation to the whole picture. This can only be done here in a very limited manner; fully to show its importance would require many costly plates.

207. As the purpose of light and shade in the representation of an object is to give the idea of projection, and to show the space it occupies, so the purpose of light and shade, when applied to a picture, is to fill it with space, and to locate, to conceal, or to reveal, the various objects it may contain, whether houses or trees, figures or mountains, and lead the mind of the spectator to consider chiefly those parts of the work that the artist wishes him to see.

208. If the student will, as before, make simple experiments, he may more easily understand some important truths in connexion with the subject.

Let him, on a stout piece of cartridge or of grey paper, make two accurate but delicate outlines in ink of any clearly defined subject, such as Fig. 96, or Fig. 97,

only considerably larger. With a piece of charcoal,* or a pencil that will easily rub out, he may now treat the subject under different aspects, and then compare them with each other ; his feelings will soon inform him which is the most agreeable treatment, and his intellect and judgment will furnish him with the reasons *why* it is so.

In attempting such exercises he must consider the position and kind of light that is to illumine his picture, its effect on the large masses, the local colour of the various parts ; and when these considerations have been attended to, he may greatly modify and complete the whole by the introduction of accidental shadows of various shapes and intensities.

When these experiments have been made with a few simple subjects, those of a more extensive and intricate kind may be attempted : for instance, such as Figs. 91 and 93.†

209. It is not unfrequently the case that when an artist has determined to paint a particular subject from Nature, he has to commence it under very unfavourable circumstances of light and dark ; but he is ever watchful for any happy moment when the scene may be lit up by some bright gleam of light which may instantly transform it from the commonplaceness of a dull day into a beautiful picture.

This instantaneous ‘effect’ he rapidly secures (perhaps

* Charcoal must be *dusted* off the paper, not rubbed.

† If grey or tinted paper be used, the light parts of the sky, and the brightest parts of near and very light objects, may be put in with a piece of extra soft white chalk, or with Chinese white.

only on brown paper with charcoal and soft white chalk), and by it he is assisted in completing his work, by adding to beautiful forms and accurate drawing the charms of ever-changeful lights and shadows.

210. And now let the student, in imagination, climb, on this fine April morning, to the top of some hill, and watch the marvellous effect of the cloud shadows as they travel over hill and down dale, concealing, revealing, gladdening, saddening ; our spirits going up or down as one moment we stand in the bright light, and in the next in deep shade—a picture of our human lives. The winding stream, the rustic bridge crossing it, the woody hill-side, the fortress-like rock, and the hills in the distance ; these are the features that the mind loves to dwell upon and the memory to recall, as the clouds cast their fleeting shadows across the scene alternately bright in light, or falling into shade to be revealed anew.

These accidental cloud shadows are a most important means in the hands of a painter for expressing space and light, and for inducing the eye and mind to dwell on whatever is most interesting.

211. If the student, with these thoughts in his memory, will look over a work like Turner's *Rivers of France*, his *Harbours of England*, or the *Liber Studiorum* ; or go through an exhibition of old (English) masters' works, especially of water-colour drawings by such men as De Wint, Varley, Barrett, Cox, Copley Fielding, and Harding, he will have a mass of evidence that will convince him of the grand power which these accidental cloud

shadows place within the reach of artists for the expression of space, light, and beauty.

212. These accidental shadows must not appear in spots, or be clearly visible throughout their entire forms, but should usually run continuously from side to side of the picture, as they generally do in nature. Being irregular in form, and passing over irregular surfaces, their exact shapes cannot be traced; but being subject to that foreshortening which all retiring surfaces show,—whether a table-top, a room, or a vast landscape,—they will almost invariably appear to extend from side to side of the picture, as in Fig. 99, and not into it.

213. As illustrations of what we mean by the distribution of light and shade in a picture, let us consider the two Figs. 100 and 101. In the former, the upper and more interesting part of the building is left light, whilst the other part becomes darker as it gets lower, and ultimately blends with the dark shadow on the ground, the nearer part of which is in strong light. To prevent the monotony of so large a mass of dark, a figure is introduced, the white and black dress of which prevents the dark shade on the building from looking heavy. But to make this more strongly felt, let the student with a soft pencil shade over the light parts of the building, the figure, and the foreground,—he will instantly perceive that all space and light are destroyed,—in fact, that the drawing is spoilt. It can be made right again by cleaning with a piece of bread.

214. Now let us take the second one. In this subject

FIG. 93.

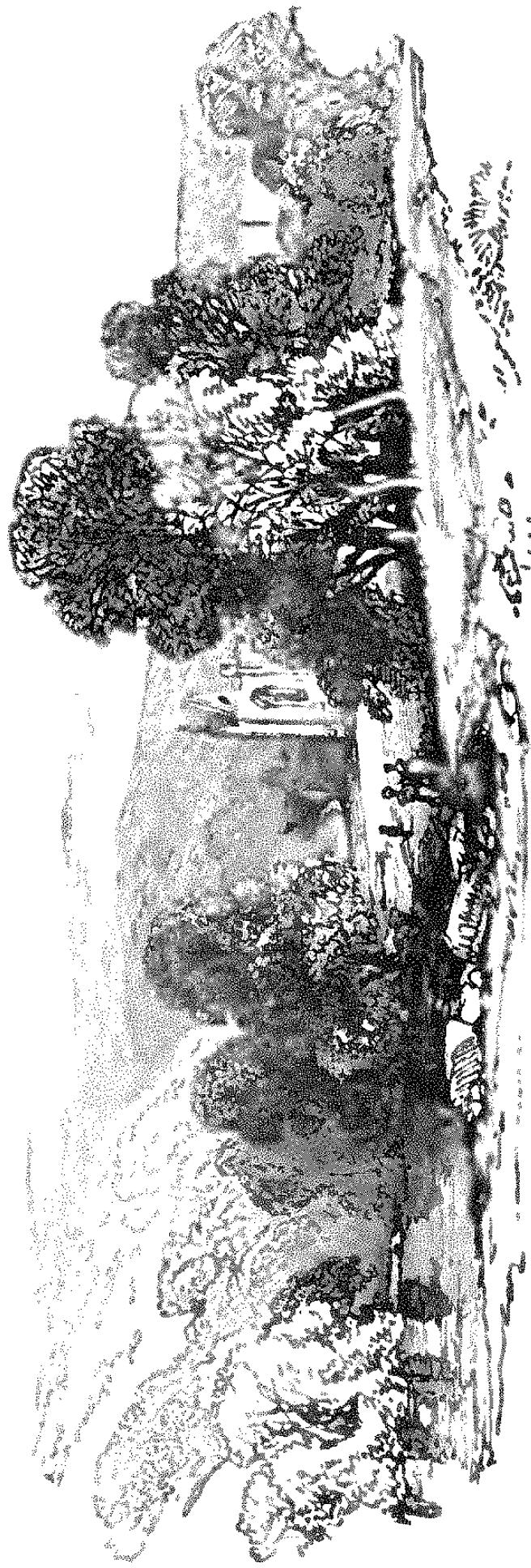


FIG. 100.

WATERCOLORS.

