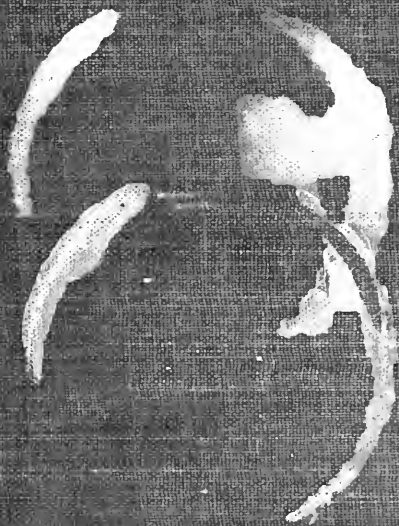


TEACHERS' MANUAL
FOR
THE PRANG ELEMENTARY COURSE
IN
ART INSTRUCTION

SEVENTH YEAR
BOOKS IX AND X.





MacLure

STATE NORMAL SCHOOL,
LOS ANGELES, CALIF.

LOS ANGELES
LIBRARY

Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

<http://www.archive.org/details/teachersmanualpt05clar>

LOS ANGELES, CALIF.

TEACHER'S MANUAL

PART V

FOR

THE PRANG ELEMENTARY COURSE

IN

ART INSTRUCTION

BOOKS 9 AND 10

SEVENTH YEAR

11659

BY

JOHN S. CLARK, MARY DANA HICKS
WALTER S. PERRY

THE PRANG EDUCATIONAL COMPANY

BOSTON

NEW YORK

CHICAGO

COPYRIGHT, 1899, BY
THE PRANG EDUCATIONAL COMPANY.

UNIVERSITY OF MICHIGAN
LIBRARY

Typography by J. S. Cushing & Co., Norwood, Mass.
Presswork by S. J. Parkhill & Co., Boston, Mass.

N357
C54t
v. 5

AUTHORS' PREFACE.

No person can be oblivious to the great educational development of the past few years. The introduction of the kindergarten, of manual training, of nature study, of drawing, of modeling, and of color work into the schools have all led the way to a broader and fuller recognition of the subject of art as an essentially important feature of public education both for the proper development of the individual child and also as a preparation for practical social life.

ART FOR SOCIAL WELL-BEING.

The psychological developments of the past few years, whether psychology be regarded from the old metaphysical, or faculty, standpoint, or from the newer standpoint of physiological investigation, also establish the supreme importance of art as the expression of individual creative activity in the training of youth for social well-being.

ART AS A SUBJECT OF PUBLIC INSTRUCTION.

In the opinion of the authors of this Course the time has therefore come when the subject of art as a definite, fundamental feature of public instruction should be clearly recognized; and this Course is a serious attempt to formulate for the schools a system of art instruction upon a distinctly psychological and educational basis. The instruction starts with the assumption that all art work is in its nature the product of creative self-activity, using the study of nature and of art for certain definite, conscious ends, and that drawing, modeling, and work with color are but the means by which this activity is manifested. Accordingly, in this series there are presented principles and methods of instruction radically different from any that have been presented heretofore, and embodied

in an entirely new set of exercises. And the authors fully believe that the time is ripe for such a system of art instruction as is here presented.

ARTISTS AND ART TEACHERS.

There are now a goodly number of trained art teachers directing the work in the schools, who not only fully understand the technicalities of art, but who are also acquainted with its psychological and educational aspects. And then, most significant of all, the series includes contributions from some of our most eminent American artists:—

JOHN LA FARGE,
ABBOTT THAYER,
EDWIN H. BLASHFIELD,
WINSLOW HOMER,

FREDERICK S. CHURCH,
ROSS TURNER,
ARTHUR W. DOW,
HERBERT ADAMS.

A DISTINCTIVE COURSE.

The authors of this system do not feel it necessary to dwell upon the distinctive features which make this Course an essentially new one for our public schools. A mere glance at the illustrations and the nature of the exercises shows how essentially different in aim and method this system is from any which has preceded it. In the preparation of this Course the authors have received assistance from very many persons, and they take a special pleasure in acknowledging the valuable assistance they have received from the leading supervisors and teachers of art instruction in the country.

The authors desire to acknowledge the very great assistance received from Mrs. Edith Clark Chadwick, in the preparation of the illustrations.

VALUABLE COUNSEL.

The authors also desire to acknowledge their obligations for valuable counsel to Mrs. Hannah J. Carter, The Prang Normal Art Classes; Mrs. M. E. Riley, Supervisor of Drawing, St. Louis, Mo.; Mr. James Frederick Hopkins, Art Director, Boston, Mass.; Miss Josephine C. Locke, Supervisor of Drawing, Chicago, Ill.; Prof. W. S. Goodnough, Supervisor of Drawing, Brooklyn, N. Y.; Miss Katherine E. Shattuck, Normal Class,

Art Department, Pratt Institute, Brooklyn, N. Y. ; Miss Sara A. Fawcett, Supervisor of Drawing, Newark, N. J. ; Miss Elisa A. Sargent, Supervisor of Drawing, Wilkesbarre, Pa. ; Miss Augusta L. Balch, Supervisor of Drawing, Salem, Mass. ; Miss Helen Fraser, Supervisor of Drawing, Columbus, O. ; Miss Myra Jones, Supervisor of Drawing, Detroit, Mich. ; Miss Stella Skinner, Supervisor of Drawing, New Haven, Conn. ; Miss Mabel S. Emery, Boston, Mass. ; Mrs. Lucy Fitch Perkins, Chicago, Ill. ; Miss Edith Palmer, Director of Art, Tome Institute, Port Deposit, Md. ; Mr. Alfred V. Churchill, Director of Art, Teachers' College, New York ; Miss Eliza B. Richardson, Mrs. Alice Brannan Haley, The Prang Normal Art Classes ; Miss Wilhelmina Seegmiller, Supervisor of Drawing, Indianapolis, Ind. ; Miss Ruth Warner, Art Instructor, Teachers' Training Classes, Brooklyn, N. Y. ; Miss Bonnie Snow, Supervisor of Drawing, Minneapolis, Minn. ; Miss Harriette L. Rice, Supervisor of Drawing, Providence, R. I. ; Miss Mary W. Gilbert, Supervisor of Drawing, New Bedford, Mass. ; Miss Ida E. Boyd, Primary Supervisor of Drawing, Brooklyn, N. Y. ; Mrs. Lucy Booth, Boston, Mass. ; Mrs. Franc Elliott, Supervisor of Drawing, Salt Lake City, Utah ; Miss Mary E. Garretson, Supervisor of Drawing, Allegheny, Pa. ; Miss Estelle E. Potter, Supervisor of Drawing, New London, Conn. ; Miss Ruth Gould, Chicago, Ill.

August 1, 1899.

JOHN S. CLARK,
MARY DANA HICKS,
WALTER S. PERRY.



TABLE OF CONTENTS.

	PAGE
AUTHOR'S PREFACE	iii-v
TABLE OF CONTENTS	vii
INTRODUCTION	
ART AND ART EDUCATION	1-3
WHAT IS NEEDED FOR ART TRAINING	3, 4
THE SUBJECT DIVISIONS OF ART INSTRUCTION	4
REPRESENTATION	5-22
DECORATION	22-38
CONSTRUCTION	38-45
COMPOSITION	45-50
TRAINING OF AESTHETIC JUDGMENT	51-56
GENERAL DIRECTIONS	57-64

THE PRANG COURSE.

PURPOSE OF THE COURSE	67
PLAN OF THE SERIES	68-71

BOOKS 9 AND 10.

GENERAL PLAN FOR THE SEVENTH YEAR	71-78
---	-------

BOOK 9.

William Morris Hunt, John La Farge. — Kobell, Millet, Le Rolle. — Corn. — Trees. — Type Solids: Square and Triangular Prisms. — Historic House. — Figure Studies. — Optional. — Roman Ornament. — Byzantine Ornament. — Space Relat- tions: Panels, Frets. — John La Farge. — Roman and Byzantine Art.	79-169
---	--------

BOOK 10.		PAGE
Herbert Adams, Abbott Thayer. — Charles Herbert Woodbury, William Hunt, Winslow Homer, Rembrandt. — Beautiful Objects. — Animal Studies. — Romanesque Orna- ment. — Objects: Working-drawings. — Type Solids: Sections, Developments, Plans. — Constructive Design: Grilles. — Building and Machine Details. — Spring Flowers. — Decorative Design, Surface Covering, Borders. — Composition: Land- scape. — John La Farge. — Byzantine and Romanesque Art	170-270	
<hr style="width: 20%; margin: 10px auto;"/>		
APPENDIX, THEORETIC PERSPECTIVE		271-275

INTRODUCTION.

11659

ART AND ART EDUCATION.

THE PRANG ELEMENTARY COURSE OF ART INSTRUCTION assumes that Art properly understood is not an imitative copy of nature, but a new creative use of nature's materials for human purposes. The primitive industrial arts — building, weaving, pottery-making, and the like — stood, not for the mere reflection or multiplication of already existing natural objects, but for human *ideas* (at first very dim) about the needs of life and about ways of meeting those needs. The great constructive, industrial arts of to-day, which have grown out of these rude, primitive arts, rise from the same source, a source within human nature; and that source is what is called creative imagination.

But the human race has other needs than those for shelter, food, and clothing to the satisfaction of which the industrial or “useful” arts are chiefly directed. Men have not alone bodies to be cared for, but also hearts, minds, and souls crying out for nourishment, for exercise, for growth. Feelings of love, admiration, and awe are as “natural” as feelings of cold and hunger, only they have to do with a higher phase of human nature than that which pertains to the body. They are that for which the body exists. Man instinctively tries to express his best self in a way to appeal to others; and thus the so-called “Fine Arts” have come into existence, including painting, sculpture, and architecture, all interrelated in practical affairs and all related so closely to the industrial or “useful” arts that the dividing line between them is more theoretic than real. The source of the Fine Arts, therefore, is within our human nature. It is the creative imagination, directed by the heart, mind, and soul, which here uses nature's facts in its own way.

This is, in brief, the general idea of art which the authors aim to embody in The Prang Elementary Course of Art Instruction. It is by no means desired that philosophic theories of art be imposed upon children. If teachers grasp the underlying idea, they will naturally use more consistent and practical methods of class-work than are sometimes followed in a haphazard way, in the absence of any real understanding of what art is.

With this idea of art and its place in the world, as a basis in the teacher's mind, it will be apparent that elementary art instruction should aim to develop the best mental powers of each individual child. The growth of the children's creative imagination along healthy lines, accompanied by growth in manual skill as the result of actual practice in doing things, is the main purpose of the whole course. To this end the child is led to make and classify in his mind observations of form and color in nature, and observations of form and color as used by master-workers in already existing art creations. These two correlated lines of observation — together with the exercise of personal, creative activity — are of the greatest educational importance. The helpful influence of studying good art examples cannot be overestimated, quickening as they do the child's artistic sense, inspiring him with fresh interest and leading him to work toward higher ideals than those which he would perceive unaided.

For instance, **in connection with the study of Nature** for her material facts and her spiritual meanings, the pupil studies fine artistic renderings of nature, — plant life, animal life, and landscape, where beauty of space arrangement is well considered, — leading up to studies of fine landscape motives in the best decorative composition, and to the creative utilization of landscape motives in original compositions.

In connection with the study of Industrial Construction pupils are led to consider not only fitness of form to material and to purpose, but also beauty of form and proportion and of space relations. Examples of constructive drawing where all these elements have been carefully considered are presented for study in the various grades, giving a wide variety of subjects, and in the higher grades broadening into the study of examples of architectural masterpieces.

In connection with the study of Historic Ornament and Decorative Design the pupil also studies space relations, both through observation of examples and through original, creative work, learning to see in the characteristic ornaments of different nations and different ages not simply a record of environments and race histories, but also and above all a showing of the manifold ways in which people have tried to express their own ideals of beauty and harmony in form and color and in space relations.

Pose Drawing, begun in the lowest grades and there incidentally utilized as a means of illustrating stories of human character and action, is strengthened in every grade by the presentation of artists' drawings from the pose; and, as the study of beauty in space relations gradually shows its bearing upon pose drawing, the examples given from great artists like Thayer, Sargent, Blashfield, and La Farge lead

pupils' power of appreciation up toward the supreme artistic utilization of the human figure in the greatest decorative art, where man's own image is used to show forth the finest feelings, the most exquisite fancies, and the greatest thoughts of the masters.

To reach these ends necessarily implies careful training for the pupil. Drawing is not "natural" to children in the same sense in which speaking, walking, and eating are natural. Counting out the rare artistic geniuses that appear not once or twice in a whole generation of children, it must always remain true that good drawing cannot be secured merely by giving children opportunity for the expression of their present selves, but by sympathetic, intelligent, conscientious training, leading them toward still higher stages of appreciation and of creative power.

Yet the development of personal skill in drawing is only a part of the purpose of the Course. The cultivation of readiness in the use of drawing in connection with other studies is also a part of the purpose. These are means toward an end. The end is twofold; it includes the development of individual, creative power according to the measure of each child's natural endowment, and it includes the development of individual, appreciative power, each child rising gradually from the point where he enjoys only the sort of thing which he can do for himself, up to a point where he is able to enter in some measure into the thought and feeling of really great artists.

WHAT IS NEEDED FOR ART TRAINING.

In preparing material for such art training, the needs of the supervisor or director of the teachers and children must be carefully considered. The drawing-book with fine examples of painting, sculpture, and architecture from masters on illustrative pages and with special examples on the drawing pages is needed. Such a drawing-book gives inspiration and instruction to teachers and children by examples of good composition and rendering, of historic ornament, and of conventions of industrial drawing, and also by providing that sequence of work which is so essential for all true progress.

The supervisor or director may direct and personally inspire the teachers through meetings, classes, visits, and courses of study, but even with drawing-books these cannot suffice for the needs of the teachers in the absence of the supervisor. Therefore, manuals are provided which enable the supervisor or director to put into the hands of the teachers the general plan, principles, and methods of Art Instruction for reference and for study.

In addition to drawing-books and manuals, the teachers should be supplied with material which will serve to educate and elevate the pupils—objects of nature and of art which will help in the formation of ideals. Growing plants in the windows of the schoolroom will do much to bring the child to a love and appreciation of nature.

Types of form—the type models, and types of color as found in the color unit, are needed as standards by which to classify and to appreciate general form and color. Beautiful objects of art as subjects for study and for drawing aid very much in the cultivation of taste. A collection of fine pottery forms is a valuable adjunct in Art Instruction.

And finally, examples of the great art conceptions of the world, simply framed and hung upon the walls of the schoolroom, will create an atmosphere of fine thought and feeling conducive to that appreciation and production of the beautiful by each individual pupil for which Art Instruction aims.

THE SUBJECT DIVISIONS OF ART INSTRUCTION.

There are three distinct yet correlated subjects in Art Instruction which call for careful consideration :—

REPRESENTATION, the science and art of delineating or representing objects as they appear to the eye.

DECORATION, the science and art of producing beauty in ornament.

CONSTRUCTION, the science and art of making diagrams or working-drawings, which give the facts of objects, and from which objects may be constructed.

Every course of drawing should give well-balanced and closely connected instruction in the three subjects,—Representation, Decoration, Construction,—should lead to the appreciation of beautiful form in each of the three subjects, and should provide suitable examples of “rendering” as well as of historic ornament.

Care should be taken to have the nature of these three subjects clearly developed in the minds of the pupils; and frequent opportunity should be taken to recall and impress them. Instruction in the three subjects should be as nearly parallel as possible; it would be found a great disadvantage to pursue one of them for six months at a time to the exclusion of the other two.

Composition is essential in all these subjects. It includes selection, arrangement, proportion, space relations. Thus there is composition in pictures—composition in ornament—composition in constructive design. Composition in art, as in literature and in music, may be studied in the work of artists, but it can be produced only by the individual, as it of necessity implies original work.

Representation; or, Drawing as Applied in Representing the Appearance of Objects.

Representation not only deals with the truth of appearance: it also requires the making of a picture by composition as well as by drawing. The art principles of selection and arrangement can be applied in elementary composition by the pupils, not only in the selection and grouping of objects to make a picture, but also in selection and arrangement in landscape. Here space relation and line direction play important parts. It must be remembered that composition appeals directly to the creative faculty.

What a Picture is.—A true picture not only shows how an object or a group of objects appears, but it also tells something of the one who has drawn the picture. It tells how the object looked to him; it tells not only what he saw, but also what he thought about the objects. For whoever draws a picture indicates, or tries to indicate, in the drawing what parts he cared for most. He also endeavors to show his ideas of beautiful composition. This human element, added to the true presentation of the appearance of objects, makes the real picture.

Now a picture may be in outline, in light and dark, in light and shade, or in color. The study and drawing of the appearance of simple models and objects for the mere outline is valuable in order to attain a realization of the true appearance in different positions. Along with this, there should be a study of the best methods of expressing the relative importance of objects, of showing the greatest beauty of contour and of light and shade, and of giving feeling to the work by drawing; also of suggesting color through light and dark by "pencil-painting" or by ink and the brush, or by painting with color.

PICTORIAL COMPOSITION.

Its Purpose.—One of the most important elements in Representation is that of composition. This element enters into all Representation, whether of single objects or a group of objects. Its purpose is to create a subtle arrangement or synthesis of lines, of forms, of colors, which shall present a beautiful whole. The final

test of composition must be its effect in producing a beautiful impression as a whole — an impression attained only through that interrelation and subordination of parts which make oneness — unity. Ruskin defines composition as “the help of everything in the picture by everything else.” The first step toward composition is selection, looking toward harmony. The objects selected for a group may be beautiful in themselves, and yet, if their relation to each other, if their mutual “help” is not considered, if, in other words, they are not “composed,” the effect as a whole will not be beautiful.

Selection of Objects. — It is well to remember that even in its beginnings this work should be pictorial art. For this purpose, select objects which are beautiful in form and pleasing in association. The many pleasant associations that we have with objects which are constant companions form a good basis for direct study.

The selection of natural objects must be made with equal care. It is frequently said that “Nature never makes a mistake.” The inference made by some from this statement is that all natural objects are beautiful. A moment's reflection will show that this is not true. In selecting natural objects, of any definite kind, for Form Study and Drawing, the guiding thought should be to choose characteristic and beautiful examples.

A Group. — In making a group, determine first the idea to be expressed, thus leading to the selection of objects having harmonious relations. The idea of the group, then, controls the selection of the objects — here again appears the maxim, as true in art as in education, the whole before the parts. If the idea is to express the beauty of fruit, let the group be wholly of fruit. If the idea is to express the beauty of vegetables, — fruits of the earth, — let the group be wholly of vegetables. A variety of things having no apparent connection with one another gives no pleasure in a picture, and distracts rather than composes. For instance, a group of delicate fruit with rougher vegetables seems inharmonious. They have not enough in common, either in the purpose which they serve or in their general appearance. The arrangement is incongruous. Only the most hardy fruit should be grouped with vegetables.

The Arrangement of a Group. — If a picture of a group is desired, it will not, then, be satisfactory to place the objects at random and draw them. Some thought must be given to the arrangement; for, if arranged in one way, the group may be very pleasing, while if arranged differently, the group may not be at all pleasing. If such arrangements are considered thoughtfully, it will be found that, in the one case, the simple principles of elementary composition have been regarded, and in the other they have been disregarded. It will be found, moreover, that these principles of composition are so simple and natural that children may be led to discover them. In studying the arrangement of a group, consider: —

1. The place of the principal object.
2. The place of the secondary objects.
3. The figure made by the group on the ground or table.
4. Partial view of some of the objects.
5. Upper line of the group.
6. **Variety** in the positions of the axes and in the faces visible.
7. **Repose** of the objects.
8. **Unity** of the group — distance between objects.

(1) Choose the principal object, and, generally, place it centrally but not exactly in the centre; (2) do not place the other objects in a straight line with the principal object; (3) try the effect of placing the objects so that if the centres of their bases were connected an irregular figure would be made; (4) place them as if they were good friends and belonged together, and (5) so that they will appear at rest. But remember (6) that the objects should not have the same positions, that is, their axes should not be all upright or all horizontal; they should not be parallel or at right angles to each other; and they should not present exactly the same faces; and (7) one of the objects should be partially hidden behind another, even if there are no more than two objects in the group. Look now (8) to see if, in the group that you have made, the objects will appear of the same height when drawn. If so, change them, for the effect will not be pleasing. By skilful questioning, the pupils can be led to these points.

It will be noticed that unity, repose, and variety are emphasized as of particular importance. They are indeed essentials in all good pictorial composition. Both variety and repose should be tributary to unity in any composition. Where unity is lacking, repose is always lacking.

Consider also the arrangement with reference to carrying the eye into the picture. Placing one object farther back than another suggests distance into the picture, which is always pleasing, as it brings with it the feeling of freedom and atmosphere. If one of the objects is placed so that its axis or its leading lines tend from you, it will aid in producing the effect of distance.

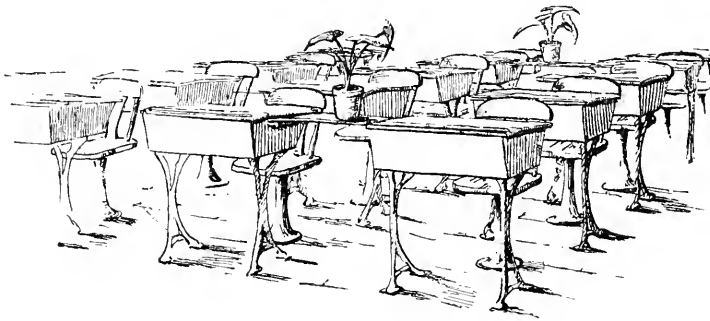
And as a test of the whole, consider the general space relations. These may be shown in a very satisfactory way by enclosing the group, as it were, by observing it through an oblong opening cut in paper, which will make a frame for the group. The hands held first vertically and then horizontally also suggest a frame.

PLACING.

Placing Objects or Groups. — Thought should be given to the placing of the various sprays, objects, or groups, so that they may be advantageously seen. It is

always better for a pupil to draw from an object or group on some desk other than his own, to get the softening and unifying effect of distance: and frequently it is well that the object or group drawn should be at considerable distance. After the objects or groups are placed, let each pupil look about the room to find that which he likes the best and which he can see in its best position; for art seeks for the best.

The placing of objects is generally something of a problem. But in the case of an upright cylindric or conic object, which always appears the same, the solution is easy. Boards may be procured long enough to extend across the aisles between the desks. Two such boards would be required for each alternate aisle, one being needed at the front and one halfway down the aisle. Cleats may be screwed on the ends of the boxes of the desk to serve as supports for these boards when they are needed for the drawing exercise. The other aisles will be left free for the teacher or pupils. At the close of the exercise, the boards can be removed and put away.



Other models and objects may be arranged on the desks. Each pupil may pile three or four books far back upon the desk, alternately at the left and right. If there is absolutely no level part of the desk, raise the pile by placing a folded paper under the front, so that there may be a surface about level for the models. On the upper book place a sheet of manila paper, and then arrange the models or objects to make a pleasing group. Be careful that the objects are not too far below the eye.

If branches are to be drawn they may be hung in various places, so as to give the best opportunity for study to the greatest number. If they are hung on the blackboard for the pupils in the front seats, a piece of white or neutral-tinted paper should be placed behind them. A pasteboard folded like a table picture-frame or an open book standing on a board across the aisle serves very well as a support for a small branch.

A spray of leaves or flowers should be studied from all sides to discover its most

pleasing aspect. It is well to have a spray placed in a vase of good form ; if that is not practicable, it is frequently possible to keep the spray in good position by placing the end between the leaves of a closed book which is standing. It is well, also, to have the spray at some little distance from the pupil who is drawing it. It may sometimes be desirable to remove part of the stem or a leaf or two, or perhaps to add another spray, in order to get a good effect. The Japanese make the arrangement of leaves and flowers a very serious study. There is an interesting book by Conder on this Japanese art.

APPEARANCE OF OBJECTS.

Technical Points. — There are certain technical points and general principles which follow concerning the appearance of objects that every teacher should know. The pupil in the primary and lower grammar grades learns these points simply as matters of experience without definite statement, but in the upper grammar grades generalization concerning these points begins and teachers should be prepared.

Why the Appearance of Objects differs from their Facts. — The appearance of an object as to outlines depends on two conditions : —

1. Its position in regard to the observer.
2. Its distance from the observer.

Position affects the apparent FORM of an object ; distance affects the apparent SIZE.

The apparent form of any object, except a perfect sphere, varies with every position in which it is placed in regard to the observer.

The apparent size of an object decreases as its distance from the observer increases.

The effect of distance on the apparent size of an object is a matter of common observation. Compare a vertical measurement on the pencil (see page 10) of an object at a distance of three feet, with a vertical measure of the same object at a distance of ten feet.

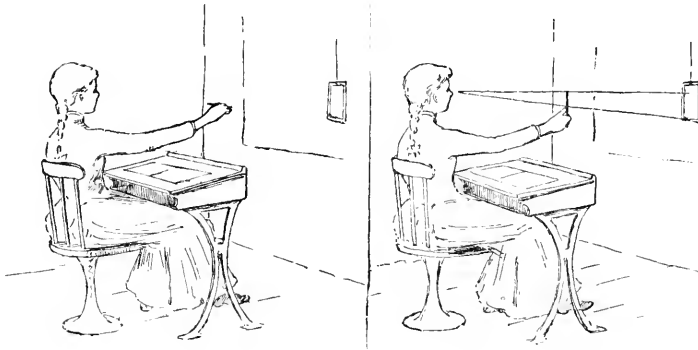
Measurement on the Pencil. — The use of measurement on the pencil is to obtain *proportion*. If pupils do not already know how to measure on the pencil, the following practice is desirable. The teacher draws upon the board at the front of the room vertical oblongs of different proportions. If the schoolroom is wide, it will be better to have several such oblongs, — some at the left, some in the middle, and some at the right end of the board. The teacher gives the following directions, and sees that each is intelligently carried out before proceeding to the next, explaining that the measurement to be taken first is the width of the oblong, — next the height of the oblong. The exercise may be varied by measuring objects in the room, as window-panes, door-panels, etc.

Remember that these measurements give *proportion* only, *not* size.

In measuring horizontally, take great care that the pencil is *parallel* to the line of the eyes; in measuring vertically, that the pencil does not incline either backward or forward, either to the right or to the left; that it is kept in the same plane, as if against a vertical pane of glass directly in front of the eye.¹

As it is necessary that the distance of the pencil from the object should be absolutely the same while studying any one object or group, all measurements should be taken with the shoulders resting firmly against the back of the chair, and the pencil at arm's length; it will be necessary also to take all measurements with one eye closed.

Position and Practice by Pupils in Holding the Pencil for Measurement.— Sit well back in the chair, with head erect, and shoulders resting firmly against the back of the chair. Grasp the pencil in the middle with the fingers, leaving the thumb, and as occasion demands, the forefinger, free to move along the pencil.



Hold the pencil horizontal and *parallel* to the line of the eyes, at arm's length, with the point to the right. Drop the hand to rest. Hold the pencil vertical (not inclining either backward or forward, either to the right or the left), at arm's length, with the point downward.

Measuring Horizontally.— Sit back in the chair, *close one eye*, and hold the pencil horizontal, at arm's length, with the point to the right, and so that the left end appears to be just at the left side of the form or figure to be measured; move the thumb until it appears to be just at the right side, Fig. 1, page 11.

¹ These are the accepted rules for measurement, and at present they seem the most practical ones. Cylindric, conic and spheric perspective bring up some problems with regard to these rules that are not yet worked out.

Those who are interested in the subject of perspective problems will find them admirably treated in "Modern Perspective," by Professor William R. Ware.

Measuring Vertically. — Hold the pencil vertical, at arm's length, with the point downward, at such a height that the upper end of the pencil appears to be exactly on a line with the upper side of the form or figure to be measured; move the thumb up or down the pencil until the thumb appears to be on a line with the lower side of the form or figure, Fig. 2, below.

Comparing Two Measurements. — Remember always to take the *same* position (back in the chair, pencil at arm's length) for any two measurements that you wish to compare; *and that the measurements give proportion only, not size.* Take the shorter measurement on the pencil, *keep it by holding the thumb fixed*; turn the pencil and compare this measurement with the longer, by seeing how many times the shorter measurement can be repeated in the longer. Decide carefully upon the proportion between the two measurements.

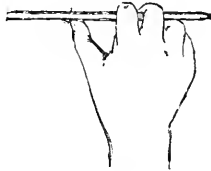


FIG. 1.

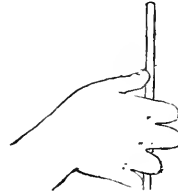


FIG. 2.

As a preliminary to the exercises in Representation, this practice can be given in measurement on the pencil. It is not intended, however, that in the early exercises the objects shall be studied by measurement on the pencil, as it is desired to lead the pupils to see approximately the appearance of objects without this aid. It would be well to call for judgment by the eye first, then measurement on the pencil. And even when measurements on the pencil are made, it must be remembered that they are of assistance only in determining general proportion. It is almost impossible to secure absolutely correct measurements by such means; the eye must always be the final test.

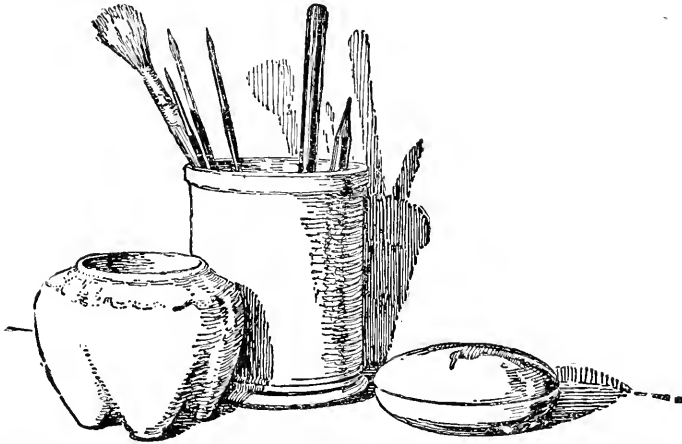
Study of Direction of Edges. — In order to study the direction of a horizontal edge, hold a pencil horizontal and *parallel* to the line of the eyes, at arm's length, with the point to the right. Raise or lower the pencil as the edge to be observed may be higher or lower; but keep it always horizontal and *parallel* to the line of the eyes. Compare the direction of the edge observed with that of the pencil. The observation, by this means, of the upper edge of a door or of a window-blind, open and shut, brings out admirably the difference in apparent direction.

General Principles. — Nearly all the principles in this subject can be gained from the study of the appearance of type forms, the simplest geometric solids. These type forms may be broadly classified as : —

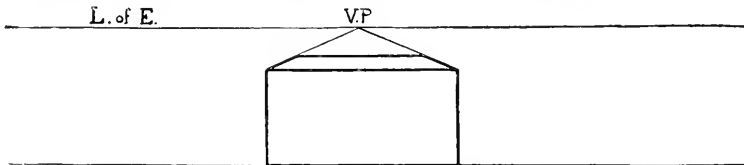
1. Cylindric forms.
2. Rectangular forms.

By observations of such forms, pupils may be led to see, and to express orally and by drawing : —

1. *That a circle seen obliquely always appears like an ellipse.*
2. *That the more obliquely the circle is seen, the more nearly the ellipse approaches a straight line.*

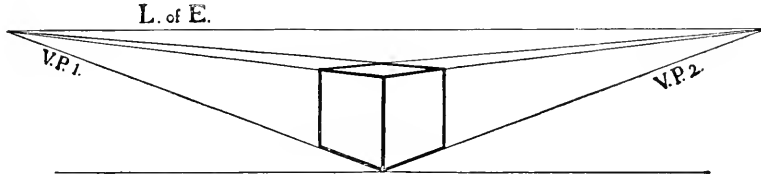


3. *That the less obliquely the circle is seen, the more nearly the ellipse approaches a circle.*
4. *That a horizontal face, when above or below the eye, always appears foreshortened.*

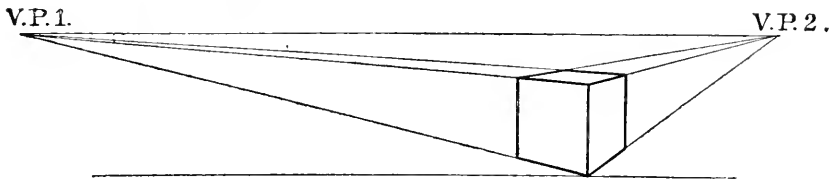


5. *That the farther of two edges, horizontal from left to right, appears shorter than the nearer.*
6. *That all parallel horizontal edges, receding from the eye, appear to converge.*
7. *That all receding horizontal edges appear to incline toward the level of the eye, and must be so drawn.*

8. That all parallel horizontal edges receding from the eye appear to converge to a point on the level of the eye, and must be drawn so that, if produced, they will meet in a point on the level of the eye (L. of E.).
9. That parallel horizontal edges receding to the left appear to converge to a point on the level of the eye at the left of the object; those receding to the right appear to converge to the right of the object. These points are called respectively Vanishing Point 1 (V. P. 1) and Vanishing Point 2 (V. P. 2).



10. That for rectangular objects standing with side faces turned equally away, the vanishing points are equidistant from the object.
11. That the farther vertical edges appear shorter than the nearer, and should be so drawn.
12. That for rectangular objects standing with side faces turned unequally away, V. P. 1 and V. P. 2 are unequally distant from the object, according to the angles at which the object stands.



The illustrations of the appearance of the group of objects and of the square prism below the level of the eye exemplify principles 1–8. The illustrations given of the cube turned and below the level of the eye are an exemplification of principles 6–11. These principles can also be confirmed and impressed by the study of square plinths above the eye, as in the case of the abacus of a column. The illustrations of these principles are made from models, as the exact forms of the models show the application of these principles more clearly than irregular objects would do. It is delightful to see how pupils will deduce the essential laws of the change in the appearance of objects in different positions, from their own observation. This deduction, however, should not be forced, but should come as a natural growth.

RENDERING.

Outline, Light and Dark, Light and Shade. — There are three ways of carrying out a picture with pencil, pen, or brush in monochrome — in *outline*, in *light and dark*, in *light and shade*. In *outline*, as has been said above, the lines should vary according to texture and importance and a slight expression of light and shade may also be given.

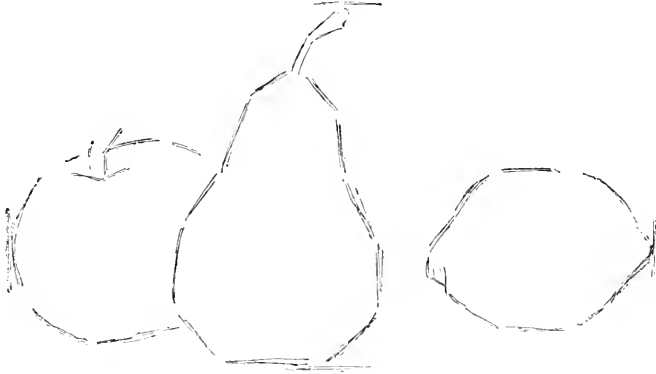
In what is known as *light and dark*, color contrasts and values are shown by means of masses of *light and dark*, sometimes in two tones, sometimes in more. Examples of expression of color and of pleasing space relations by light and dark will be found all through the drawing-books, notably in the illustrations from the Japanese and those by Arthur W. Dow.

In *light and shade*, the effect of sunlight and shadow is represented. See **Light and Shade**, page 16. Color effects shown by light and dark and the effects of light and shade are frequently found in the same drawing.

Blocking-in. — It is a great art principle to look for the mass first, whether in form, or in light and shade. Every exercise in Representation should tend to fix this great principle. Blocking-in — that is, getting the general shape and proportion in the quickest and simplest manner possible — is one of the means by which attention is directed first to the mass, the object as a whole, rather than to the details — to the group as a whole, rather than to individual objects in the group. Therefore it is well to block in an object or a group. But very few lines should be used; for if every change in direction should be represented by a line, the process of blocking-in would become that of studying details. See Plate I and also the illustration on page 15.

You will note that the blocking-in lines sometimes touch the outlines of the objects, sometimes cross them, and sometimes do not touch them at all, as there may sometimes be subordinate objects or outlines, that do not affect the outer limit of the group. The blocking-in lines may be continuous, or may be simply indications of direction. The illustration, page 15, shows how a few lines will bring out the general mass; a few more have been added to bring out each object as a whole. The special points in blocking-in are proportion of the mass, shape of the mass, size suited to the space. There is no rule for blocking-in which excludes any of these conditions; any of these ways may be taken which will help to express the general shape of the mass. Whatever way is taken, however, blocking-in lines should be very light, that they may not interfere with the later stages of the drawing. And there should not be a feeling that they must be absolutely adhered to; it frequently happens that changes are found necessary as the drawing progresses.

Blocking-in has more than the immediate effect of getting the shape of the particular thing to be drawn. It induces a habit of mind ; it leads to study of the mass everywhere, to large views, to looking at the whole before the parts, beginning first in judgment of form in mass, then in detail of a group of forms, continuing this habit in judgment of actions and of events.



Quality of Line. — Every drawing should show a feeling for the character of the material of the object drawn. This is always seen in what is called **artistic rendering**. Natural objects differ from manufactured objects in substance and texture, and they have varying outlines. The wooden models are exact in form and outline ; therefore, in drawing their outlines, a more definite but still transparent line should be used.

Outlines not only vary in direction, but are more decided and definite in some parts than in others. This variation in direction and in definiteness is expressive of the varying forces of life and growth, and must be rendered by a similarly varying line in the drawing. A lemon, being somewhat indefinite in outline, on account of the peculiar texture of the skin which holds its delicious fragrance, should be drawn with a line varying in thickness and not quite continuous. The skin of the apple is smoother ; this will need a somewhat lighter line and more continuous throughout than the line for the lemon. Remember also that it is the general form which should be expressed, and not the small details.

Table-Line. — In order to show that an object or group is resting on something, and thus to give an effect of rest in the drawing, what is called a **table-line** is frequently added. This line represents the farther edge of the table or shelf on which the object rests. Place an apple on a book slightly below the level of the

eye, and observe how high up on the outline the farther edge of the book appears to be. This will help you in drawing the *table-line*. In order to have the table-line properly observed, the teacher must see that objects are not placed too near the farther edge nor too far in front of it. In the former case, the table-line will appear too low; and as if the object were in danger of tumbling off; in the latter case, the table-line will appear too high, and as if the object were surrounded by too much space. A good general rule is to place the object so that the farther edge of the table or object on which it rests will appear to be less than halfway up the height of the object. The table-line should always be made a little lighter than the line of the object, to express distance and subordination.

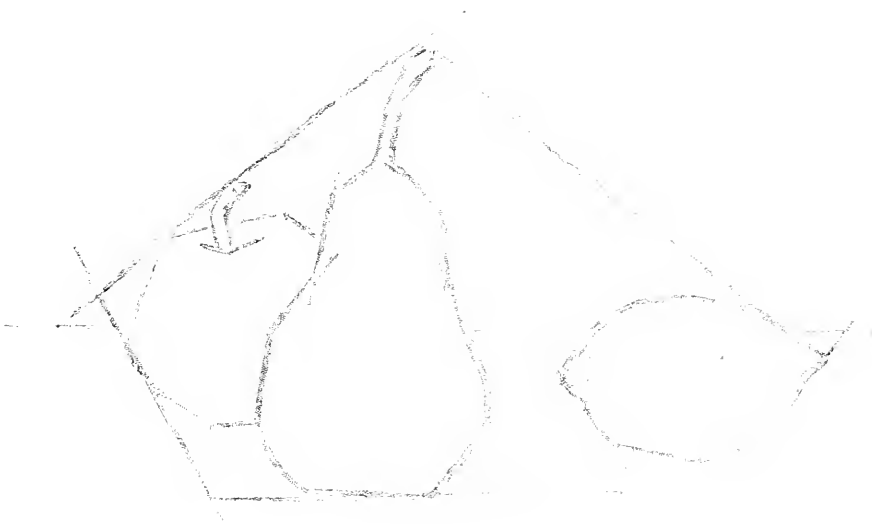
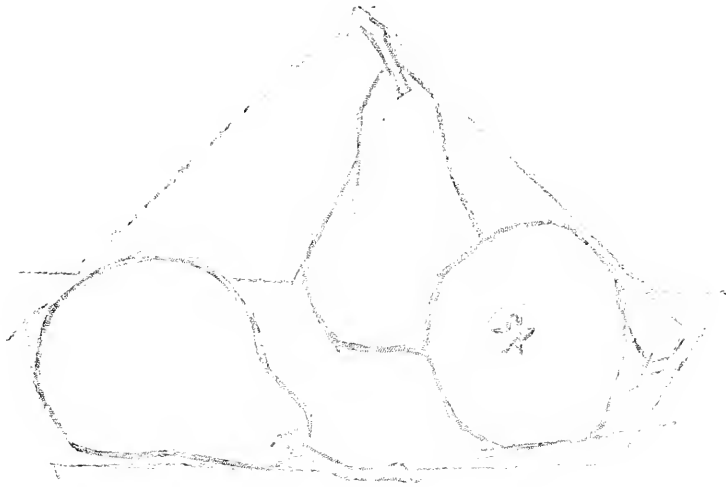
Rendering of a Group. — Having blocked in the group, the next thought must be how to finish it so that it may best tell its story. The *rendering* of a group of objects — that is, the quality and the variety of line used — should be such as to suggest the leading ideas of a group. Therefore, in completing any drawing, keep in mind the whole thought which is to be expressed, and aim to express as far as possible by the rendering, the same ideas that were specially considered in the arrangement of the group.

The Principal Object. — It is necessary that one object should be more noticeable than others, in order to have the eye at once attracted. The principal object in a picture may not be consciously observed first, but the eye finds there a resting-place; if, on the contrary, there are two or three objects equally prominent, the eye is distracted, and the attention wanders. The principal object should be drawn in such a way as to attract the eye at once.

Secondary Objects. — One object alone is not so interesting as a group of objects; for an agreeable element of contrast is added by means of the relation of other objects to the principal object. As they are subordinate to the principal object, they should be rendered by lines not as strong and not as definite as those of the principal object.

Distance. — The effect of distance into the picture, obtained by the placing of some of the objects farther back than others, must be expressed in the rendering by making the lines for the farther objects somewhat lighter and less definite than those of the principal and nearer objects. By the addition of a background, there will be in such an arrangement, **foreground, middle distance, background.**

Light and Shade. — In addition to the expression of distance, an emphasis on the side of the objects opposite the light, to suggest shade, will also add to the effect. If the light comes from the left, — as it should in every schoolroom, — the right side of the objects would be in shade, and hence the right side should be emphasized. But the light comes from above also, so that the lower part may also



Blocking-in.

be strengthened. These dark lines suggest shade, but they also suggest light ; for there would be neither shade nor shadow were it not for the light. So the touches for shade really introduce the thought of light into the group.

Still further the shade and shadow may be expressed by lines, varying according to the degree of shade and shadow, as illustrated in the Drawing-Books, and on Plates II and III.

Look at any object placed in the light ; the part toward the light is of a different tone from the part away from the light and the object casts a shadow. We have, then, **light** on the part toward the light, **shade** on the part away from the light, and the **shadow** cast by the object — three distinct conditions as regards the light. These conditions, generally included under the term **light and shade**, are to be studied in this exercise.

When the light comes but from one part of the room, the *light* on the object is strong, the *shade* and *shadow* are well defined. If light comes from two or more directions, there will be cross lights, which will cause perhaps two or three shadows mingling with each other, and render the limits of shade and shadow vague. In any elementary study of light and shade, therefore, the light should be arranged as far as possible to fall in one direction.

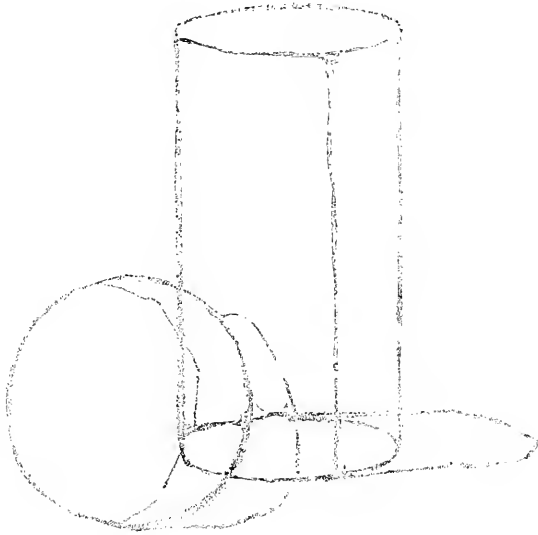
The best effects can be obtained in a schoolroom where the light comes in from the side alone.¹ If the room is lighted from one side and the back, shut off the light from the back and from all but one or two windows at the side. If the lower part of these windows can be screened, it will be better. In the case of cross lights, only the strongest shades and shadows should be studied.

Study of Effects. — Even more care is necessary in the arrangement and placing of objects for study of light and shade effects than for mere outline drawing. A group of two or more models affords more variety and contrast than if but one model is taken. Suppose the sphere and cylinder to be chosen. Lead the pupils to discover that the sphere slightly in front of the cylinder makes a more agreeable arrangement than beside or behind the cylinder. To keep the spheres stationary, place them on tiny brass or rubber rings, which may be bought by the box, and distributed and collected with the models.

If the teacher, in preparing for this lesson, will work at a pupil's desk, any peculiarities in the situation will become apparent. Observe the general form of the whole group — the proportion of one model to the other. Sketch lightly, but carefully, the cylinder and sphere. Half close the eyes, and look carefully at the

¹ Where position can be chosen, it is well to place the objects so that the light comes from the left and above, for elementary work. The light on the drawing will not then be obstructed by the hand.

shade upon the models and the shadows cast by each model upon the paper. You will see what artists call **the breadth of light** and **the breadth of shade** on the models — that is to say, the light side as a whole, and the dark side as a whole. Still “looking through the eyelashes,” see how far the *breadth of shade* extends upon the cylinder, upon the sphere — the shape of the shade. See the illustration below. With a line so faint that it will not be observed when the shade is expressed, sketch on the drawing of the cylinder, the blocking-in of the limit or outline of the shade — the same upon the sphere. Study the cast shadows most carefully as to general shape — they often fall in a most unexpected way. The foreshortening on a



horizontal surface must not be forgotten, and the absolute change of general direction when continued on a vertical surface. Notice the shape of the cast shadow of the cylinder, of the sphere, and that the shadow of the sphere may run up on the cylinder. Block in very lightly the outlines of the shadows wherever they fall. It must be borne in mind that the shades and shadows will be different for each pupil. Each one must study for himself. Those in the front seats may get the light a little over the shoulder, so that their shades and shadows will not be like those for whom the light falls more directly.

Now give careful study to the relative tones of the light, shade, and cast shadow. Which is lightest? Which is darkest? Which is the middle tone? Cast shadows

are always slightly darker than the shade upon objects. Look at various objects upon which the light falls from one direction for examples.

Expression of Shade and Shadow. — Keep at first to simple breadth of light, breadth of shade, and cast shadow. Express these planes by drawing simply, first blocking-in as on page 18 and then showing planes of shade as in Fig. 1, Plate II.

After this is attained, a closer study of effects — of the contrasts and relations of light and shade — of what are known as **values**, as on Plate II, may be undertaken. Where is the deepest tone of shade? Express this, studying the method shown in Fig. 2, Plate II. As the study progresses, the tender gradation and flow of shade will become more and more visible, and the beautiful relations of light and dark will appear more and more. Figs. 1 and 2, Plate III, show how different planes and values are expressed. Study all of these illustrations, and observe the different handling or *technique*. Remember that each medium used in drawing should be handled in its own way. It is not well to work with the pencil for a scumbled effect similar to charcoal, — the touches of the pencil should be definite and sure, but not mechanical. The methods illustrated here are not to be taken as rules given, but as suggestions and helps. The blocked-in method, keeping planes of light and shade according to mass, is very good for beginners. Notice that there is a difference between a drawing merely suggesting light and shade by emphasis, and one in which light and shade is studied for relations and values.

Notice that in all the illustrations the lines are parallel and close enough to merge a little, and not close enough to cover the surface of the paper; that in the illustrations, Figs. 1 and 2, Plate II, showing breadth of light and shade, or planes of light and shade, the lines are oblique, except on a horizontal surface. This direction is preferred because it seems the nearest to neutrality; that in the illustrations showing more of values, Figs. 1 and 2, Plate III, the direction of the surface is expressed by lines, straight lines being used for plane faces and curved lines for rounding faces; that when a shadow falls upon a horizontal surface it is expressed by horizontal lines, and that if a part of the same shadow falls upon a vertical face or surface, the lines expressing the shadow are vertical. These suggestions as to direction of line must not, however, be considered as absolute or prescriptive.

The strengthening of the outline away from the light that is practised in outline drawing is omitted in light and shade drawing. The limit of the model is expressed by the shade. Always trust as far as possible to the mass of shade to define the form.

Variety. — The element of variety will appear in the rendering already suggested. In addition it must be remembered that the texture of the line should vary according to the character of the object. If the object is manufactured, the edges and profiles will be sharper and more even than those of a natural object. The

edges of the models are well defined. The outline of fruit shows yielding irregularity; the outline of leaves and flowers is tender and delicate. These qualities should be shown in the line.

Unity. — The effect of unity produced by the arrangement of the objects can be increased in the rendering by putting the emphasis on the principal object, and keeping the others in their proper relation. This can be done not only by keeping the secondary objects more subdued in line than the principal objects, but also by a greater omission of detail.

Repose. — This is one of the highest qualities in pictorial composition, but some of its elements may be brought out even in early work. The effect of repose is produced by the proper and restful arrangement of objects. This effect will be increased in the rendering if the transitions from light to dark, from definite to indefinite, are gradual and not violent. The table-line is a very necessary, though minor, element of repose, as it gives the idea of support. It should be in lighter line than the group.

Values. — The proper relation of objects in regard to their importance in the group or picture is expressed by what are known as **values**. The rendering must be such that it will show the relative importance of the parts of a group or a picture — that is to say, the *values*. In artistic rendering of outline, the principal and the secondary objects, the nearer and the farther objects, the light and the shade, are all made manifest by the difference in quality and emphasis of line. The principal object has the strongest emphasis or accentuation, and all other objects receive less in proportion to their importance. This must be carefully borne in mind; for an eager worker often forgets the need for expressing the relation between the principal and the subordinate objects, and emphasizes equally the shade on all, ignoring values, and producing a staring and “spotty” effect, quite different from that produced when a due regard is paid to subordination of the less important, and appreciation of the more important, parts. From what has been said, it will be seen that in the rendering of secondary objects, strong contrasts should be avoided; the effects of the secondary objects as a whole should be subdued.

In the treatment of light and shade and shadow, the study of values can be carried much farther, of course, than in outline, as in Plates II and III; and the values can be most subtly expressed.

When a picture is worked up toward full values, there will appear *foreground*, *middle distance*, *background*. These may be carried out even in a simple group — the principal object being in the foreground, the secondary objects being in middle distance, the background being added as in Fig. 2, Plate III; see also Plate II. In rendering, the foreground should have the stronger, clearer touches, the middle

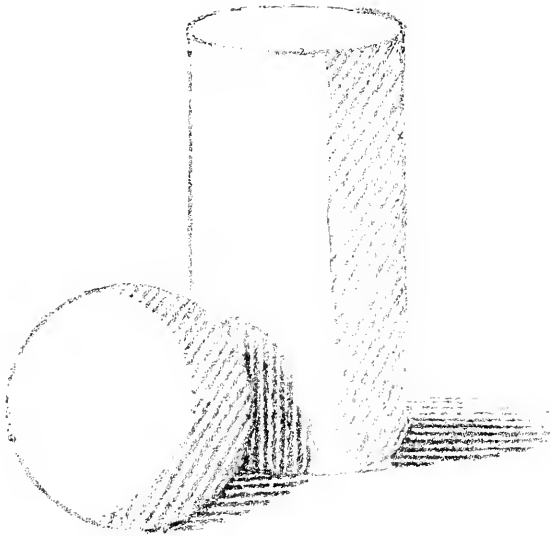


FIG. 1.

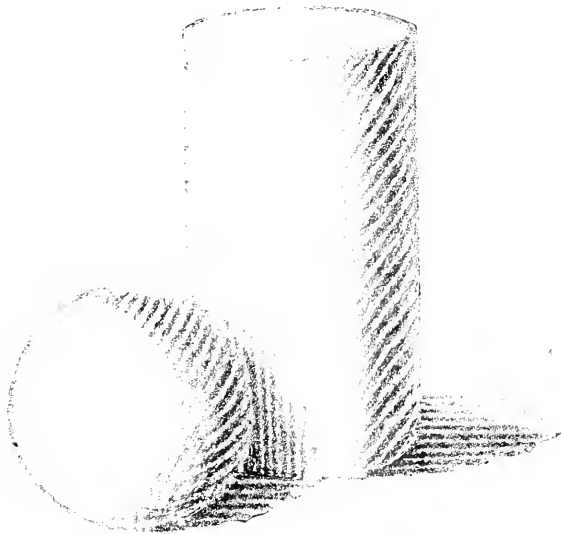


FIG. 2

distance the more subdued touches, and the background should be entirely subordinate, fainter and less defined than any other part of the picture. Remember, however, that the background should be drawn with careful control, and with a consideration of its purpose. Herein lies the lesson of restraint, as valuable in life as in art.

Expression of Feeling. — In representing natural objects, a greater variety of direction must be distinguished and represented than with models. The teacher is not to analyze the rendering of printed reproductions further than to ask the pupils to note the expression of masses, the direction of the several lines, and how they adapt themselves to the surface to be suggested.

All good rendering of natural forms requires elimination on the part of the artist or worker. Skill and genius are shown in selecting what to depict as conveying a characteristic impression of the object, and this involves an understanding of what to omit. This selection is again largely a matter of individual feeling, and it is here that there is infinite opportunity for independent expression.

As the artist feels for the surface of his object, he unconsciously adapts his lines to expressing this feeling. Feeling counts for more than physical seeing in all nature work.

Remember all artistic rendering of nature is a translation, not an imitation — an imitation of nature is always imperfect and unsatisfactory; in seeking for realistic details the spirit is sacrificed. The truth of realism must always be partial and one-sided if it starts on the basis that the physical senses are the measure of the human soul. The truth of idealism is the all-embracing truth of art, and that to which it is consecrated.

Copying Good Examples. — The work in Representation should not be confined to drawing from models and objects only; there should be good and careful study through copying good examples. The copying should not be superficial and imitative, but should be rather an endeavor to enter into and represent the feeling of the one who drew the example. True copying is endeavoring to see and to draw what the eyes of another and a greater has seen as shown through his representation; drawing from models and objects is seeing through one's own eyes. To the advantage of personal experience in any study there should always be added the advantage of the richness of others' experience. The work in Representation should be presented by the teacher in this spirit, developing in the pupils, not merely reliance in their own ability to see and to draw, but also an appreciation and admiration for what has been done by others, with a desire to attain through earnest study to real art expression.

Remember that a drawing may be absolutely correct as far as giving the principles governing the appearance of an object or group or scene is concerned, and yet wholly without what is known in art as expression. Lead your pupils through the study and sympathetic drawing of good examples, through a store of associations in literature and in life, through a spirit of recognition and appreciation, to a conscious feeling for the beautiful, and a desire for its expression in drawing.

Decoration; or, Drawing as Applied in Ornament.

Decoration is the science and art of producing beauty in ornament. Ornament, the product of purely decorative art, is always employed to beautify objects created for some purpose, independent of their decoration. It is truly an expression of love for the object—a desire to make it beautiful. It produces its legitimate effect when, without concentration upon itself, it makes the object to which it is applied more pleasing than if unadorned.

Lead pupils during their study of ornament to the discovery of the principles which have been given and to the use of them in decorative design. Decorative design is closely akin, in many ways, to music: it has rhythm and accent through repetition, melody through curvature and color, and harmony through proportion and relation of parts to make a "perfect whole." It will not be difficult for a teacher to make these analogies apparent. All art is one, whether of word, form, sound, or color.

Creative Power.—The subject of Decoration opens a wide field for creative power—for the expression of the individual. Gradually the pupil should be led through sequential exercises involving modes of arrangement, space relations, and distributions as well as the study of fine examples of ornament, to the expression of his own ideas of the beautiful in terms of art.

Mere acquisition, whether of money, knowledge, culture, or æsthetics, is selfish; and all selfishness is barren. Whatever the subject may be in education, it should aim to ultimate in productive power through creative activity.

In the subject of Representation, the aim is to reach this end not only through practice in drawing the appearance of objects and study for its principles, but also through Representative Design or pictorial composition. So in the subject of Decoration, aim to increase the productive power of the pupils by leading them to a realizing sense of the need for architecture and ornament to meet the requirements of life at the present day. This can be done by giving some very simple problems

in planning a room, in considering its coloring, its decoration and furnishings, and also in designing oblongs of good proportion, corresponding to the shape of one external face of a building. Within these oblongs may be arranged other oblongs, corresponding to openings for doors and windows of good proportion in themselves and bearing the proper relationship to each other and to the external oblongs. Such problems will lead to the consideration of what is fitting and beautiful in buildings, as well as in details, and will bring up inquiry as to the general principles of good taste.

As a means of answering this inquiry, lead pupils to study fine historic architecture and ornament (that which has been accepted as exemplifying the beautiful in form and proportion), to see how the principles which underlie all design and which make for the production of the beautiful have been applied.

The study of historic architecture and ornament may be made vital by first considering the conditions under which it was produced, and by indicating how the architecture and ornament were responsive to the conditions. Such study will lead the pupils to an appreciation of fine types of ornament and will cultivate their æsthetic judgment, inspiring them to apply the principles of beauty in modern problems.

Thus creative activity, stimulated and enriched by the study of the beautiful in ornament, will ultimate in productive power.

Subordination. — Fitness to its purpose is the underlying principle — the very corner-stone of all good ornament. From this principle of fitness for its purpose there arises the fundamental law of ornament — subordination. This law requires THAT ALL ORNAMENT SHALL BE MODEST AND MODERATE. Strong contrasts and striking effects violate it. Illustrations of this requirement in matters of good taste in general are familiar to all. A loud voice in conversation is not excusable ; a forward, self-asserting manner is a mark of ill-breeding ; gaudy colors in dress are shunned ; showiness, or any other attempt to attract attention, is condemned. This requirement holds good in all ornament, whether architectural, domestic, or personal. He is not well dressed whose dress is conspicuous ; that house is not well furnished where the furniture is obtrusive ; that building is not well ornamented whose decoration is not subordinate to the idea of the building.

Sources of Ornament. — Ornament has two sources — Nature and Geometry. In the minds of many these are widely separated. Geometry is too often considered as simply a treatise on an assemblage of figures and forms which have no particular meaning except as a basis for mathematical study. Such a view is most inadequate ; for geometry is really the study of ideal and typical forms, which while not discoverable in a perfect state in nature, are deduced by man from a study of nature.

“Above, below, in sky and sod.
 In leaf and spar, in star and man.
 Well might the wise Athenian scan
 The geometric signs of God,
 The measured order of his plan.”

— JOHN G. WHITTIER.

Nature presents no ideal forms : these are the result of man's thought led by nature. The forms of geometry are ideals conceived by man in “Thought's interior sphere,” as archetypes of nature ; they are the forms toward which nature in evolution is constantly tending. Nature and geometry are, then, but different manifestations of the divine law. A thoughtful consideration of nature will show geometric plans and forms, and modes of arrangement, in her handiwork. Order, symmetry, and proportion are all exemplified in nature in varying degrees.

Materials of Ornament. — The materials of ornament are : —

1. Geometric plans, enclosing figures and units.
2. Conventionalized units derived from natural forms as motives.
3. Historic ornament.

But, in order to use these materials effectively, it is necessary to study : —

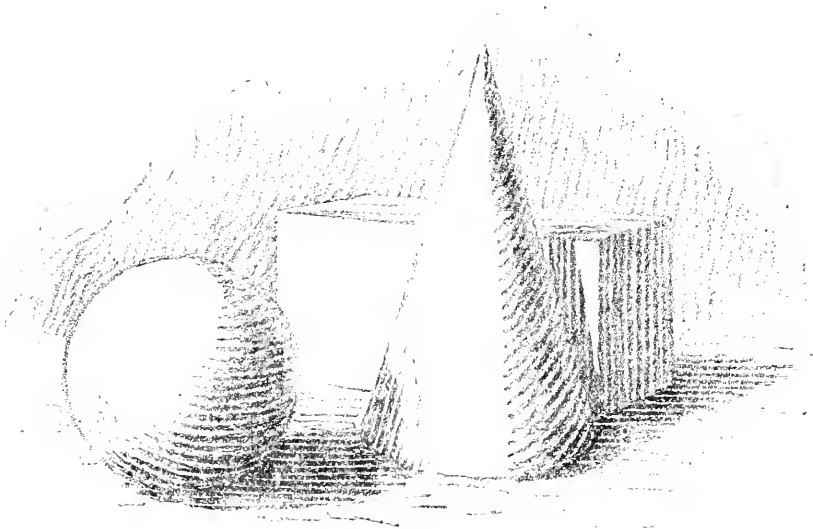
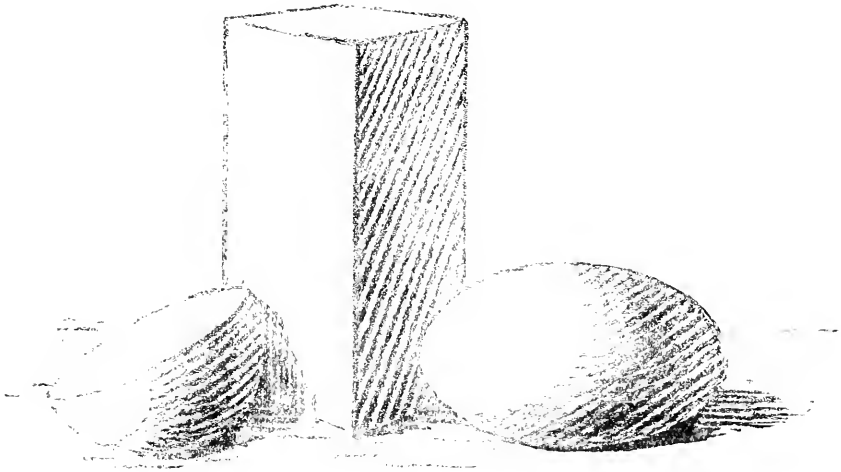
- a.* Geometric construction and symmetric arrangement.
- b.* The proper use of plant forms as motives.
- c.* Well-selected examples of historic ornament.

Symmetric Arrangement. — The principal forms of arrangement (all requiring more or less of geometric construction) are, as shown in the illustration on page 25 —

1. A surface design, to cover a surface, as in wall-papers, carpets, drapery, and textiles in general.
2. A border, to limit a surface or a surface-covering.
3. A single arrangement, complete in itself, as in a bilateral unit, as the lotus and the fleur-de-lis, or as in a rosette or centre.

The *parts* of a design common to the three are : —

- a.* The enclosing figure.
- b.* The geometric plan, which embraces not only the general geometric outline, but also the lines and divisions required by order and symmetry for the construction of the design, — axes of symmetry and field lines.
- c.* The units or motives, which are repeated in making the design.
- d.* The ornament itself, or the filling.
- e.* The background or field.



Groups of Models.

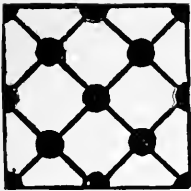


FIG. 1.

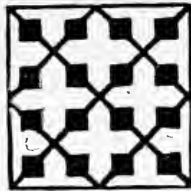


FIG. 2.

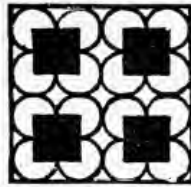


FIG. 3.

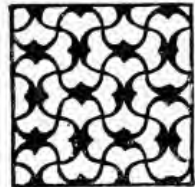


FIG. 4.

SURFACE COVERINGS.

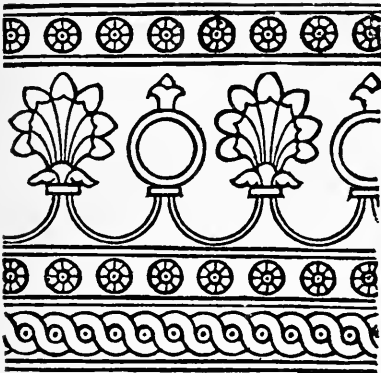


FIG. 5.



FIG. 6.



FIG. 7.

BORDERS.

Egyptian.

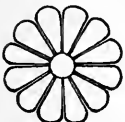


FIG. 8.

Greek.

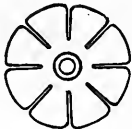


FIG. 9.

Roman.



FIG. 10.

Byzantine.



FIG. 11.

Saracenic.



FIG. 12.

Gothic.



FIG. 13.



FIG. 14.



FIG. 15.



FIG. 16.



FIG. 17.

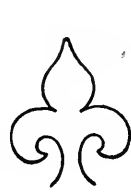


FIG. 18.

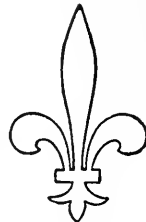


FIG. 19.

FIGURES COMPLETE IN THEMSELVES.

Nature in Ornament. — The laws of growth, which are recognized and recognizable in all good ornament, are derived from the laws of growth in nature. It would be a mistake, however, to conclude from what has been said that a pictorial imitation of nature is good in ornament. A pictorial imitation of nature represents the accidents of growth. Order, regularity, and symmetry are the normal laws of growth, while the irregular is accidental. This idea is developed in the treatment of conventionalization.

“Flowers or other natural objects should not be used as ornaments, but conventional representations founded upon them, sufficiently suggestive to convey the intended image to the mind, without destroying the unity of the object they are employed to decorate. *Universally obeyed in the best periods of art; equally violated when art declines.*”

“In all the best periods of art, all ornament was rather based upon an observation of the principles which regulate the arrangements of form in nature than on an attempt to imitate the absolute forms of those works, and wherever this limit was exceeded in any art it was one of the strongest symptoms of decline.”

— OWEN JONES, *Grammar of Ornament*.

“We owe the beauty of nature the full tribute of our respectful appreciation, but we should never degrade her loveliness by putting it to unworthy service. The picture-painter throws his whole power into the attempt to reproduce natural truth; but the designer, feeling the limitations of his materials, and the purpose to which his work must be applied, takes a different view, not because he appreciates nature less, but because appreciating it so much he cannot bring himself to do it discredit by inadequate representation.

“We need scarcely say that any one attempting naturalistic work should have a good working knowledge of plant-structure, and even if he would hesitate to call himself a botanist, should be well acquainted with the leading laws of plant growth. A wild-rose spray, in all its picturesque beauty, is as much constructed according to law as the designer himself; the spiral growth of its foliage, and the beautiful foreshortening, therefore, of the parts that result from this rigid law, is as marked as any other law of nature; and it is no more permissible to add a sixth to the ring of five fragrant petals in each of its beautiful flowers than to consider it immaterial whether we put four, five, or six toes to the human foot.”

— F. EDWARD HULME, *Birth and Development of Ornament*.

“This must be accomplished not by the mere imitative rendering of flowers and foliage, which is a means of study, but not the end; the ornamentist must be a much deeper student, if he would found a new style. If he seeks out the mode of development of vegetable growth, he will find that regularity and symmetry are the normal laws, while all that is irregular is accidental and extraneous.”

— RICHARD REDGRAVE, *Manual of Design*.

“The imitation of natural objects for merely ornamental purposes usually disagrees both with the materials used and the place where they are introduced. It is also an indication of poverty of invention, and a deficiency of taste for design. In carpets, where roses and other flowers are figured, the very best rose is always unlike the reality, while the imagination is diverted from the general effect by the comparison of this imperfect copy with the natural flower. To obtain ideas for ornamental art, nature should be carefully studied and the beauties she presents should be fully understood, but she should not be directly copied in an unsuitable material.”

— SIR GARDNER WILKINSON, *On Color and Taste*.

“There can be no question that the motive of ornament is not the presentation of natural images to the mind, but the rendering the object ornamented as agreeable as possible to it, and therefore the details of decoration should have no independent character of their own, but be kept purely subservient to beauty of effect.

“The designer must ever remember that the effect of the whole should never be interfered with by any partial attraction of the details.”

— R. N. WORNUM, *Analysis of Ornament*.

“Experience proves that the fitting opportunity for realistic ornament very seldom occurs. It is for the most part contrary to the purpose or position of the object, ill adapted to the material and the method of working it, and most especially it is calculated to draw undue attention to the object, or, which is worse, to itself. A more subdued and reticent and altogether simpler style of design is almost invariably found to be advisable, either in the shape of pure ornament or in some adaptation of natural forms.”

— LEWIS F. DAY, *Some Principles of Every-day Art*.

“The right method of studying nature does not consist in merely gathering her facts and applying them indiscriminately to any object as decoration, but in the endeavor to understand the principles upon which nature works, so that we may use her endless treasures with artistic wisdom. Moreover, by adopting this mode of studying nature we shall find that all the records of ancient art will have a new meaning for us.”

— FRANK G. JACKSON, *Lessons on Decorative Design*.

“Ornament should be natural; that is to say, should in some degree express or adopt the beauty of natural objects. Observe, it does not hence follow that it should be an exact imitation of, or endeavor in any wise to supersede, God’s work. It may consist only in a part adoption of, and compliance with, the usual forms of natural things, without at all going to the point of imitation; and it is possible that the point of imitation may be closely reached by ornaments which, nevertheless, are entirely unfit for their place, and are the signs only of a degraded ambition and an ignorant dexterity. Bad decorators err as easily on the side of imitating nature as of forgetting her, and the question of the exact degree in which imitation should be attempted under given circumstances is one of the most subtle and difficult in the whole range of criticism.”

— JOHN RUSKIN, *Two Paths*.

Idealization.—The subject of conventionalization is frequently misunderstood. Some, having a totally wrong impression of conventionalization, think of it only as a means of taking all the life and grace out of a leaf or a flower, and reducing it as nearly as possible to the hard lines of a geometric figure. This is a wholly wrong conception. True conventionalization is idealization; it searches for the life and the marvellous manifestations of growth in the leaf or flower. Natural leaves are more or less unsymmetric; a leaf type would usually be symmetric; idealization rejects the occasional irregularity, and accepts the beauty of symmetry in the type form. Idealization seeks in the natural leaf for the beauty of symmetry, the beauty of general form, the beauty of radiation,—or, as it might be phrased, the beauty of stability,—the beauty of proportion, the beauty of general curvature, and renders them in the idealized leaf. Every line of the conventionalized or idealized leaf can be traced as typical of the natural leaf.

Pupils should be led to seek for type forms of natural leaves by comparing many leaves of one kind, and to discover and express the peculiar beauty of each type form. This will be true conventionalization.

The purpose is entirely distinct from that of botanic study. In botanic study, the various parts and organs are studied with minuteness, and all the wonderful structure is revealed. In studying a flower for decorative purposes, the details are not taken up, unless for a special end; but the general plan as to form is studied, and is rendered with faithfulness to the type form, and not to the individual.

Lead pupils as deeply as possible into the study of nature, in order that they may see for themselves the *spirit* of the plant which they are studying, as well as the more formal matter of arrangement. Then let them *idealize* plant forms for use in ornament, by keeping the characteristics of growth, curvature, and proportion, while simplifying outlines and omitting details.

Historic Ornament.—In the past, many nations have produced certain ornament so repeatedly that the ornament has become characteristic of those nations. As the account of what nations have done is called history, so the ornament produced by nations is called **historic ornament**. Different nations have developed different kinds of ornament; each kind, however, has a character or style of its own, hence styles of ornament are spoken of. The great historic styles are: the Egyptian, Greek, and Roman,—the ancient; the Byzantine, Romanesque, Saracenic, and Gothic,—the middle age; and the Renaissance, which may be called the modern. Among the ancient styles, the Assyrian and Persian are ranked as secondary, but they are coming more and more into prominence as new discoveries are made. The Persian, Indian, Chinese, and Japanese are called the Oriental styles. All of these would be taken up in a more advanced study of historic ornament.

The study of special styles is begun in Book 7, and pursued in the order given above. This will lead to an appreciation of the characteristics of each style as well as of the influences which formed the style. As the study progresses, the interrelation of these styles will be seen.

The beauty produced by finely proportioned and delicately contrasted spaces should be emphasized in all study of historic ornament. The gradual training of the eye and the mind to a fine appreciation of this important element will lead the pupils to a right understanding of what constitutes good work, and will ultimately express itself in their creative efforts.

The study of historic ornament as one proceeds leads to its interpretation as a visible manifestation of the history, life, and spirit of the people who produce it. The contact of various nations or peoples, either through war, commerce, or travel, can be traced in their ornament; and it is an evidence in the various phases of progress and civilization.

Good historic ornament is always ennobling, for it is an expression of the best and most enduring feeling; it is, in a very high sense, "a survival of the fittest." A lesson in historic ornament may and should be not merely a lesson in drawing, but also, to a greater or less degree, a lesson in history and æsthetics, in living and in doing.



From Antæ, Temple at Eleusis.

Decorative Design.— Historic ornament serves as a broad field for the discovery of those elements which make for beauty in decorative art. The study of good examples of ornament leads to the development of certain general principles. It is found that unity is essential to the production of beauty in ornament. Unity requires that the effect of a design, as a whole, should be considered, and that the parts should be subordinate to the whole effect.

The leading principles which through unity lead to the creation of the beautiful in decorative design may be stated as —

SYMMETRY,	ORDER,	BREADTH,
PROPORTION,	CONTRAST,	STABILITY,
RHYTHM,	INTRICACY,	REPOSE.

Symmetry.— Symmetry is produced by balancing the parts one against another. The balance may be of form (page 25) or of value (Antæ. Temple of Eleusis illustrated above). Figures may be bi-symmetric or multi-symmetric; in other words, there may be symmetry on an axis (Figs. 14-19) or about a centre (Figs. 8-13, page 25).

Proportion. — “As in every perfect form of architecture a true proportion will be found to reign between all the members which compose it, so throughout the decorative arts every assemblage of forms should be arranged on certain definite proportions; the whole and each particular member should be a multiple of some simple unit of proportion.”

The units of a design must not be too small in proportion to the ground to be covered. The ornament or filling should, as a general rule, occupy about two-thirds of the space within the enclosing figure. Color as well as space values should, however, be carefully considered as modifying elements. (See also Intricacy, below, and Proportion, page 47, under Composition.)

Rhythm. — As the effect of rhythm in music is produced by the regular recurrence of measures of time, in decoration, it is produced by the regular repetition of the parts of a design. There are three ways of repeating units of design: (1) to cover a surface; (2) on a straight line; (3) around a centre. (See pages 24 and 25.)

Repetition may be close or open, simple or alternate. In close repetition, the units touch each other; in open repetition, a space intervenes. In simple repetition, one unit only is repeated. In alternate repetition, two or more units are repeated, one alternating with the other. Counterchange and interlacing are forms of alternate repetition.

Order. — Order, so essential to the beauty of a design, depends upon a definite plan of geometric arrangement. This plan is secured by enclosing forms, axes of symmetry, and field lines for the units. (See pages 24 and 25.)

Contrast. — In a decorative design, there should be a pleasing contrast of direction or directness in line, of proportion in space, of shape in figures, of tone and hue in color.

Color may be produced by the brush, by colored paper, or in a representative way by half-tone. Half-tone is produced with the pencil or pen by covering the surface evenly with lines or by pencil painting, and may be employed to distinguish the ornament from its background (page 58). Half-tone may be used either upon the background or the ornament: whichever covers the least surface should be in half-tone. When there is more half-tone than white surface, the design is likely to appear heavy. Mechanical results are not desirable in half-tone in freehand work.

Intricacy. — There is great beauty in that intricacy of form produced by subtlety of proportion and curvature. The simpler the proportion, and the more easily it is detected by the eye, the less pleasing is the effect; while the more subtle the proportion, and the more difficult it is for the eye to make it out, the more pleasing is the effect. So, also, the more subtle of two curves affords the eye the greater pleasure. Compare the circle and the oval.

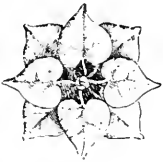
Breadth. — There is much more beauty in the simple arrangement of good, well-drawn figures, having a large proportion to the surface which has to be covered, producing a certain strength or breadth of effect, than in a profusion of complicated details on a small scale. If there are subdivisions of units, they must be made subordinate to the effect of the unit as a whole.

Stability. — The union of parts produces stability. In a surface design, this union is secured by its enclosing figures; in a border, by its marginal lines; in a rosette, by a strong central figure or a tendency toward the centre.

Repose. — It is essential that there should be repose in ornament: that is, there should not be too violent contrasts of form or of color in the parts, but they should harmonize while they vary.

Curved lines should unite tangentially with curved or with straight lines. Tangential union showing laws of growth is a simple example of harmony. (See below.)

Study of Growth. — By observing plant forms and tree growth, it will be seen that in a general way plant growth falls into three classes as to direction, — erect, as



in trees and shrubs (under this head may also be placed **ascending** growth, rising obliquely from the root); twining or climbing, as the morning-glory, the pea, bean, and nasturtium; the running or creeping, as the strawberry. Erect growth is suggestive in its vertical symmetry for bilateral units in ornament, and in the radiation seen in the top



view for arrangements about a centre. The **twining** or **climbing** plants suggest spiral growth in ornament, and the running plants give motives for horizontal ornament and for a garland treatment.

Tangential Union. — The law of tangential union, always observed in nature, should govern decorative design. Owen Jones states this law thus, "All junctions of curved lines with curved, or curved with straight, should be tangential to each other," or, in other words, they should be so drawn that they would touch, but if produced would not cut each other. Owen Jones further says: "Oriental practice is always in accordance with it. Many of the Moorish ornaments are on the same principle which is observable in the lines of a feather and in the articulations of every leaf; and to this is due that additional charm found in all perfect ornamentation, which we call the graceful." It may be called an example of harmony of form. The suggestion here given of the interrelation of beautiful form and music opens a wide door.

Tangential union applies to all lines starting from a central' line or stem; hence the lines of division in a unit should unite tangentially, the sides branching from the central division, and all uniting in the stem or trunk below. The law of tangential union should govern the union of the divided parts of a unit. Tangential union is therefore a large factor in the effect of growth and vigor in an ornament, and teachers should make its importance and beauty very well known to pupils. The illustration shows on



the right a line uniting tangentially with the vertical, thus showing tangential or "touching" union; on the left, a line which, if continued, would cut the vertical, thus showing secant or "cutting" union.

Symmetry. — The laws of decorative design, as has been said, are derived from a study of nature and of geometry, and underlie all good historic ornament. Thus the idea of symmetry is found constantly suggested and approached in nature, but never actually displayed; in geometry it is perfected. From the suggestions of nature and the idealizations of geometry, the element of symmetry in decorative design has been developed.

Bilateral Unit. — A decorative design is planned to fill the space it is to occupy; therefore, bilateral units vary in proportion according to the place in which they are to be used. But there are certain general ideas of decorative treatment which pertain to all the variants. These ideas can best be developed by the use of the general type of the bilateral unit, which has come to be known as the kite-shaped unit, as seen in Fig. 2. This has always been a great favorite, as it seems to meet an innate desire for symmetry, proportion, and variety. It is very interesting for pupils to discover this type in examples of ornament of various styles. The lotus palmette is of this type.

Symmetry is produced by repetition on an axis, called the **axis of symmetry**. Proportion in art is the pleasing relation of unequal parts. The kite-shaped unit is susceptible of innumerable changes of outline and proportion, while still retaining its chief characteristic — unequal tapering at the two ends of the axis — through all the changes. The greatest width of the kite-shaped unit may be at any point in the axis outside the centre; or, in other words, considering the figure in its normal position, the greatest width may be above or below the centre, but not at the centre of the axis. Its normal position is with the axis vertical.

Modifications. — The line of illustrations below shows some of the simple modifications that may be made in the kite-shaped unit by changing a part or the whole of the outline from straight to curved lines. Still further modifications are introduced to give stability, strength, and variety.

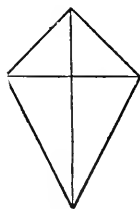


FIG. 1.

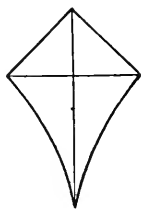


FIG. 2.

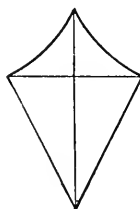


FIG. 3.

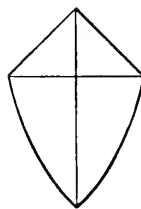


FIG. 4.

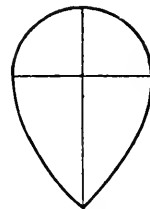


FIG. 5.

Stability. — Study tree form, and see how stability is there secured. Sketch a tree roughly in mere outline; note the general shape obtained — a strong trunk, broad branching at the top, an expansion at the roots.

Study now Figs. 7 to 10, and note the expansion at the root or base, which gives the appearance of stability to the unit. A unit with insufficient expansion at the base is weak. This is, then, an important modification.

Strength. — While considering expansion at the base, provision must also be made for the strength of the unit, which can be best attained by sufficient width of stem or trunk. If the trunk or stem is made too slender, the unit becomes painfully weak. In a tree, the trunk is generally slender in proportion to the width of the branching, but in a tree much strength comes from the growing life. In a figure, strength must be expressed in the trunk or stem by a greater proportional width.

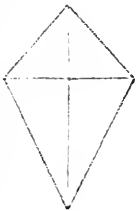


FIG. 6.



FIG. 7.



FIG. 8.



FIG. 9.

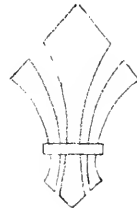


FIG. 10.

Variety. — The unit may be modified by division, so as to secure greater variety; this division may be partial, as in Figs. 8 and 9, or entire, as in Fig. 10. In the use of division, care must be taken not to impair the strength of the unit. The divisions of Fig. 8, a partially divided figure, are held together by the strong undivided stem, as the trunk of a tree holds the branches together. Draw this on the board, and lead pupils to see that if the divisions are carried too low, there will be an apparent tendency to split, and thus the strength of the unit will be lost.

Pay special attention to the proportional width of parts in these units, the central part being broader than those at the sides. Division of the unit introduces a very beautiful phase of proportion — proportional parts. The beauty of proportional parts may be illustrated not only by the study of the figure, but also by the study of nature. Three and five lobed leaves show this regard for proportional parts. Note also that these parts seem to grow from the stem, and that their curves, if continued, would pass within the stem. This is an important point.

If the unit is wholly divided, as in Fig. 10, stability may be obtained by holding the parts together by a band. Care must be used, however, to place the band at the narrowest part of the unit, where it would really be of use. Show

this by drawing on the board. The good effect of fine curvature and pleasing proportion may be largely destroyed by placing the band above or below the narrowest part of the unit. The effect given is that of insecure holding, which detracts greatly from the repose necessary in ornament. Division may also be used in a moderate degree to give variety to the base.

How to Judge a Unit. — It is not an easy matter for beginners to draw simple and beautiful units, and teachers are sometimes at a loss to know how to help their pupils. It is necessary first to consider the characteristics of a good unit. A unit complete in itself should possess symmetry, proportion, contrast, breadth, stability, and repose, and should be judged according to its possession or lack of these characteristics. In judging units, the following questions will be helpful: —

Symmetry. — Is the unit symmetric, or is it one-sided? Pupils should be led to see the beauty of symmetry, by which one part is the reflex of the other, and therefore in harmony with it.

Proportion. — Is the proportion of the unit agreeable as to general dimensions? The effect will not be good if the two dimensions are either very nearly alike or widely different. If the unit is partially divided, what is the relative proportion of its parts? There should be a moderate inequality between the central part and those at the side, the central part being larger than the other two. The proportion of each part should be that of slenderness, rather than of breadth. If the parts are made too wide, the unit, as a whole, will lack elegance of proportion.

Contrast. — Is there a pleasing contrast of straight and curved lines, or of inner and outer curves, or of curves and points? There is often a monotony of outline in a unit, produced by several curves of the same sort, or by continuous curves of no very strong character.

Breadth. — Is the unit simple? Simplicity is a great beauty in decoration. If the unit is cut up into many petty parts, this beauty is lost.

Stability. — Is the stem of the unit broad enough to be strong? Does the unit expand at the base? If partially divided, would the curves of each part, if extended downward, pass within the stem, or would they cut through it? To be true to the laws of growth, they should pass within the stem. Notice whether the curves which divide the unit into three parts would, if continued downward, cross the outer lines of the stem. If wholly divided and held by a band, is the band so placed that it can perform its office?

Repose. — Is there anything startling about the unit? Has it many sharp points? or unusual curves? If so, it cannot be restful. Are the curves easy, flowing, and graceful? The higher qualities of repose are obtained through symmetry, proportion, breadth, and stability.

“Teach them the music fine
In the curve of a perfect line.”

Rosette. — A rosette may or may not have an enclosing figure. When it is desired for any reason to call particular attention to the shape of a rosette, or to indicate more clearly its fitness to occupy a certain place, an enclosing figure is added to emphasize the shape. A rosette is usually made up of symmetric units, which occupy equal *fields*. A field is that part of the ground of a design that a unit is to occupy. If the rosette is from a flower form the number of units is determined by the petals in the flower chosen. To aid in preserving the symmetry and order of the rosette, the axis of the units should be drawn. In a circular figure, the radii of the circle will serve as axes of the units.

The unit, however, must not touch the enclosing circle, for that would give a crowded look; a feeling of restriction and constriction would ensue, and the repose of the figure would be lost. A space, therefore, should be left between the ornament or filling and the enclosing figure; at least two-thirds of the ground should be filled. A skilful teacher will lead pupils to this study of space relations.

Study of Nature. — Study a flower, observe its general outline, the arrangement about the centre, the radiating petals, their graceful shape, the way in which they are held at the centre, the stamens and pistils filling the centre. Try to express this in a broad, simple way, by drawing with an even line. You will have a rosette with regular, radiating units of beautiful outline, and a strong, simple centre. The details of stamens and pistils are too minute for representation here — the result would be only dots, which would seem characterless. The centre of the rosette, holding the units together, is simply a reflex in the drawing of that mysterious power of life that sends out the flower and holds the petals with a circling hand. This is a delightful exercise, and is always enjoyed by pupils, as it is not beyond their comprehension, and it gives them an opportunity to discover the elements of beauty; and so insight grows.

Besides the wonderful beauty of appearance and the marvellous physical structure of a flower, there lies within it a perfect manifestation of order, of symmetry, of proportion, of unity, of æsthetic beauty. The æsthetic is the highest type of the ideal. In studying a flower for a motive of ornament, the attempt must be, through the study of the flower, to reach its ideal.

A Surface Covering. — Probably the idea of designs for surface covering arose from the patterns brought out in weaving. Thus from the beginning order was suggested; and still, order resulting from a geometric plan is one of the essentials in a surface covering.

Walter Crane, in speaking of designs for surface coverings, says, "Most of us who have given thought to the subject feel that a design must be constructed on some systematic plan, if not absolutely controlled by a geometric basis."

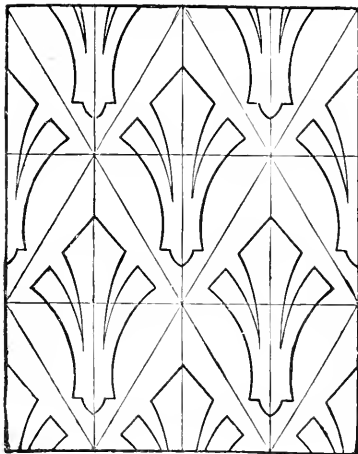
The first step then in the actual drawing of a design must be a plan on which to lay it out. It must be determined also whether it is to be used horizontally or vertically. A bilateral unit is always suitable for a vertical surface covering. A rosette is suitable for either a vertical or a horizontal surface covering.

Have some examples of simple surface covering in textiles or wall-paper, and let pupils discover the geometric arrangement or plan that underlies the placing of the figures. Sometimes this plan is easily traced, and sometimes it is apparently hidden; but a little search will always find it. The usual plans of surface coverings are based on squares, rhombuses, or hexagons repeated.

In some of these designs, the geometric plan shown by light lines in Fig. 5, Plate IV, and in the illustration below, *does not appear* in the finished work; only the decorative figures remain. In others, as in Fig. 3, the geometric plan is left to form part of the design. Plate IV gives various examples of surface coverings which plainly show geometric plan. Fig. 1 is Japanese; Fig. 2 is Persian; Figs. 3 and 4 are Egyptian; Figs. 5 and 6 are modern, and were taken from Lewis Day's *Anatomy of Pattern*.

When in a surface design the units only appear, the geometric laying out of the space having been erased, the arrangement is technically known as *powdering*.

Figs. 2, 4, 5, and 6, Plate IV, are examples of powdering.



Distribution over the surface is now to be considered. Care should be taken that the unit be not too large for the allotted space, so that the design shall not look crowded; and also that the units shall not be too small, so that the unit will not seem scattered and lost. As a general rule, about two-thirds of the surface should be covered in a surface covering. The units in a surface covering taken collectively are known as the *filling*; the space uncovered is known as the *ground* or field. The proportion of the *filling* to the *ground* should then be about as two to three.

Decorative Treatment.—The decorative treatment of a natural form occupies a middle ground between a picture and a **decorative design**. In all three, the composition of line, mass, and color is a decided element. In a *decorative design* the composition has a geometric basis; while in a picture and in a *decorative treat-*

ment, the composition depends on agreeable contrasts of line, mass, and space, with more regard to pictorial effect than to geometric order. In a picture, the representation of the object in light and shade, with all the harmonizing accessories of composition of line, light, and dark, etc., is the main thing. In a *decorative treatment*, the composition of line, mass, and color is the chief element, while the representation is carefully kept. The drawing is true and spirited, but without the pictorial element and the modeling given by light and shade. The contrasts are not of light and shade, but of light and dark, or of light, dark, and middle tone, as will be seen in Plate V. Everything is kept in flat effect, whether the work be in black and white or in color.

Mr. La Farge says, "We compose when we select." The selection of a suitable motive, and of a beautiful aspect of this motive, is one of the elements of composition for decorative treatment. The selection of a well-proportioned enclosing figure is of importance, as well as the disposition of the motive in the figure. The relation of the open spaces to each other should be studied, as well as the beauty, contrast, and harmony of line, mass, and color, in the motive itself. Decorative treatment is used more for single effects than for repetition.

Decorative Design. — The purpose of *decorative design*, however, is mainly to produce subordinate effects for repetition; hence, the mode of composition differs greatly from that for decorative treatment. In decorative design, conventionalization and a geometric plan subordinate the pictorial, and tend to make the decoration quiet, restful, and undemonstrative. Decoration should attract by its harmony, repose, and unobtrusiveness. It should surround one with companionship of thought as expressed in the beautiful without any element of domination.

Method of Study. — For a *decorative treatment* seek a beautiful motive and the most beautiful aspect of that motive; if the enclosing figure is not fixed, look for one beautiful in itself and suited to the motive; consider how the motive may be best arranged to make the contrasts with the open spaces agreeable; try to express the life and grace of the motive in the lines, masses, or colors; but keep all the treatment flat, without expression of light and shade. Study, however, the relation of light and dark. If a certain fixed space is to receive a decorative treatment, seek for a motive fitted to the space, selecting its most beautiful aspect.

In *decorative design*, however, consider first the mode of repetition, whether for a unit, a centre, a border, or a surface covering. Select a beautiful motive, and consider the geometric plan for the design. Draw the lines and masses which represent the ideal of the motive, rejecting all pictorial effects.

In decorative treatment the motive is the main feature; in decorative design the motive is used to enhance the beauty of geometric order and arrangement.

Mode of Expression. — This may be with pencil or brush, in outline, light and dark, or color.

In Representation, a drawing is intended to represent the appearance of an object, or group of objects, and therefore to express not only the appearance as to mere outline, but also as to distance, as to direction of light, and as to relative importance of parts. It is in Representation, therefore, that what is known as “rendering” is used, giving more emphasis to some parts, and less to others, according to their light, their distance, and their value, by lines varying in thickness and in shade.

In Decoration the purpose is different. No effect of light, shade, distance, or value is desirable in flat decoration. A decorative figure should be drawn in the simplest possible way. It should be drawn with intelligence, with strength, with purpose, with firmness. The line should be open in texture, of an even gray color, and of an even width. Venation may be expressed (it should be sparingly, however) by a line tapering in width. Unevenness of line in decorative outline detracts from repose.

Accent in line — that is, the line rendered as it would be in pictorial drawing — is out of place in flat decoration. The line may sometimes be irregular, as in the drawing of historic ornament, but it should retain the effect of flatness.

Construction; or, Drawing as Applied in Conveying Ideas of the Facts of Objects.

Construction deals with the facts of form, and shows the use which is made of the drawing of these facts in the world of industry. Its importance, both educationally and practically, cannot be too strongly emphasized.

Working-Drawings. — *Construction* as used in graphic study is the science and art of making drawings which give the facts of size and structure of objects and from which objects may be constructed. These are called working-drawings, and are necessary to guide the workman in nearly every branch of manufacture.

Practical Value. — The practical value of constructive drawing will be more and more recognized as knowledge grows of the way in which ideas of form, that is to say, constructive designs, are expressed so as to be carried out in manufacture and industry. Every detail of building construction, from the stone foundation and the beams to the finished exterior views of the house, or church, or cathedral, has first to be imagined, and then shown by working-drawings; from these drawings the builders work. Every new invention, from the simplest detail in machinery to

a great engine as a whole, must not only be thought out before it can be made practical, but it must also be expressed and be made intelligible through working-drawings. It is through working-drawings that every new object manufactured is made possible, is materialized, so to speak. Designs for all landscape gardening and outdoor improvements — roads, parks, drives, etc. — must be expressed in working-drawings, that they may be carried out by workmen. The great works of civil and mining engineering depend upon working-drawings for their ultimatum. There is no walk in life in which a knowledge of the methods of expression underlying working-drawings and the ability to interpret them are not of service.

Creative Imagination. — But beyond the practical benefits arising from a knowledge of constructive drawing there lies the great educational value in the subject of Construction well presented. It calls for most accurate observation, most careful consideration of the relation of parts and of form values, of the adaptation of form to purpose, of agreeableness and beauty of form — all in the service of the creative imagination. The principles which govern the expression of thought in the subject of Construction are fixed, and take their place among the exact sciences. From these considerations, the value of construction will be seen, as a subject of study, not only for the few who wish to pursue its special lines, but also for all students.

A Working-Drawing. — A working-drawing is a drawing which gives all the facts of form, size, and structure of an object. Its purpose is to show a workman with accuracy all the facts of an object which is to be made. This object may be one already made or it may exist only in the brain of the inventor or designer.

A working-drawing is, therefore, composed of as many different geometric views of an object as are necessary to the complete understanding of the object.

A geometric view shows an object under the simplest possible conditions; that is, as seen with but two dimensions. For such a view, the object is supposed to be placed not only directly in front of the eye, but as though each individual part was directly in front of the eye.

The different views required in a working-drawing are named from the part represented in the view; thus the front view represents the view obtained by looking directly at the front of the object; the top view represents the view obtained by looking directly down upon the object, and so on with the other views.

It has been agreed by long custom to represent certain things in working-drawings by certain kinds of lines; agreements of this sort have come to be known as "conventions." The "conventions" of Construction to be noted at this time are few. The various kinds of lines used are centre lines, working lines, visible lines, invisible lines.

In lead-pencil drawing, the centre line — that is, the line for placing the views — is usually made a short-and-long-dash line - — - — - —, the long dashes being made longer than those for "invisible lines." Working lines, by means of which distances are

transferred from one view to another, are frequently made short-dash lines, but they may be made light lines. Working lines, however, are used only in elementary practice.

All visible edges and outlines — that is, edges and outlines which are actually seen in the view to be drawn — are represented by clear, full lines, called “visible lines,” perfectly even and uniform, not too strong nor yet too fine. “Invisible lines” representing edges or outlines which are known to exist in the object, but which are hidden in the particular view which is being drawn, are always made long-dash lines — — — — —, and should be of the same strength as the full lines. By means of these conventions the purpose of these various lines is seen at a glance.

Dimension lines figured show the size of the object. They are limited by arrow-heads; they may be either short-dash lines, as illustrated on page 41, or they may be long fine lines $\langle \text{—————} \text{o}' - 6'' \text{—————} \rangle$ broken by the insertion of the figuring necessary to show the size.

In making a working-drawing it is frequently necessary to make the drawing smaller than the object. In order to keep the proportions of the object in the drawing, the method of “drawing to scale” has been adopted. If the scale is decided to be $\frac{1}{2}''$ to $1' - 0''$, then for every foot in the object, half an inch is laid off on the drawing. The drawing is then marked: Scale $\frac{1}{2}''$ to $1' - 0''$ or Scale $\frac{1}{2}'' = 1' - 0''$.

It is necessary to multiply the views as the details of the object increase and as the construction becomes more complicated; but it is not often in simple objects that more than three outside views are required. Yet there are six outside views of any rectangular object: top view; bottom view; front view, sometimes called upright view, face view or elevation; back view; left side, or end view; right side, or end view. In addition to these, there may be as many sectional views as are required for a clear understanding of the internal construction and details. A sectional view is a representation of an object, which gives two dimensions and details of the object, as seen when it is cut through horizontally, or vertically, or obliquely, thus showing the construction of the interior.

Illustrations of working-drawings of simple objects will be found on page 41. Fig. 1 shows two views of a hoop; Fig. 2, two views of a slate; Fig. 3, three views of a square frame, square in section; Fig. 4, three views of a circular frame, square in section; Fig. 5, three views of a circular frame, circular in section; Fig. 6, two views of a screw; Fig. 7, four views of a hollow cylinder, closed at the upper end. It will be seen that in Figs. 3, 4, 5, and 7 sectional views are necessary to show the facts of form of the objects.

The “conventions” mentioned above — centre lines, visible lines, invisible lines — are illustrated in these working-drawings. It will be noticed that these drawings give the facts of size as well as of form. Working lines are illustrated in the Drawing Books and Manuals for the Fourth to the Eighth years.

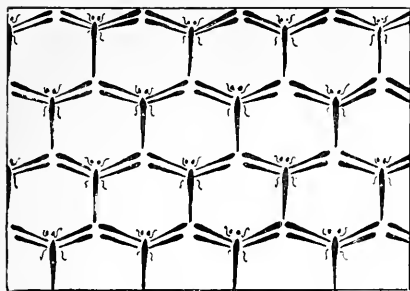


FIG. 1.

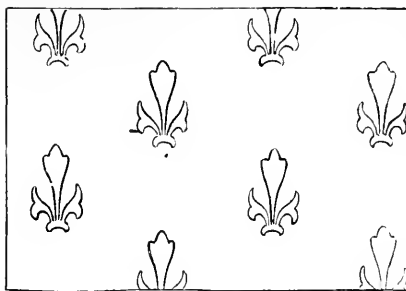


FIG. 2.

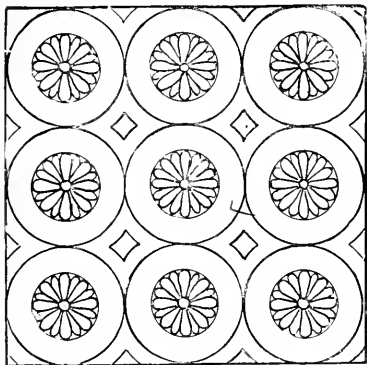


FIG. 3.

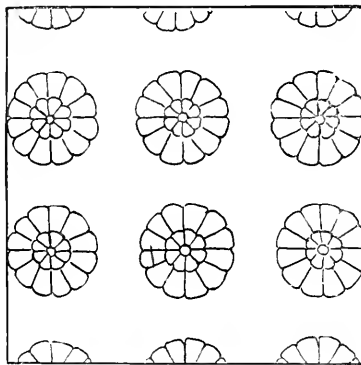


FIG. 4.

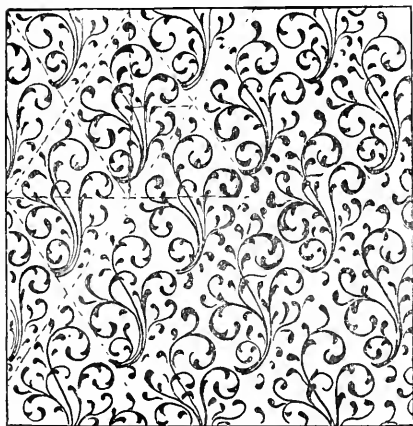


FIG. 5.

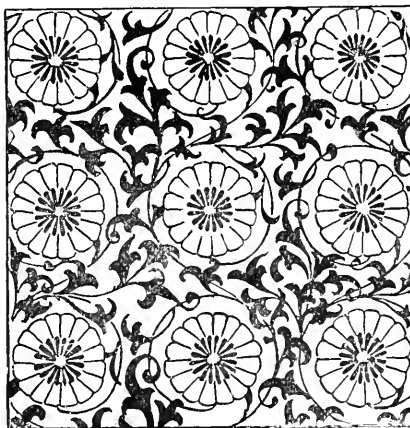
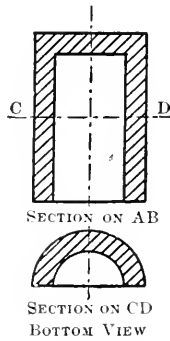
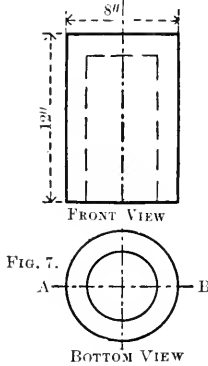
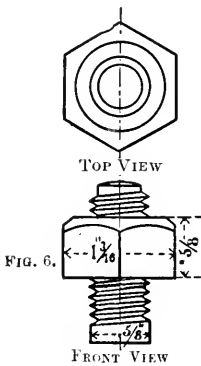
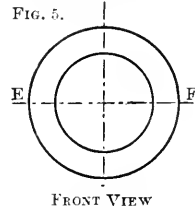
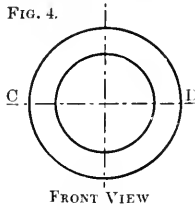
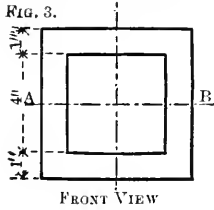
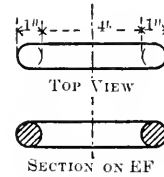
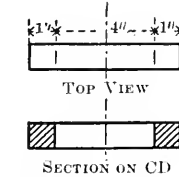
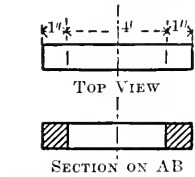
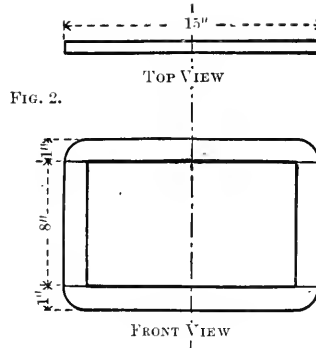
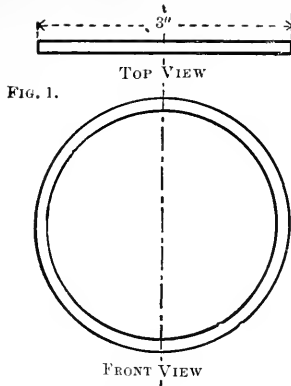


FIG. 6.



Dimensions. — Clear ideas of dimensions are necessary in the subject of Construction. Dimension is extent in any one direction.

Dimension in only one direction, as of a line, is known as length.

When there are two dimensions, as of any surface, the two dimensions are called length and breadth.

When there are three dimensions, as of a solid, the longest dimension is known as length, the next is known as breadth, and the shortest is known as thickness. Thickness, however, always expresses solidity, and is never used to express the third dimension of a hollow object.

The terms just spoken of are applied to solids and objects without reference to position.

Let a solid now be considered with regard to both dimension and position. It has three dimensions, as before, but the dimensions now have definite direction, — it has one vertical dimension and two horizontal dimensions. The vertical dimension is known as height ; and the horizontal dimensions are designated by width : 1, width from left to right ; 2, width from back to front.

When the vertical dimension is less than the shorter of the horizontal dimensions, it is sometimes known as thickness. It is better, however, as a general rule, to adhere to the terms height, width from left to right, width from back to front, in speaking of objects in a definite position.

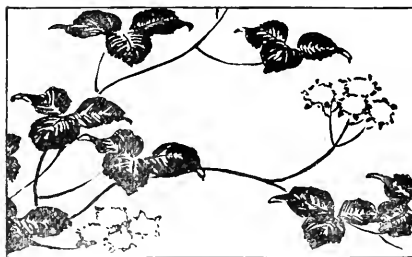
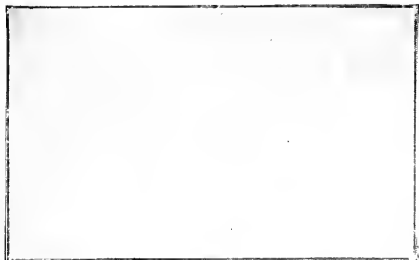
Pupils may be called on to measure the length of certain lines in the room, whether vertical, horizontal, or oblique. Then they may measure faces, — so many inches one way, so many inches the other way. Then they may measure solids, — so many inches one way, so many inches another way, so many inches another way ; thus gaining the idea of measurements in different directions, and from that the idea of extension or dimension in different directions.

In a similar way the idea of height, of width from left to right, and of width from back to front, as dimensions in different directions, may be developed, and probably the pupils can be led to express these by the proper terms.

Pupils will now be ready to see that in a geometric view but two dimensions are represented, and that in order to represent three dimensions of an object two geometric views are necessary.

Views of Solids. — When a solid is simple and regular, the facts of its form can be shown in two views, — the front and top views. These views should be placed in the same relation to each other that they have in the object ; that is to say, the top view should be placed above the front view. The top and front views of twelve solids¹

¹ A full statement of their characteristics and applications will be found at the end of this Manual.

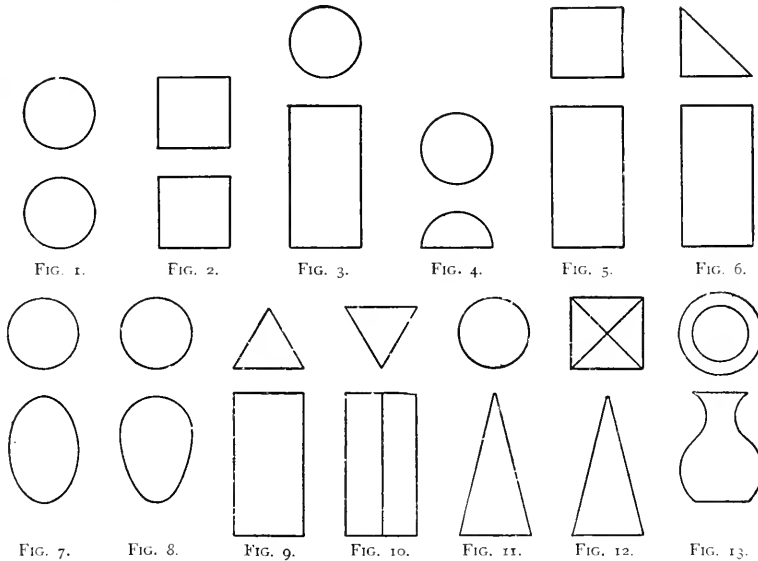


日本画



From Japanese Drawings

are here illustrated — the top and front views of the sphere, Fig. 1, — the cube, Fig. 2, — the cylinder, Fig. 3, — the hemisphere, Fig. 4, — the square prism, Fig. 5, — the right-angled triangular prism, Fig. 6, — the top and front views of the ellipsoid, Fig. 7, — the ovoid, Fig. 8, — the equilateral triangular prism facing, Fig. 9, — the same with a long edge toward you, Fig. 10, — the cone, Fig. 11, — the pyramid, Fig. 12, — the vase form, Fig. 13, are seen.



More than Two Views. — It is frequently desirable to have more than two views. In this connection, the triangular prisms show some interesting facts, as will be seen by the study of their views. Take first the right-angled triangular prism in a vertical position. This prism has two right-angled triangular faces, two narrow oblong faces, and a broad oblong face. If it is placed vertically, with one narrow oblong face facing you and the other on the left side, its top, front, bottom, and right-side views will be as in Fig. 1. As, in the solid in this position, the vertex of each triangular face points away from the front face, so the vertexes of the triangles in the top view and in the bottom view point away from the front view.

The side view of a solid shows its width directly from back to front, therefore the left and right side views of a solid must be of the same width, and the right-side view of the prism in this position must be a narrow oblong, no wider than the left face, although, in looking at the right-side view, the broader oblong face is in sight.

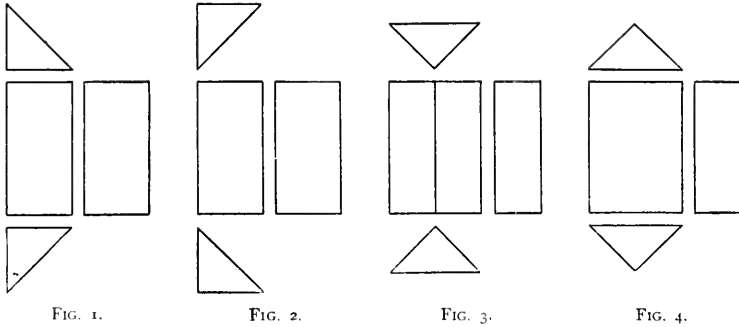


FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

If the prism is placed so that one narrow oblong face is at the left and the other is at the back, its views will be as in Fig. 2. If it is placed with the broad oblong face at the back, its views will be as in Fig. 3. The right-side view cannot be wider than the width of the solid from back to front, as seen in the top view. If the prism is placed with the broad oblong face facing, its views will be as in Fig. 4. These views will be readily understood if they are studied from the solid.

The study of the equi. tri. prism placed vertically and horizontally as Figs. 9 and 10, page 43, would also show facts of a similar nature. The left end, front and top views of the horizontal equi. tri. prism, in various positions, are seen in the illustrations below. In Fig. 1, the prism rests on an oblong face; the front view is not as high as the front *face* would measure, for the front view cannot be higher than the end view. The width of the top view, from back to front, equals the width of the left end. Similar facts will be observed in Figs. 2 and 3. In Fig. 3, the prism is supposed to rest on a long edge, with an oblong face facing you.

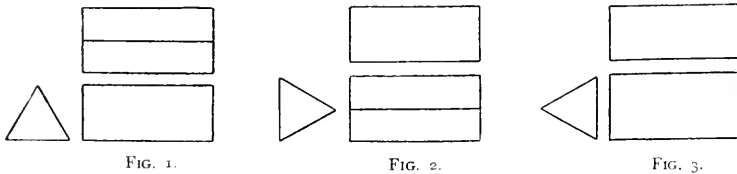


FIG. 1.

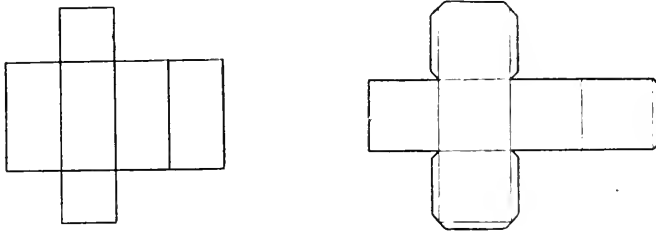
FIG. 2.

FIG. 3.

Patterns. — A pattern is anything cut or drawn or formed to correspond to an object to be made, and serving as a guide for determining its exact shape or form and its dimensions.

A flat pattern of a solid is made by what is called the development of the surface of the solid. The surface is, as it were, unfolded and spread out flat, thus making a pattern, which, when folded, will show the form of the solid. The devel-

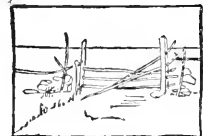
opment of the surface of the square prism is shown below ; also the pattern of a cube with laps for pasting. The subject of patterns and development is carried in this Course as far as the development of a four-part elbow.



Manual Training. — Both educators and practical men are now seeking the introduction of manual training into regular school work. Such training will, however, fall short of the desired result, both educational and practical, unless pursued in connection with regular, systematic, thoughtful work in Form Study and Drawing, as form is the basis of all work in manual training. By means of pattern sheets, definite exercises in regular sequence, and in immediate connection with the Form and Drawing exercises, are provided. Making objects from the patterns also furnishes objects for study, as well as opportunity for care and skill in manual work. The pattern sheets are provided so that accurate models may be made. Where instruments are provided for children, it will be much better for them to lay out and draw their own patterns, instead of using the printed patterns.

Composition.

Composition, as the word is used in art, is a general term covering the individual worker's choice and arrangement of forms and colors, lines and spaces, in order to perfectly and beautifully express his idea and carry out his plan. He is continually collecting material for this use, through his studies of nature and of the art productions of his fellow-workers. Through such studies he fills his mind with conceptions of beautiful forms and colors ; he develops judgment regarding the appropriateness of certain forms, colors, plans, and arrangements to certain ideas of use and beauty ; and he cultivates his power of idealizing familiar things and their relations to each other.

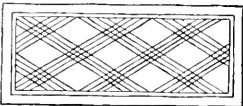
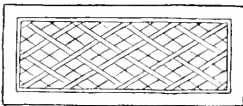
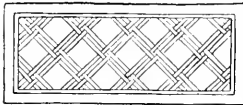


It is when he himself composes a bit of Representation or Decoration or Construction that he begins to make truly creative use of what he has acquired in other lines of his art-study.

Composition, in a word, stands for individuality in art. Composition as a feature of art instruction stands for the development of individual creative power in the art activities.

A study of good composition already existing in the various departments of art shows that there are a few great, underlying principles on which the best workers of different times and places have consciously or unconsciously agreed. These principles seem to be fundamental in art just as certain other principles are fundamental in nature. In nature-study children are led to see how certain principles or laws keep the natural world in beautiful order, and how a man's wise utilization of these laws in his own work makes that work effective. So in art-study children should be led to see how certain principles underlie all good composition, and to utilize these same principles in their own creative work.

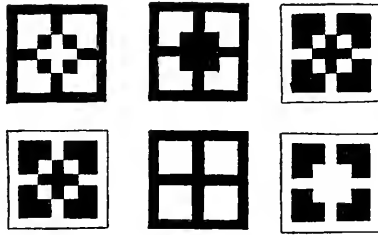
Good composition results from a harmonious arrangement or grouping of parts — each part being subordinate to the whole and in a pleasing relation to the other



parts — so that the whole is beautiful. While this work in its result is original and individual, there is of necessity an orderly procedure underlying every composition. The geometric plan is first determined. In pictorial composition, the geometric plan is simply the shape of the space to be filled — some plane geometric figure; in decorative composition the geometric plan may be merely the shape of the space to be filled, it may require in addition the geometric laying out of the repeats, and it may require also the geometric symmetry of the repeats themselves; in constructive composition, either industrial or architectural, the third dimension may be involved, and solid as well as plane geometry may give the geometric plan.

Having the geometric plan determined and having decided on the motive, — whether lines, spaces, plant, landscape, figure, etc., — the great effort, the art effort, is to so present that motive that the general effect will be harmonious, that its lines shall contrast agreeably, and that its spaces shall bear pleasing relations. To secure this the student, bearing in mind that harmonious **proportion** of the parts to each other and to the whole is secured through the simple laws of **principality**, **opposition**, and **balance**, works out this problem in various ways striving to show his own conception of beauty. By these efforts and by the study of fine works of art, he learns

the need of *breadth*, *simplicity*, and *repose*. If he is working in decorative composition, he considers *symmetry*, *rhythm*, and *order*.



Principality requires that one part be more important and the others subordinate, hence contrast of dimension or of value ensues.

Opposition requires that there be a variation or contrast in direction or directness of line and in shape.

Balance requires that there be such a mediation or reconciliation of these contrasts that the whole effect will be harmonious.

All nations have shown their ideas of composition in their paintings, their sculpture, their decoration, and their architecture. To the Greeks we owe that magnificent example of architectural composition, the Parthenon. Their feeling for proportion, for space and form relations, has never been surpassed. From the great masters of pictorial art of the fifteenth and sixteenth centuries, as well as from the builders of the Romanesque, Gothic, and Renaissance periods, we receive lessons in composition.

“In my experience, art instruction must begin by awakening the perceptions of beauty, by causing an exercise of choice and judgment, by the effort to originate something that is fine, — that reflects the personal thought or emotion of the student. That is the purpose of the simple problems in elementary line. The pupil makes several designs, chooses the best, compares them with similar things in the art of the world, and is helped to perceive the style and distinction of the really fine things. By continually exercising his judgment and personal feeling, he gains creative ability; and when he desires to express his thoughts by representing nature, he has acquired a language in which to do it, and his eagerness to do it will lead him to draw with enthusiasm. This simple beginning underlies Painting, Sculpture, Architecture, and Decoration.

“From the beginning this thought is emphasized, viz.: that neither applied design nor representation of nature can be called *Art* unless the fundamental ideas of Proportion, Opposition, Principality, and others have been considered and appreciated.

“The study of composition means an art education for the entire people, for every

child can be taught to compose — that is, to know and feel beauty and to produce it in simple ways.” — ARTHUR W. DOW.

“Flowers,¹ by their great variety of line and proportion, are particularly valuable, as well as convenient, subjects for elementary composition.



“Their forms and colors have furnished themes for painters and sculptors since the beginning of Art, and the treatment has ranged from abstractions to extreme realism: from the refinements of lotus-derived friezes to the poppy and rose wall-papers of the present time.

“In flower composition as here suggested, there is no intention of making a design to *apply* to anything as decoration, hence there need be no questions as to the amount of nature’s truth to be introduced. The flower may be rendered realistically, as in some Japanese design, or reduced to an abstract suggestion, as in the Greek, without in the least affecting the purpose in view, viz., the setting of its lines into a space in such a way that *beauty* shall result — in other words, making it serve as a subject for a composition exercise.

“It is essential that the space should be *cut* by the *main lines*; a small spray in the middle of a big oblong, or disconnected groups of flowers, cannot be called compositions; all the lines and areas must be related to one another by connections and placing so as to form a beautiful whole.

“Not a picture of a flower is sought — that can be left to the botanist — but rather an irregular pattern of lines and spaces, something far beyond the mere drawing of a flower from nature and laying an oblong over it, or *vice versa*.

“The instructor draws a flower in large, firm outlines on the blackboard, avoiding confusing detail, and giving the character as simply as possible. The pupil first copies the instructor’s drawing, then he decides upon the shape into which to compose this subject — a square or rectangle will be best for the beginner. He makes several trial arrangements roughly, with pencil or charcoal. Having chosen the best of these, he improves and refines

¹ From a book on “Composition,” now in preparation, by Arthur W. Dow. The illustrations given in this section are from the work of Mr. Dow’s pupils at Pratt Institute, Brooklyn, N.Y. In The Prang Elementary Course of Art Instruction, Drawing-Book 7, there is a full-page illustration (page 15) of Mr. Dow’s work in Flower Composition.

them, first on his trial paper, and later by tracing with brush and ink on thin Japanese paper. Effort must be concentrated on the *arrangement*, not on botanical correctness.

“Many line compositions can be derived from one flower subject, but each of these can in turn be made the source of a great variety of designs by carrying the exercise farther into the field of Dark-and-Light. Paint certain of the areas black, and at once a whole new series suggests itself from a single line design. To the beauty of the line is added the beauty of opposing and intermingling masses of black and white.



“In this part of the work the *arrangement of shapes of light with shapes of dark* occupies the attention, rather than shading, or the rendering of shadows. Hence the flowers and leaves and stems, or parts of them, may be black or white, according to the feeling of the student.

“Let him choose, out of his several drawings, those which he considers best. The instructor can then criticise, pointing out the best and the worst, and explaining why they are so.

“A mere aimless or mechanical blackening of paper, without *effort to arrange*, will result in nothing of value.”—ARTHUR W. DOW.

Mr. La Farge whose decorative work in Trinity Church, Boston,¹ whose stained-glass and whose general composition show the finest feeling for proportion and spacing, writes of art in “Letters from Japan”:—

“I have far within me a belief that art is the love of certain balanced proportions and relations which the mind likes to discover and to bring out in what it deals with, be it thought or the actions of men, or the influences of nature, or the material things in which necessity makes it to work. I should then expand this idea until it stretched from the patterns of earliest pottery to the harmony of the lines of Homer. Then I should say that in our plastic arts the relations of lines and spaces are, in my belief, the first and earliest desires. And again I should have to say that, in my unexpressed faith, these needs are as

¹ The illustrative pages in Drawing-Book 12 of The Prang Elementary Course in Art Instruction give examples of his composition.

needs of the soul, and echoes of the laws of the universe, seen and unseen, reflections of the universal mathematics, cadences of the ancient music of the spheres.

“For I am forced to believe that there are laws for our eyes as well as for our ears, and that when, if ever, these shall have been deciphered, as has been the good fortune with music, then shall we find that all the best artists have carefully preserved their instinctive obedience to these, and have all cared together for this before all.

“For the arrangements of line and balances of spaces which meet these underlying needs are indeed the points through which we recognize the answer to our natural love and sensitiveness for order, and through this answer we feel, clearly or obscurely, the difference between what we call great men and what we call the average, whatever the personal charm may be.

“This is why we remember so easily the arrangement and composition of such a one whom we call a master — that is why the ‘silhouette’ of a Millet against the sky, why his placing of outlines within the rectangle of his picture, makes a different, a final, and decisive result, impressed strongly upon the memory which classifies it, when you compare it with the record of the same story, say, by Jules Breton. It is not the difference of the fact in nature, it is not that the latter artist is not in love with his subject, that he has not a poetic nature, that he is not simple, that he has not dignity, that he is not exquisite; it is that he has not found in nature of his own instinct the eternal mathematics which accompany facts of sight. For indeed, to use other words, in what does one differ from the other? The arrangement of the idea or subject may be the same, the costume, the landscape, the time of day, nay, the very person represented. But the Millet, if we take this instance, is framed within a larger line, its spaces are of greater or more subtle ponderation, its building together more architectural. That is to say, all its spaces are more surely related to *one another* and not only to the *story told* nor only to the *accidental occurrence* of the same. The eternal has been brought in to sustain the transient. . . .

“Yes, the mere direction or distance of a line by the variation of some fraction of an inch establishes this enormous superiority — a little more curve or less, a mere black or white or colored space of a certain proportion, a few darks or reds or blues. And now you will ask, Do you intend to state that decoration —? To which I should say, I do not mean to leave my main path of principles to-day, and when I return we shall have time to discuss objections. Besides, ‘I am not arguing; I am telling you.’” — JOHN LA FARGE.

The following books, treating of Composition, may be useful to teachers: —

Treatise on Composition. John Burnet.

Composition in Pictures. Susan Carter.

The Graphic Arts. P. G. Hamerton.

An Artist's Letter from Japan. Consideration on Painting. John La Farge.

The Genesis of Art Forms. George Lansing Raymond.

Practical Treatise on Composition. Harry Willson.

Composition. Arthur W. Dow.

Training of the Æsthetic Judgment.

A twofold purpose should run through all art training, namely, the development of both the creative and appreciative powers of the child. That training which aims purely to develop the child to his higher possibilities as an individual is insufficient. He needs as well that training which will make him a desirable and useful member of society.

While both lines of work minister to every activity in life, yet in a special sense the development of the creative powers prepares the child for his work as a producer — or brings him to his full powers as an individual.

The training of his appreciative powers, or æsthetic judgment, prepares him for his place as a consumer — or as a member of society.

Production and Consumption. — Every working member of society is in a sense a producer. He is a producer in a special sense who uses raw material of any kind for the manufacture of a product. While every person in this special sense is not a producer, all are consumers, and all are consumers of art products, or products resulting from the application of Art to Industry. The common environment of everyday life cannot be supplied without dependence upon this creative work of others. The element of design enters into everything made by man, and that design may be either good or bad ; therefore design as applied to construction, the making of things, affects the life of all more constantly and directly than the more purely imaginative arts of painting and sculpture.

All cannot as yet have paintings and statues in their houses, but all must have houses, furniture, and clothing. Fortunately, a chair or table may be truly a work of art, if it be designed according to correct principles. Fortunately, too, good design is not dependent upon expensive material. Objects may even be made beautiful for less than is often expended in making them ugly, for were the florid ornamentation so often seen omitted, this expense would be eliminated, and the object itself would be better in design. The responsibility for the quality of design rests primarily with the consumer. The producer — trained to his creative work, may desire to make truly artistic products, but he is not wise to manufacture what the public will not buy.

If the consumer insists upon furniture covered with meretricious ornament the producer is obliged to supply it, or go out of the business. In any broad sense the standard of production can be lifted only as the æsthetic judgment of society is developed to the point of demanding better things. The producer and consumer

are thus seen to be mutually dependent, for good design in the common surroundings of life, and the necessity for the development of the æsthetic judgment as an inherent part of art education, becomes apparent at once.

How may the Æsthetic Judgment be Trained?—Are there any principles which, when understood, will enable us to select with judgment, and to surround ourselves with beauty instead of ugliness, and thus raise the standard of production by the demand for good design? The selection of products has for the most part been determined by the mere personal preferences of the buyer, his standard of value being simply “I know what I like.” For example, one is fond of roses, and influenced by this fact purchases a lamp-shade heavily decorated with naturalistic representations of his favorite flower.

Or, one admires color and sparkle, and selects a gilt chair for a reception room. The universal admiration for feminine beauty betrays another into buying a plate with a portrait of Madame Recamier painted upon it. In these instances the judgment fails to remind the purchaser that the roses obscure the light of the lamp, that the gilt chair is a palpable deception, and that it is unpleasant to spread food upon even a beautiful countenance. The fact that the schoolboy may prefer the history of “Sure Shot Sam” to “Hiawatha” does not prove that it is better literature. It is generally conceded that the choice of “rag-time” in preference to the “Fifth Symphony” is not evidence that it is better music. Neither is the mere personal preference for one design rather than another evidence that the design chosen is good. These illustrations lead us to an obvious principle. Personal choice is not the standard by which the quality of any art product may be determined. Or, stated positively—the æsthetic quality of a design must be determined by its relation to certain principles. These principles must be simple and of universal application, or they cannot be permanent measures of value. The value of a design is not determined by its historic accuracy of style. The styles of architecture and ornament are themselves measured by principles. As the principle of number antedates and underlies all systems of computation,—so the principles of design antedate and underlie the architectural orders and the grammar of ornament. These derive their authority only from their exposition of principles of design. To know how to select a good chair is to know the principles by which all constructive design must stand or fall. The principles involved in the design of a tea-cup govern the design of a cathedral. To help the child to see these principles expressed in simple objects is the best preparation for judgment of more complex forms later. As a generalization, the saying of William Morris, “Keep nothing in your house that you do not know to be useful or believe to be beautiful,” is very

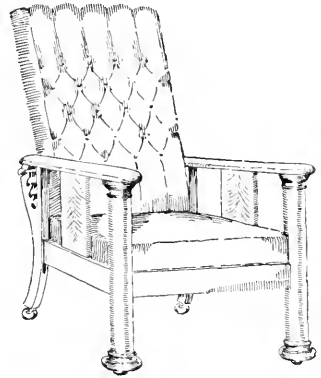
useful. Another valuable definition of more recent date is this: "Good design is the solution of the problem of utility in terms of beauty."

Every common object is made to serve some purpose. It should be made of the material and of the form best adapted to meet that purpose. This is an axiom, yet in it are involved the first two principles of good design.

1. Fitness of form to function.
2. Suitability of material.
3. Honesty of construction.

These three principles relate primarily to the use of the object, for no object can be truly beautiful without these qualifications. There are three other principles which concern more essentially the beauty of the object: they may be called Proportion, Beauty of Form, Beauty of Color. These six principles, however expressed, may be regarded as the golden rule of good design.

Fitness of Form to Function.—This may be illustrated in the schoolroom by any object at hand, or by reference to any common object at home. Take for example a chair. Consider first its purpose. All chairs are made to sit in. Yet one chair may be good in design for the very quality which makes another chair bad in design. The easy-chair should give a chance to recline, and should therefore have the back at quite an oblique angle, while a dining-room chair so constructed would be obviously unfit for its function. The Morris chair, designed by William Morris, is an example of excellent design in reference to all these principles. The back is adjustable by a simple device, and the chair can thus be made to suit the comfort of the user to an unusual degree. The free cushions allow perfect cleanliness. It meets with equal success the other demands of good design. The material is suited to the purpose; the wood is without ornament, its beauty being brought out by the finish of the natural wood itself.



The construction is so simple and straightforward that a child may understand it. Here "the problem of utility" is indeed "solved in terms of beauty." Fitness of form to function may be safely considered the most inclusive and fundamental of all the elements of good design. In a sense it includes all the others. The illustration of the Morris chair is used because it embodies in a simple form all the principles mentioned. Fitness to

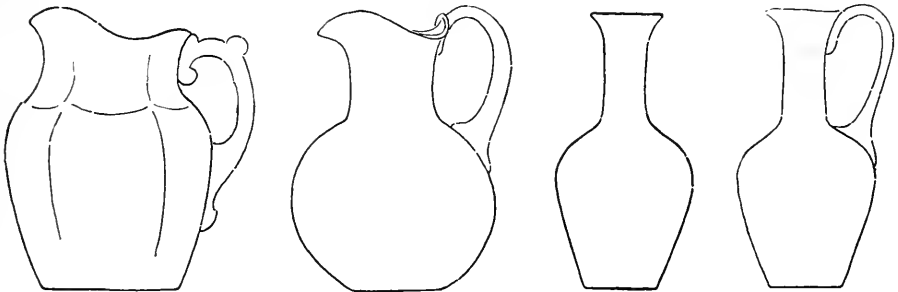
purpose would demand for the dining room a much more erect and formal chair. It should be designed with reference to the height of a dining room table. It should be light in order that it may be easily moved. It should be free from dust-collecting ornamentation and have a smooth surface to admit of perfect cleanliness. Apply these principles to some simple object like a milk pitcher. Fitness to purpose demands that it be light so it may be lifted easily. It must be of good shape so that the milk will pour without spilling. The handle must be large enough to take hold of, and the opening large enough to allow thorough cleaning. The first question to ask of any object in judging its design is, What is its purpose? Then, Does its form suit that purpose?

Suitability of Material. — This is really a corollary to the principles of fitness to purpose. Nothing can be truly fit for its use unless made of appropriate material. Illustrations of unsuitable material may be found in the plush covering of seats in railway or street cars, or in furniture for common use in the house. This material so holds dust and dirt that it is obviously unsanitary. Coverings of woven straw or of leather answer the needs of comfort and beauty quite as well, and have the quality of suitability. The paper lamp-shade may be beautiful in itself—the material is charming in texture and color—but its inflammable nature renders it unsuitable material for that purpose. So with the Japanese lantern—it answers every one of the requirements except that of suitability of material. The use of the candle renders it always dangerous. In form, proportion and color, it excels. In suitability, and therefore in fitness, it is deficient. Another illustration of material beautiful in itself, but bad through misuse, is the selection of silks and satins for children's dresses. The unsuitability is obvious. A white and gold book binding may be exquisite in design, beautiful intrinsically, but its tendency to show soil renders it unsuitable for any purpose which requires much handling. Suitability concerns itself largely with considerations of cleanliness, sanitation, and safety.

Honesty of Construction. — This means that the structure of the object shall honestly appear in its form. This is perhaps the most frequently violated of any of the principles of design. Negative illustrations rush at once to the mind. The folding-bed is a flagrant example of structural hypocrisy. Pretending to be a desk or a family organ it unblushingly confronts the undeceived beholder. Imitation of one material in another is always unsafe. "Tapestry effects" in wall-paper, "silkoline," or cotton made to look like silk, basket or lace patterns on china or pottery, wooden spindles made like twisted ropes, all such things violate the principle of honest construction. Houses are frequently seen made of brick with a

vener of stone in front. A house built wholly of a cheaper material is better in design than a brick house which tries to pass itself off for stone. Terra-cotta ornament in buildings is treated like carved stone, and cast-iron window frames, used everywhere in commercial buildings, too often also masquerade as stone. A simple straightforward construction like that of the Morris chair is the only safe course. The moment we apologize for structure by concealing it we are violating an essential principle of design. This does not mean that seams should be outside and the structure of the object obtruded upon the eye. It merely means that there shall be no attempt to deceive the eye.

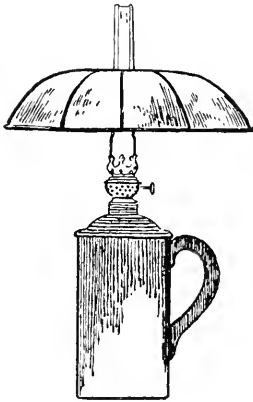
Proportion, Form, and Color.— These may be treated together, as it is difficult to separate them even for definition. Proportion and form are so dependent upon use that it is hardly possible to consider them abstractly. Proportion is the harmonious relation of parts to each other. All necessities may be met and the object still be unpleasing in proportion. Take, for instance, a pitcher. All the demands for use might be answered by the first form, but the eye is not pleased. All the requirements of use are equally well answered in the other designs, and they have also the elements of proportion and good form.



Proportion must be judged by use. A tall, slender vase for holding two or three roses is in beautiful proportion for that purpose, while for a pitcher for common use it would be bad. Harmonious relation of parts expressed with grace of line, make beauty inevitable. Color is the most distinguishable and separate of qualities. Beautiful color adds incalculably to the æsthetic value of any object. But of itself it is not enough to make an object beautiful. An illustration of this is the wonderful work of the Tiffany Company in the manufacture of their Favriile glass. Here color effects of surpassing beauty have been obtained. When this color is added to a beautiful form the effect is complete and satisfying, while the

color alone is not enough to redeem a clumsy form. An example of good design in every point is difficult to obtain, and it therefore becomes all the more essential to look for the good points in each object, though none will, perhaps, qualify in all. A chair that is good in construction may be covered with poor material. Let us be sure to recognize its positive quality. A dish is perhaps excellent in everything but decoration. By all means make the most of its good points, and in every illustration lead the children to emphasize the positive quality rather than the negative. Criticism by appreciation rather than depreciation is the law by which the æsthetic judgment may be trained on the optimistic and positive side. When negative illustration serves to point a positive principle it may perhaps be employed, but the emphasis should always be upon the points in which objects meet the requirements of good design. Let us look for fitness and beauty as exemplified in this design for a lamp.

Here, under Fitness of Purpose, we note that it is stable in form. It will not easily tip. The handle is firm, large enough, and well placed. The shade of bamboo and stretched silk is light in weight. It is suitable in material, since by its shape and mechanical arrangements the danger of burning is avoided. It is decorated enough to give charm without obscuring light, and the decoration is flat and appropriate. The construction honestly appears throughout. The proportion and form are simple and pleasing, and the color of the original enhances the effect of all the parts. The color of the base is echoed more delicately in the shade, bringing all the parts into unity. This seems to meet all the utilitarian requirements of a hand lamp, which must be carried from room to room, and to meet the requirements of beauty as well. Another shape might perhaps better answer other requirements, as for instance, a lamp for the dining table would necessarily be higher, in order to throw light down, while a reading lamp would



not need to be so light in weight, the consideration of use being first in each case in determining the excellency of the design.

GENERAL DIRECTIONS.

Drawing.

Freedom of Movement. — The importance of freedom of movement in drawing cannot be overestimated. It produces lightness of touch, quickness in execution, begets confidence in one's ability to draw, and when acquired by a class of pupils, materially lessens the work of the teacher. Experience among thousands of pupils shows conclusively that too much stress cannot be laid on the need for the early development of freedom of movement. The ability to sketch rapidly and easily cannot be attained without it.

A set of drawing-books, finished as draughtsmen would finish them, rarely indicates the best teaching. It is of far more importance that the child should have opportunity to work first for freedom of movement rather than for straightness of line.

Position. — The children should sit on the left half of the seat facing the desk. They should sit erect, feet flat on the floor, the eyes never nearer the paper than is necessary for a clearer view of the lines. They should not bend forward unnecessarily, and should learn to work at a distance, as thus they can get a better idea of their work as a whole. In drawing at the blackboard, children should stand at arm's length from the board.

Pencil. — For general work the Prang school pencil S. M. is recommended. For work in light and shade, color, pencil-painting, and all methods of artistic rendering the S. M. is especially effective. Young children should be led to use such a pencil with restraint so as not to get extreme effects, that is, the rendering too heavy and black. The pencil should be used for drawing only. Short pencils should not be used.

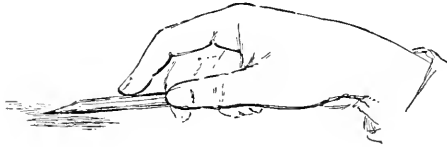
For ordinary work, the pencil should be held lightly three or four inches from the point, so that it will have the support of the middle finger and be held by the thumb and forefinger, as shown in the illustration. Lead the pupils to attain this pencil-holding from a desire to draw freely and well.



The pupils should be led to see that frequent erasing injures the surface of the paper and the eraser is disastrous when applied to shade or shadow, therefore it is better that the pupils should draw at first with very light lines, correcting these if necessary by drawing other light lines over them. When a satisfactory outline (or blocking of the whole) is secured then the pupil may proceed to carry out the effect desired, any obtrusively incorrect lines being first taken out with an eraser.

For *pencil-painting* where the drawing is done in mass with broad intermingling strokes, the pencil should be held under the fingers as shown in the second illustration.

Practice Paper. — It is desirable that pupils should have some practice in free movement in connection with work in the drawing-book and some of the exercises call for quick sketches by the pupils in order to fix in the mind the purpose of an exercise, as in the pose or animal study, that the lines of action may be studied from life as preliminary to work in the drawing-book. For such



purposes sheets of manila paper, six by nine inches, are desirable.¹ The sheets may be used on both sides for drawing. Provision should be made for at least twenty-five to thirty sheets for each pupil for use with one drawing-book. The

teacher should guard against too much practice as preliminary to any exercises in the drawing-book lest the children lose interest and the spontaneity of their effort suffer. Still further, the work in the book should generally differ from that upon practice paper. For instance, if sketches have been made of clusters of grass on practice paper, it is well to use a different cluster for the drawing-book page.

Materials and Methods for Brush Work.

Ink. — For work in black and white common writing ink answers very well, though, of course, india-ink has more body and brilliancy.

India-ink is prepared in the most convenient form for use in bottles, and Higgins's Waterproof Liquid Ink (white label) is recommended.

India-ink of excellent quality can also be obtained in sticks directly from Japanese dealers at about fifteen cents a stick from two to three inches in length. When in this form it should be prepared for use by each child by rubbing an end with a little water in a small dish (individual butter-plate), adding more water drop by drop until there is enough for the lesson. The proper consistency can soon be estimated by trial and also the amount needed for the lesson. The ink is easily thinned by adding water and mixing it in the dish. The stick ink might be preferred in the upper grades as it gives a better effect than common writing ink. When the stick ink is used it should be carefully dried and wrapped in paper after using to prevent crumbling or cracking.

Brushes. — The quality or size of the brushes is not so important as the method of using them. The brush may be a flat bristle (for flat wash), or a Japanese pointed brush, or a camel's hair or sable brush of medium size. If a Japanese brush is used, it will be found that the bristles are partially held together near the base by a sort of glue. Care

¹ The paper is put up in packages of 100 sheets, and may be obtained of booksellers and of The Prang Educational Company.

should be taken not to remove this glue for outline work as its presence helps to give greater firmness to the brush; for general work in washes, its presence is not desirable. Brushes may be kept singly in the paint-box or together, using a box longer than the brushes so that the points may not be injured. Brushes should never be kept in water or put in the mouth. The paint-box and brushes should be put away clean. When put away for the summer it is well to add a piece of camphor.

Water-Colors. — Water-color paints are furnished to the schools in various forms. There are liquid paints in bottles, moist water-color paints in tubes, and paint-boxes with cakes of paint. Perhaps the most practical for general use in the public school is a paint-box with three colors of excellent quality.¹

The scientific knowledge of color is of little or no value as a training of the color sense or æsthetic preception; but by mixing or combining (by juxtaposition) the three primary colors, red, yellow, and blue, the children may obtain much practical knowledge of pigments, their possibilities, and their limitations.

The paraphernalia for such work should be as simple as possible, so as to reduce the time required in handling it, and also the expense. One lesson a week, taking the time of two periods, is better than two shorter lessons. Large heavy cups or small bowls may be used for water — distributed by monitors and filled by the teacher from a long-nosed vessel, such as a coffee-pot. With care one supply of water will be sufficient for a lesson. The papers may be white or slightly tinted. An American drawing paper answers every purpose: the manila practice paper is good.

For all line work in ink or water-color the brush should be held as nearly vertical as possible, with the fingers slightly resting upon the paper and the whole arm moved instead of merely the fingers. Broad washes are obtained by charging the brush with considerable water and color and working with the side and not the point of the brush. To obtain control and power of expression, it is well to encourage even young children to use the brush in both ways.

How to Use the Brush. — For practice with the point of the brush it is well for children to reproduce borders which have been previously laid with sticks, or perhaps drawn, as this will not only keep a direct connection with other work, but will give excellent practice in handling. The constant and laborious drill which Japanese children are obliged to go through in order to learn to write their peculiar characters with ease and freedom and correctness is undoubtedly a great means in developing their mastery of the pencil and brush in their characteristic art. The Japanese do not rest the hand even on the fingers, but move the whole arm, holding the pencil and brush vertical.

If children can draw with the brush without first sketching the leading lines with

¹ The Prang Water-Color Box No. 1 is recommended. This box contains three cakes of fine quality and extra size, — one each of carmine, ultramarine, and mineral yellow. The colors work easily and smoothly and mix readily into secondaries, tertiaries, and intermediates and broken colors. They are put up in attractive boxes with hinged covers. Two quill brushes of good quality and generous size, with wooden handles, are included in each box. The inside of the box cover is finished for use as a palette with three divisions.

pencil, it will not be well to repress such effort. Young children are less self-conscious than older ones, and if technical results are not expected beyond their power to produce they will show great courage and often surprising ability. They should, however, think carefully before making a line and perhaps practise the movement just over the paper, before making the stroke. A tactful teacher will see ways to gently guide or restrain, but it should be borne in mind that it is especially desirable in all this work that the children should have as much freedom as possible. It is not direct results that we should expect, but the development of power.

Sketching the outline is necessary in some examples of historic ornament or decorative design. In order to avoid erasing upon the paper, which seriously injures the surface for water-color or ink, it is well to have the pupils sketch the design first upon thin paper and then transfer to the sheet which is to receive the color or ink.

How to Use Water-Colors. — Washes may be laid perfectly flat by working with the brush full of wet color, beginning at the top of the figure and carrying the color across the enclosing space from left to right, inclining the paper slightly and dragging the color down as it pools. The excess of color at the lower edge may be lifted with the brush if the brush is nearly dry.

If the first wash does not produce a tone of sufficient depth, another or several others may be added, taking care that one wash is thoroughly dry before applying another.

For practice in laying flat washes the children are much interested in filling squares, oblongs, circles, triangles, quatrefoils, trefoils, etc. These decorative motives may be painted and the enclosed spaces filled by the children; they may be drawn by the teacher (by drawing one sheet carefully and pricking through many sheets to secure proper dimensions and connecting points by lines or curves) or the children may color their own drawings.¹ The hektograph is also a great aid to teachers.

A graded wash from the full tone to a pale tint may be laid by starting with a brush full of color (very wet) and carrying the tone as far down as the full depth of the color is desired, then by adding water and no more color every time the brush starts from the left to the right, the full tone will change, giving a graded effect ending in a pale tint. Long vertical oblongs are excellent for this exercise.

Blotted washes are made by alternating the full depth of a color with a tint of the same color added at irregular intervals. Sometimes different colors are used, as Prussian or ultramarine blue and touches of emerald green or raw sienna, thus producing stained-glass effects. This work is delightful for color composition. Simple sky effects may be obtained by the use of a blue wash, lifting the color in places by means of the brush to simulate clouds.

Practice in laying washes is very essential as a preliminary to the study and rendering of examples of historic ornament and original design.

Color for the washes may be prepared or mixed in the depressions for that purpose

¹ The Prang Outline for Color Work. These consist of 28 different decorative examples, lightly printed on heavy white paper, suitable for water-color washes. The sheets are 6 × 6, one figure only on each sheet. Blank sheets of the same size can also be supplied for optional exercises.

on the inner surface of the lid of the paint-box. If moist color in tubes is used special pans are necessary for mixing.

The effect of the juxtaposition of colors may be practically demonstrated by surrounding squares or circles of the same color with different colors. as, for example, surrounding a red square with yellow, another red square with orange, and so on with blue, green, and violet. The children will thus see for themselves the change in effect. (These same experiments may be carried out with colored paper, the children cutting the decorative shapes and thereby gaining much in manual dexterity.)

Compositions of flowers or sprays of leaves, budding twigs or seed vessels, within an enclosing space, as a circle, square, or oblong, may be painted in early work in monochrome, as, for example, in quite a full tone of blue, the blue being modified in later stages with enough of red and yellow to neutralize it. The blue of Canton china is an excellent tone for such work.

Landscape composition may be well carried out in several values in ink or water-color, keeping the washes very flat. This flat treatment is perfectly satisfactory to the child, and, by dealing in clear washes handled directly, muddy combinations are avoided.

When more pictorial treatment is attempted, the same direct treatment should be encouraged and the children led to see the value of using as pure color as possible. The best artists, at present, use very few, if any, brown, gray, or any so-called neutral pigments,¹ but depend for such effects upon the juxtaposition of pure colors or upon the mixing of red, yellow, and blue with a dash here and there of pure color. A clear sunset sky may be vivid with yellow and red, while against it the trees are very dark green and in some places very deep blue. The artist will mix the colors very little, but while working rapidly will lift the wet color in one place nearly off the paper and add depth of color in another, suggesting grays, violets, and neutral tones by the juxtaposition of colors which produce their effect. This preserves the richness of the colors and their depth and brilliancy.

It is not meant by this that "outdoor effects" should be sought as shown in the works of Manet, Monet, and others where pure colors are juxtaposed in small masses, the pictures to be viewed at a distance. It is meant, however, that the clearer and purer the pigments are used the more brilliant is the result, and in decorative or pictorial work gray (and various broken colors) can be produced not only by the juxtaposition of colors, but also by working as directly as possible from the paints, keeping the brush full of color and water and letting the color blend in the brush or on the paper rather than doing much of the mixing on the pan. The effects produced in modern stained-glass are good illustrations of such a use of color.

The mixing of colors and the use of flat washes, both so necessary for decorative effects, will lead the children to see the results of various combinations of color.

When expressing in a pictorial and not a decorative way, the work should be as

¹ An artist's box usually contains more than one yellow, red, or blue, with very few neutrals. A master of technique can use almost any pigment or combination of pigments, and produce good results, because he knows just what effects he desires to bring out and just how far it is safe to combine the pigments. But children without this experience are safer with a very simple palette and no neutrals.

individual as possible, that is, the children should express as they individually see. It would be a mistake for the teacher to give directions or definite advice as to what colors to combine or juxtapose to give the exact tint or tone of a flower, leaf, or stem, as different children may see or feel the color differently. One child sees green in the shadows or a glow in the reflected light and should express what he sees as well as he can. One child sees red in the stem and he puts it there; another sees the same part as brown: into his red he touches a bit of blue and perhaps of yellow. In such work children should be encouraged to work as much as possible directly from the paint, avoiding much mixing and yet keep the color very wet.

If the teacher can possibly do it, it would be well to study into the methods of treating water-color when used decoratively and pictorially, practising in both methods. It will be a fascinating study, and the teacher will be well repaid in knowing better how to help the children.

THE PRANG ELEMENTARY COURSE

IN

ART INSTRUCTION.

PURPOSE OF THE PRANG COURSE IN ART INSTRUCTION.

THE purpose of THE PRANG COURSE IN ART INSTRUCTION is to lead the child through a study of form and color, as manifested in nature and in art, to the use of his own individual creative ability through expression by pencil and by brush in terms of art. In the first two primary years of school, this purpose is developed—

- By exercises in modeling,
- By acquainting the children with type forms and shapes through such occupations as building, arrangement, paper folding and cutting, etc.,
- By exercises with color tablets, colored paper, and the brush to develop color perception and expression,
- By observation of fine pictures suited to their grade,
- By imaginative drawing stimulated by well-selected quotation, with some simple attempts at composition, and
- By free drawing from the pose, from animals, from grasses and flowers, and from models and objects.

All these exercises stand in close relation to each other in their appeal to the child through interest, and in their progressive nature.

After the first two years, children are prepared for more conscious effort; as their experience widens, they come to realize that their own drawing fails to express their ideas and to reach their ideals. They desire to know how others draw and are eager for more definite instruction. To meet this desire and to steadily develop their creative power along sequential lines, more definite means are required.

THE PRANG ELEMENTARY COURSE IN ART INSTRUCTION, consisting of a series of drawing-books and manuals, provides such means. In this course, the work has three interrelated and complementary lines,—observation of form and color in objects and the graphic record of this observation—observation of works of art—the utilization of all these observations in creating beautiful compositions.

The exercises have been planned with relation, on the one hand, to their nearness to the child, to his interest, and to their adaptation to his growing powers and capabilities, and, on the other hand, to their provision for opening a wider horizon, and for developing richer concepts than his ordinary experience would furnish, that he may be thus incited to individuality in beautiful creations. From this statement it will be seen that the vital feature in all this work is the development of the creative activity of the child toward the production of the beautiful.

With this ultimate purpose, the authors have endeavored —

1. *a.* To come in touch with the child through things that are near him — that appeal to him — through the study of

{	children,
{	animals,
{	plants,
{	familiar objects,
{	good drawings and pictures.
- b.* To lead him to appreciation of beauty by the selection of beautiful examples and aspects of all these objects.
- c.* To enlarge his horizon and furnish him with new concepts and new material for creative imagination by giving him objects that are new to him, but kindred to those which he already knows.
2. To aid him to classify his concepts so that they may stand in his mind in the proper relation to each other and be easily at his command.
3. To incite him through his own study of objects and of artistic examples to use the concepts thus gained to make new creations, which shall show his own feeling for the beautiful.

These aims furnish the key to the sequence of the exercises in **THE PRANG ELEMENTARY COURSE IN ART INSTRUCTION.**

GENERAL PLAN OF THE SERIES.

THE PRANG ELEMENTARY COURSE IN ART INSTRUCTION is intended to cover the time from the third to the eighth years of school life.

As different periods of promotion prevail in different towns, some promoting half-yearly, and others yearly, the drawing-books of this series are issued in two forms — one form giving the work of a half-year in a book, the other form giving the work of a whole year in a book. The half-year books are designated by numbers, Nos. 1, 2, 3, 4, etc.; the year books are designated by years, Third Year, Fourth Year, etc. The drawing-books are accompanied by Manuals for teachers, equally available for the half-year or the year drawing-books. Each drawing-book contains

ILLUSTRATIVE PAGES SHOWING THE WORK OF MASTERS.

DRAWING PAGES GIVING FINE EXAMPLES AND SEQUENCE OF WORK.

Illustrative Pages. — The illustrative pages are given to show examples of good art by acknowledged masters, which will not only give pleasure to the children, but will also show them that there are very many ways of drawing, that it is not neces-

sary always to express outline and light and shade in the same way ; but that the great point is to have first thought and feeling, then study and training, each enlarging the possibilities of the other.

The wide range in these illustrative pages gives great variety of style and rendering, encouraging freedom and originality in the pupils' own work. They show admirable technique with pencil, pen and ink, charcoal and brush. Some are in pure outline, some show study for masses of light and dark and of color, others show light and shade simply expressed.

Examples are given from the work of both old masters and artists of the day : —

DA VINCI,	WM. HAMILTON GIBSON,	F. S. CHURCH,
RAPHAEL,	JOHN LA FARGE,	ARTHUR W. DOW,
VAN DYCK,	ELIHU VEDDER,	C. H. WOODBURY,
REMBRANDT,	ABBOTT THAYER,	EDITH CLARK,
LANDSEER,	JOHN S. SARGENT,	LUCY FITCH PERKINS,
MILLET,	EDWIN H. BLASHFIELD,	ANNA KLUMPKE,
BARYE,	ROSS TURNER,	TANYU,
LE ROLLE,	C. D. GIBSON,	HIROSHIGE,
WILLIAM HUNT,	HERBERT ADAMS,	HOKUSAI'S DAUGHTER.
	WINSLOW HOMER,	

There are also illustrations of the finest examples of architecture in the various styles.

Drawing Pages. — The illustrations on the drawing pages give help in drawing from nature — from plant, animal, bird, and insect life, and from the human figure, from familiar objects, and from simple effective buildings ; — from type models singly and combined, in various positions ; — and from historic ornament from the flat, relief, and round, both detached and in interesting applications in architecture, ceramics, etc. They include also examples of pictorial, decorative, and industrial composition. Working-drawings, patterns, and views are clearly illustrated.

The illustrations on the drawing pages are printed to give pupils good examples of form, line, and composition, to interest them in the work of others, to lead to a higher standard of excellence than exists in the individual, and to be a stimulus and help to the pupils by their suggestiveness as to subject and as to manner of rendering. They assist in providing a regular sequence of study and save time of teacher and pupil. Good copies are as necessary and helpful to the child as art-studies to the adult. In some cases the children may gain much by copying, although the

examples are of such a character and so arranged that there is abundant opportunity on every page for free, original, and individual work.

Application in Other Studies. — As will readily be seen, the use of these text-books will be of great practical value in securing *good* drawing in other studies. The examples given include many which are immediately suggestive of good composition and rendering in the sketching of specimens studied in Elementary Science lessons (botany, zoölogy, entomology, geology, etc.), the sketching of historic buildings and furniture, and of objects interesting in geography; the sketching of buildings and scenes associated with the study of literature, and the imaginative illustration of poems and stories, including the human figure.

Mediums for Drawings. — It is assumed that in most schools the lead pencil will be the most available medium for drawing. The drawing-book pages present, however, a paper which can be used for brush work, or for pen and ink if desired.

Color. — Opportunities are given for the expression of color in three ways:—
 By pencil-painting, as shown in certain examples of pose-drawing, drawing of animal life, foliage, and still-life, and historic ornament.
 By the use of colored papers, cut and mounted in connection with the study of historic ornament and of decorative design.
 By the use of water-colors.

NATURE OF THE WORK.

Throughout the series each pupil is encouraged to express himself freely and according to his own feeling, and at the same time he is offered the broadening and enriching influence of what has been done by masters in art; so that while on the one hand he is growing in individual power to express by drawing, on the other hand he is gaining through acquiring more and more of thought and beauty to express. The creative powers are stimulated and each child learns to feel that he himself has something of his own to tell with pencil or brush.

The exercises require drawing

FROM NATURE,

FROM OBJECTS MADE BY MAN,

FROM ART EXAMPLES,

FROM MEMORY,

to culminate in composition — the work of the creative imagination.

STUDY OF FORM AND COLOR.

In the first two primary years the children have selected the models of type forms from their groups of objects, have built with them, have handled and moved them,

have arranged them, have imagined them to be all kinds of familiar things, have talked about them and have drawn them until the sphere, cube, and cylinder, and their relations, the ellipsoid, ovoid, the prisms, the cone, the pyramid, and vase form have become not only as "household words" in the children's speech, but through pleasant associations have also come to be mental companions, which are summoned at will. The work now given in form will be such as to keep in remembrance these types and also to lead to their further study.

In a like way in their primary years through a loving, happy study of grass and sky, of leaf and flower, and of types of color, the children have learned to know and to feel the colors **red, orange, yellow, green, blue, and violet** in normal and lighter tones. They are now carried farther in color study and expression, by the use of colored paper and of the brush.

By this study of form and color, the pupils gain fine material for use in expressing their ideas of composition.

If we should wait until the pupils were equal to producing drawings which would compare not unfavorably with the examples in the books, even Book 1 would not be appropriate for young children. We must put aside the idea that ability to draw well can come as any immediate result of studying good examples or of drawing from objects. There may be art feeling in the simplest and crudest effort, while it may be a poor drawing from the adult or technical standpoint. These books with their beautiful illustrations will fail in the inspiration they might otherwise give if the children are forced beyond their powers.

Pupils will gain in individual expression and appreciation by seeing beautiful things, just as they gain along similar lines by hearing and reading fine examples in literature. Therefore, in order that the children may develop in a natural manner, it is hoped that the teacher will accept with tranquillity even very crude results, if they express the best efforts of the pupils.

BOOKS 9 AND 10.

SEVENTH YEAR.

GENERAL PLAN OF EXERCISES FOR THE SEVENTH YEAR.

BOOKS 9 AND 10.—SEVENTH YEAR BOOK. SHOWING THEIR PURPOSE,
SEQUENCE, AND INTERRELATION.

THE exercises for the Seventh Year are chosen to open to the pupil more widely still than in previous years the world of nature and of art, by the presentation of the drawings of artists, and of exercises for drawing from life, and from familiar and beautiful objects. These exercises appeal to him through his innate delight in beauty of form and color,—a beauty resulting from simplicity, harmony, and repose,—and thus lead him to creative activity.

The exercises include the following:—

FROM NATURE.	Grain. Flowers. Landscape — window study. Figure studies. Animal studies.	} Life in growth.
	Familiar and beautiful objects. Fine buildings. Type forms. Working-drawings — views, sections, plans, patterns, and development.	} Life in growth, action, and feeling.
FROM ART.	Beautiful objects. Historic ornament — Roman, Byzantine, and Romanesque. Historic architecture — illustrations, capitals, plans.	} Association. } Idealization. } Construction.
CREATIVE WORK BY PUPILS.	Space relations in panels, mouldings, doorways. Space relations in flower forms and simple landscapes. Patterns of type forms and objects. Plans and elevations of rooms. Grilles — constructive design. Decorative arrangement.	} Rhythm and beauty. } Radiation — tangential union. } Space distribution. } Individual power.

These exercises are classified generally as above, yet all are closely interrelated as pages 74-77 show. To maintain closely this interrelation, the illustrations on the

drawing-book pages were prepared with reference to more than one subject ; therefore the same illustration sometimes occurs on pages 74-77 in more than one connection.

NATURE. — PLANT LIFE. — OUTDOOR STUDY.



Book 9, p. 3.



Book 9, p. 4.



Book 10, p. 3.



Book 10, p. 12.

The study of nature is seen in the exercises on grain, trees, and flowers, and in the landscape exercises and in the window study. The study of nature is taken according to the season of the year.

BEAUTIFUL OBJECTS. — HISTORIC HOUSES.



Book 10, p. 3.



Book 9, p. 6.



Book 9, p. 6.



Book 10, p. 12.

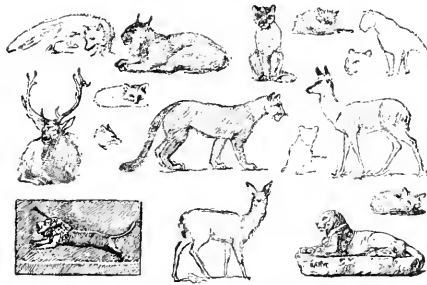
The study of simple and beautiful objects is given in the pottery forms,¹ and in the type forms used for the constructive work, while the historic houses are well provided for.

¹ The Prang Educational Company has had manufactured abroad, expressly to their order, a large variety of pottery and basket-ware forms, to furnish the schools with beautiful modifications of the simple type forms, embodied in vases and other interesting objects, made additionally attractive by good color.

THE POSE. — ANIMALS.



Book 9, p. 8.



Book 10, p. 4.



Book 9, p. 15.

A human being is the object which is the nearest to the pupil, being related to him by life, action, and emotion kindred to his own. Therefore the pose of a figure is given. This exercise is related to the special interests of the pupil through an appeal to experience — and to leaves, fruits, flowers, and animals through the life principle. The pose appears again in other illustrations. Next in nearness are animals — wild animals are especially studied in this year.

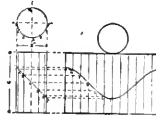
TYPE FORMS.



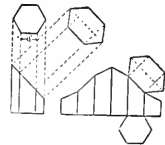
Book 9, p. 6.



Book 9, p. 6.



Book 10, p. 9.



Book 10, p. 9.

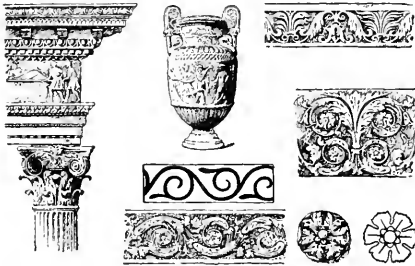
The teacher should note that the idea of type forms underlies all the exercises of the year. They are especially called for on two pages. They are illustrated on other pages, and form the basis for simplicity of choice for objects.

DECORATION.

The pages of ornament appeal to the pupil through simplicity and rhythm, through interest in familiar ornaments, rosettes, etc., through the symbolism, ornament, and history of the Romans and of the people of the Byzantine and Romanesque periods, and through original design for units, borders, and surface coverings.

They are related to types of form and to plane figures through the circle, square, triangle, and simple rectangular and parallel effects, produced with both curved and straight lines.

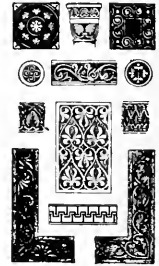
In these pages there are introduced borders, units, and figures complete in themselves, some of which can be discovered by the pupils in their daily surroundings.



Book 9, p. 10.



Book 9, p. 12.



Book 10, p. 6.



Book 9, p. 13.



Book 10, p. 7.



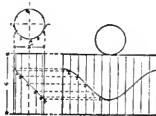
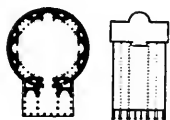
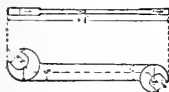
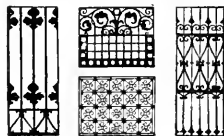
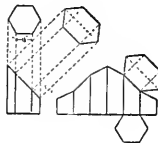
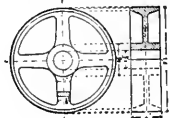
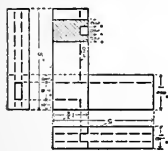
Book 9, p. 14.

The examples of historic ornament are also very closely related to composition, furnishing very fine examples of space relations. They are to be especially studied with reference to beauty produced by spacing and proportion.

WORKING-DRAWINGS.

One of the chief ways in which the creative faculty may be exercised for social well-being and for beauty is through the subject of Construction, which furnishes through its various drawing conventions the graphic language for industry and manufacture. Looking forward to this end, the exercises in making working-draw-

ings of the simple types and kindred objects which appeal to boys and girls are given. These connect directly with the type forms, and with objects familiar and pleasing by association, and that are useful in mechanic and building arts.



Book 10, p. 8.

Book 10, pp. 8 and 9.

Book 10, p. 9.

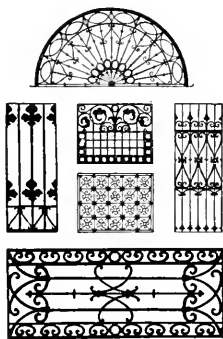
Book 10, p. 10.

COMPOSITION.

Individual creation in space relations through the division of spaces by vertical and horizontal lines for paneling, and the use of simple landscape features and of



Book 9, p. 14.



Book 10, p. 10.



Book 10, p. 13.

flowers as motives is definitely called for. Examples showing the general nature of this work are given here.

The development of the creative power of the child in the production of the beautiful is the supreme purpose of the exercises. Underlying the production of the beautiful is the great principle of fine space relation.

This principle is something which the pupils can gradually be led to feel through the study of good examples and through various exercises calling for selection of form and aspect, for grouping, for placing upon the page, and for rendering. These are all features of composition, of beauty expressed in terms of art. To this end the choice selections are given from the works of masters on the illustrative pages of the drawing-books.

BOOKS 9 AND 10.—SEVENTH YEAR.

REPRESENTATION. <i>Appearance of Form.</i> Picture=Drawings.	{ NATURE: Corn; Trees; from the Pose, from Animals; Flowers; Landscape. OBJECTS: Vases, Bowls, Jars, and Other Familiar Objects; Roofs. TYPE SOLIDS: Square Prism; Right-angled Triangular Prism; Equilateral Triangular Prism.
DECORATION. <i>Ornamentation of Form.</i> Original Design.	{ HISTORIC ORNAMENT: Roman, Byzantine, and Ro- manesque. COLOR: Colored Paper, Brush, Light and Dark.
CONSTRUCTION. <i>Facts of Form.</i> Working=Drawings.	{ SOLIDS: Cube, Square Prism, Ellipsoid, Ovoid, Cone, Pyramid. PATTERNS: Cone, Pyramid; Objects similar in Form. WORKING-DRAWINGS: Two and Three Views, figured.
COMPOSITION.	{ REPRESENTATIVE: Groups of Models or Objects; Landscape. DECORATIVE: Space Relations; Light and Dark; Color; Frets; Flower Composition. CONSTRUCTIVE: Grilles.

BOOK 9.

SEVENTH YEAR.—FIRST HALF.

The Prang Elementary Course in Art Instruction is published in two separate editions, prepared to meet the varying conditions of the use of one or two books a year. In the edition providing for the use of two books a year, the books are designated as "No. 1," "No. 2," "No. 3," "No. 4," "No. 5," "No. 6," etc.; in the edition providing for the use of one book a year, the books are named "Third Year," "Fourth Year," "Fifth Year," etc. This Manual text has been especially prepared to meet the needs of both editions.

BOOK 9, PAGE 1.

SEVENTH YEAR BOOK, PAGE 1.

ILLUSTRATIVE PAGES.

FIGURE DRAWING. — William Morris Hunt. John La Farge.

Illustrations. — The drawings on this page are of especial interest, not only because of their own merit, but also because of the relations of the two great artists. In the early period of Mr. La Farge's art study, he was a student with William Morris Hunt at Newport, Rhode Island. They remained always warm friends.

William Morris Hunt (1824-1879) was born in Brattleboro, Vermont. His mother was fond of drawing and painting in water-colors, and, as a boy, he too found great pleasure in them, as well as in his favorite occupations of modeling in clay and carving in wood. Music and color gave him great delight, and he was especially happy in the enjoyment of the flowers and the fields.

He studied drawing while he was a schoolboy, and after leaving Harvard College he went to Europe, where he began to study art for his profession. He felt very strongly that correct seeing and honest drawing are the basis of good pictorial art, and he studied for some time with sculptors in Rome and in Paris, modeling in clay. He became a student at Düsseldorf, where he drew from antique casts and from the nude, becoming thoroughly familiar with the beautiful proportions and structure of the human figure.

Still later, in Paris, he was a pupil of the celebrated Couture, then at the height of his fame. Millet was then having a hard struggle with poverty, being little understood or appreciated. Hunt was greatly impressed by the simplicity and nobility of Millet's work, and took pains to make the acquaintance of the man in whose drawings and paintings he saw so much fine thought and feeling for beauty. The two men, while always very different from each other in talent and temperament, became warm friends. They spent much time working and studying together, discussing great books which they both loved, — particularly the Bible and Shakespeare, — and comparing their own thoughts about nature, art, and life. Hunt said afterward: "Millet taught me to see nature and gave me broad ideas of humanity. I felt with him the infinitude of art."

Though living and studying in the art atmosphere of Europe were delightful to a man of Hunt's temperament and genius, he decided to return to his native country and devote his life to the service of art among his own people. Boston was chosen for his home. Here he became one of the most eminent men of his time, and drew

about him circles both of devoted pupils and of deeply attached personal friends. One of his pupils kept notes of many of his wise and witty sayings about art and art study. His enthusiasm for art was unbounded. "For me," he said, "it is the only work worth doing, and there is no other play." He could not endure laziness. If an object in life were really noble and beautiful, it seemed to him a shame to grudge any necessary pains in working for it, and his sayings on this point had sometimes a shrewd humor that made them doubly impressive.

In his own work, Hunt never spared any pains. His finished paintings have an air of great freedom as well as vigor, strength, and fine thought, but he prepared for this freedom of final action by making innumerable preliminary studies and sketches from nature. There is in the Museum of Fine Arts at Boston a famous painting by Hunt called the "Girl at the fountain." The lifelike pose of the dignified and beautiful figure is something to be greatly admired and long remembered. But he did not paint the figure offhand; he made several studies in order to consider the different lines produced in such a figure by differences in the girl's attitude, or in the observer's standpoint, that he might choose the attitude and the standpoint which would best help express the beautiful idea in his mind. Reproductions of four of these preliminary sketches are shown on the drawing-book page.

Hunt left behind him some admirable landscapes. His paintings of Niagara Falls are justly famous. The most celebrated of his works are, however, those in which human figures hold a prominent place, and they are now in various public and private art galleries. His greatest work of all consisted of two great paintings made in 1878 on the walls of the New York State Capitol at Albany, but since destroyed. The space occupied by each was forty-four by fifteen feet in area. On one wall the subject of the artist's composition was the flight of Anahita, the Goddess of Night, before advancing day. The horses attached to the goddess's chariot were marvellously spirited in their action, and the effect of the whole was very beautiful. Hunt was so earnest in his desire to make the picture perfect that he not only made many experimental sketches of the galloping horses, but even modeled them in clay, to better fix in his mind the magnificent lines he wished to use in his finished composition. Casts of this modeled group are obtainable under the name of "The Flight of Night" or "The Flight of Time."

The other wall painting at Albany took for its theme "The Discoverer," a noble, commanding figure in a vessel surrounded by rolling waves, Faith, Hope, Knowledge (Science), and Fortune attending him in his advance toward a new world and a new life. A fine reproduction of the figure of Hope is given in Book 12, page 1; Eighth Year book, page 17.

John La Farge, the elder, father of the great American artist, was a French officer, who after various adventures by sea and land reached America in 1806. He became quite wealthy and settled in New York City, where **John La Farge**, his son, the artist, spent his early days, and where he received a legal and classical education. He was taught to draw in a rather minute, precise way by his grandfather, who was a miniature painter. When he went abroad, he found himself with an inclination to know something of painting as an accomplishment. With this thought, he entered the studio of the great French artist, Couture. Of his work there, Mr. La Farge says:—

“Mystay at the atelier was not a long one. It was mainly taken up with drawing from the model. My master not only approved of my work, but warned me of the danger of imitating his manner through the methods of his students. . . . The master’s advice was to study and copy the drawings of the old masters in the Louvre, and to postpone the practice of painting. . . . I made drawings from Correggio, Leonardo, and others. My greatest fascination, however, was Rembrandt in his etchings.”

Returning to New York, he grew more and more interested in painting, and found a master in William Morris Hunt. At this time Hunt was growing in appreciation and enthusiasm for Millet. La Farge and his master worked together, not always agreeing in method or theory, but always friends. The sketch-books of this time are many; they contain first thoughts and also carefully worked-out studies; mere records, sometimes of pose and gesture, or most minutely drawn studies from nature, showing a pre-Raphaelite tendency. He drew and painted assiduously; he made many drawings on wood for magazines and books, for wood engraving was the chief means of book illustration at that time. About the time of the Civil War he began to make his qualities as an artist felt. At this time he painted his fine figure of St. Paul, described by G. P. Lathrop in *Scribner’s Monthly*, 1881.

Among Mr. La Farge’s greatest works are the decoration of Trinity Church, Boston, and the painting of “The Ascension” in the Church of the Ascension, New York. Both these churches are easily accessible to visitors, being open nearly every day. His new work, which is to decorate the chancel of the Church of the Paulist Fathers in New York, represents “The Angel of the Sun.” The canvas is circular, and is to fill a space forty feet above the floor. Eventually the corresponding space on the opposite wall will have a painting of “The Angel of the Moon.” Three large windows now in place are to be removed to make way for new windows by La Farge. Each of these is to contain a single figure about seventeen feet high—the largest ever put into glass. Mr. La Farge is well known through his remarkable and individual work in stained glass. He uses in this work many methods that are peculiarly his own, to bring out the richness and opalescence of color that he so strongly feels.

In all his work his subjects are noble and uplifting. To nobility of subject he joins nobility of composition. He says, in "An Artist's Letters from Japan": —

"I have far within me a belief that art is the love of certain balanced proportions and relations which the mind likes to discover and to bring out in what it deals with, be it thought or the actions of men, or the influence of nature, or the material things in which necessity makes it to work. I should then expand this idea until it stretched from the patterns of the earliest pottery to the harmony of the lines of Homer. Then I should say that in our plastic arts the relations of lines and spaces are, in my belief, the first and earliest desires. And again I should have to say that, in my unexpressed faith, these needs are as needs of the soul, and echoes of the laws of the universe, seen and unseen, reflections of the universal mathematics, cadences of the ancient music of the spheres."

From one of his sketch-books the figure illustrated on the drawing-book page was taken,— a figure full of expression, although without features. The form is majestic and dignified, unmoved among the flying draperies which show the powers of nature, while back of it is illimitable distance and the blackness of darkness above. The placing of the figure in the space is worth careful study as well as the sweep of the lines, which gives such grandeur to the figure.



FROM ONE OF MR. LA FARGE'S SKETCH-BOOKS.

BOOK 9, PAGE 2.

SEVENTH YEAR BOOK, PAGE 2.

ILLUSTRATIVE PAGES.

LANDSCAPE WITH FIGURES AND ANIMALS. — Kobell. Millet. Le Rolle.

Illustrations. — It is the purpose of this page to show compositions of landscape and figures or animals, and simple direct treatment of them. There are here three distinct styles — by Kobell, by Le Rolle, by Millet. The illustration by Le Rolle is remarkable for the full, serene light. There is an opportunity to compare the treatment of near and distant figures, and also to study that of accessory objects in the drawings of Millet. The two illustrations at the left are examples of composition with oblique division of space; those at the right with horizontal division of space. Strength and simplicity with tender feeling are seen especially in the drawings of Millet.

Ferdinand Kobell (1740–1799) was a German landscape painter. He studied in Paris, and was afterward court painter and professor in the art academy of Mannheim. In 1793 he was made director of the Munich art galleries. The drawing reproduced here is in a collection at the Uffizi in Florence. It shows not only good feeling for composition, and a fine eye for beautiful effects of texture, distance, and light and shade, but also a delightful sense of sympathy with animal life. The low placing of the horizon line and the consistent drawing both of the landscape and the sheep combine to give a feeling of looking at the scene with the eyes on a much lower level than usual.

The beholder seems not to be standing at his full height; he sees the distant landscape at nearly the same angle as that at which the sheep themselves might see it; he looks the animals straight in the eye, in a friendly way, and sees the world, as it were, from their standpoint. Notice a similar effect of comradeship produced by the composition of Millet's "First Steps," where the observer feels himself just on a level with the kneeling father and the toddling baby.

Jean François Millet (1814–1875), who was born at Gruchy, France, was one of the great modern painters. He was born a peasant; his father and mother were peasants, and together they toiled in the fields. His father, however, found time to see the beauties of nature and to point them out to the boy, saying to him of the tree: "See how fine! Look at that tree — how large and beautiful! It is as beautiful as a flower"; or looking out of the window, "See!" he would say,

“that house half buried by the field is good ; it seems to me that it ought to be drawn that way.” He also modeled in clay and carved in wood for his son. His sister Emilie remembered once that, when François was a child of four or five, his father asked the little ones what professions they would choose when they grew up, and the boy replied, “ I mean to make pictures of men.” One of the professors of the high school at Versailles, who chanced during his vacation to meet and talk with young Millet, said, “ I have met a child whose soul is as charming as poesy itself.” And soon that child began to express himself, not only by words, but also by drawing. When he was eighteen years old he drew with a bit of charcoal, upon a white wall, the picture of a tree, or an orchard, or a peasant plodding home from work. They talked these drawings over at home, and decided that Jean should study to be an artist.

His teachers in Cherbourg could not help him much ; and in 1837, at the age of twenty-three, he went to Paris to the studio of the famous artist Delaroche. Millet was a fair, broad-chested peasant, with long light hair falling wildly about his shoulders. His fellow-students called him “ the man of the woods.” Diaz, Rousseau, and Corot, who afterward became such great artists, were among the pupils of Delaroche at this time with Millet. They are all now known as artists of the Barbison school.

Millet soon left the studio of Delaroche, and supported himself by sign painting, by painting portraits, and by making copies of the great pictures in the galleries. At the same time he read all that he could ; for though a peasant, he had been well educated. He read Virgil and Homer and Shakespeare, Walter Scott and Byron, Milton and Burns, Goethe and Schiller, Emerson and Channing. He also studied the old masters. He says : —

“ For a month the masters were my only occupation during the day. The early ones drew me by their admirable expression of gentleness, holiness, and fervor ; the great Italians by their knowledge and charm of composition. Fra Angelico filled me with visions ; and when I returned at night to my miserable lodging I did not want to think of anything but those gentle masters who made beings so fervent that they are beautiful, and so beautiful that they are good.”

Yet he kept in his heart the peasant life that he knew so well, and which was so full of humanity ; and in 1849 he painted his great picture “ The Sower.” He constantly heard what he called “ the cry of the earth,” and he portrayed it in his pictures of peasant life. He had a hard time to live, for he and his family at many times had not enough to eat.

In 1849 he left Paris and went to Barbison, taking a house of three rooms. He lived there with his family, and painted, happy in his privations, for he was

again in the midst of his inspiration, the peasant life of toil, — “the true humanity, the great poetry.” There he worked, gaining fame and moderate means, and there he died in 1875.

His great endeavor was to portray character through types rather than individuals. The peasant was to him a living being who, through his toil, symbolized humanity. Among his best pictures are “The Gleaners,” “The Sower,” “The Sheep Fold,” and “The Angelus.” It will be interesting to pupils to make collections of his pictures. He was known, however, as well by his drawings as by his paintings; and some of his best drawings have been reproduced for these drawing-books, that they may stand as an inspiration to the pupils.

He drew the digger, the sower, the haymaker, the thresher, the gleaner, the shepherdess, the goose girl — all phases of peasant life and labor attracted him.

Millet excelled in draughtsmanship, in mastery of form, and in the expression of tender and profound feeling. He sketched with great rapidity. On returning from a walk he would frequently cover many sheets of paper with sketches of what he had seen. He had a motto most expressive of him: “*Il faut pouvoir faire servir le trivial à l'expression du sublime; c'est là la vraie force.*” “Make the trivial serve in the expression of the sublime. That is true strength.” He made such sketches rapidly to obtain motives for his pictures; but when he had determined on the motive, he drew with very great care, working very slowly.

“This is why we remember so easily the arrangement and composition of such a one whom we call a master — that is why the ‘silhouette’ of a Millet against the sky, why his placing of outlines within the rectangle of his picture, makes a different, a final, and a decisive result, impressed strongly upon the memory which classifies it, when you compare it with the record of the same story, say, by Jules Breton. It is not the difference of the fact in nature, it is not that the latter artist is not in love with his subject, that he has not a poetic nature, that he is not simple, that he has not dignity, that he is not exquisite; it is that he has not found in nature of his own instinct the eternal mathematics which accompany facts of sight. For, indeed, to use other words, in what does one differ from the other? The arrangement of the idea or subject may be the same, the costume, the landscape, the time of day, nay, the very person represented. But the Millet, if we take this instance, is framed with a larger line, its spaces are of greater or more subtle ponderation, its building together more architectural. That is to say, all its spaces are more surely related to one another, and not only to the story told, nor only to the accidental occurrence of the same. The eternal has been brought in to sustain the transient.” — JOHN LA FARGE.

The great art principle of Millet was that the picture must be a whole and must give one single impression. He sought then for a fundamental note for his

picture — determined on the central thought, and then made everything contribute to that thought. He selected and rejected details, and he carefully composed his pictures. There was no haphazard work; it was all carefully thought out. The figure was the main thing; nature was the frame, for the life of the peasant is in nature, but that nature was chosen that would be in harmony with the thought of the picture. The point to which he never ceases to return is **character**, and this is expressed by careful selection of costume, attitude, gesture, features, and of the landscape accessories, eliminating everything that would detract from the character sought. Moreover, he always worked for a type, — the ideal, — believing it to be more true than the real, just as Aristotle said poetry was more true than history.

The Examples. — Millet, like Hunt and other masters of painting, sometimes worked direct from nature, and sometimes tried experiments in the composition of masses and lines, lights and darks. His drawings in charcoal, pen and ink, and pastel are now treasured in various public and private art collections.

Notice in the drawing of the shepherdesses how a few slight touches of shade and shadow bring out the modeling of the figures, making them real and substantial under the heavy, plain draperies; thus the touches of shade on the cape over the right shoulder and side of the nearer girl indicate perfectly the position of her right arm underneath, the bend of the elbow, and the direction of the forearm. So the mass of shade on the nearer portion of the other girl's gown shows how she is stretching one foot out behind her as she leans forward on the bank to watch the dog chasing a stray sheep back to the flock. Notice how beautifully the picture space is divided between light and dark masses, and how the contrast of light with dark gives spirit and life to the effect of the whole. The light-colored figure is set off by the dark mass of the bushes; the darker, shadowy figure stands out strong and vigorous against the light open space of the distant field.

“The First Step” is thoroughly characteristic of Millet's genius. He saw in the peasant's laborious life not labor alone, but also the simple, homely pleasures of family affection. He had several children of his own, and often made sketches from them as well as from the babies of his country neighbors. He delighted in their companionship. This composition shows in an admirably effective way the beauty gained by emphasizing the most important features of a picture, and leaving the rest subordinate. The heavy tools which the father has been using in his little garden, the rough fence, the fruit trees, the cottage home, — all are sufficiently indicated to suggest the whole story of plodding industry and humble comfort, though in a faint and sketchy way. The father, his sinewy arms toughened by toil; the mother,

lovingly intent on the little one ; and the chubby baby just learning to walk, — these are the essentials, and to these Millet devoted his chief attention.

“A little way, more soft and sweet
 Than fields aflower with May,
 A babe’s feet venturing, scarce complete
 A little way.

“Eyes full of dawning day
 Look up for mother’s eyes to meet,
 Too blithe for song to say.

“Glad as the golden spring to greet
 Its first live leaflet’s play.
 Love, laughing, leads the little feet
 A little way.”

— ALGERNON CHARLES SWINBURNE.

Henri Le Rolle is a French artist of to-day. Diffused light, — clear, luminous, and silvery — is a special quality of his pictures. They contain reflected light, and shadows too, that make one feel the atmosphere. He has a remarkable perception of the pictorial, and his pictures are very carefully composed. Many of his themes are taken from peasant life and from the scriptures. The original painting of this “Shepherdess,” sometimes called “In the Country,” is in the Luxembourg Gallery at Paris. Another famous painting by the same artist, called “By the Riverside,” is in the Museum of Fine Arts, Boston.

The effect of distance is beautifully shown in this picture of the shepherdess ; the strong, dark masses of the nearer tree trunks have much to do with this effect, making the delicate, hazy drawing of the field seem more vague by contrast with their own decided accent. The tree trunks divide the picture-space pleasantly for the eye. They also carry the thought up in the direction of their growth, and suggest to the imagination great spaces of open sky overhead. Light and shade tell very clearly the rough, woolly texture of the coat of the nearest sheep. Some of the flock are too far away for such texture to be evident. A beautifully lifelike effect is given to the browsing animals by means of slight variations in their outlines *almost* alike ; the forward-reaching necks differ just enough in direction to give us a feeling of motion in the individuals, as we look first at one and then at another. The dignified, womanly figure of the shepherdess moves tall and serene against the background, with an unobtrusive but beautiful halo effect about its dark outline. This exquisite effect of light is very often to be seen in real life, but comparatively few people notice it, and fewer still have ever put it in a picture.

THE SUBJECT OF REPRESENTATION.

In the earlier books of this series emphasis was put upon the interesting aspects of the things studied rather than on the pupils' methods of representing them. It is assumed now, in the higher books of the series, that pupils who have advanced to this grade will have acquired habits of sympathetic observation, both of objects and of pictures.

The instruction, from this point onward, puts steadily increasing emphasis on the development of individual power through wise selection of motives, through the expression of beauty of forms and values in composition, and through the mastery of skill in the artistic rendering of effects of perspective, texture, light and shade, color and atmosphere.

BOOK 9, PAGE 3.

SEVENTH YEAR BOOK, PAGE 3.

REPRESENTATION.**NATURE. — Corn. Life and Growth.****ART. — Selection. Choice of Aspect. Composition. Rendering.**

[The pupil selects a stalk of corn and sketches it, arranges it to present the most beautiful aspect, and draws it in the book, striving to express the freshness of the plant, and seeking for beauty in the rendering.]

Sturdy Growth. — A stalk of growing corn is a vigorous example of plant growth, and in most places it would not be difficult to obtain some fine specimens at the proper time of year for the pupils to study and draw.

The leaves, being of good size, definite in character, strong in growth and yet graceful in their curves, furnish a breadth of effect which is sometimes not as apparent in other plants.

“The corn, the corn, the beautiful corn,
 Rising wonderful, morn by morn ;
 First, scarce as high as a fairy’s wand.
 Then, just in reach of a child’s wee hand ;
 Then growing, growing, tall, brave, and strong ;
 With the voice of new harvests in its song ;
 While in fond scorn
 The lark outcarols the whispering corn.”

— DINAH MARIA MULOCK CRAIK.

Preparation for the Lesson. — If the cornstalks can be obtained, they should be cut the day before they are needed, kept in water and in a cool place until just before the lesson. If a stalk is attempted similar to that of the illustration, it would be well for the pupils to make two sketches within the space on drawing-book page 3, — one at the left to fix the position of the leading lines, the other a more finished drawing based upon the same or similar lines. By so doing the proportion of the whole will be carefully considered, and only so much be attempted as can be placed upon the page with good effect.

If desired, a section or part may be drawn (not necessarily the top), and a good effect produced by allowing from three to four inches for the length of a leaf. If the ear of corn is drawn, do not have the husks open to reveal the kernels. Remember that this is a study of general growth, and the effect should be kept simple and broad as possible. An ear of corn by itself makes a good subject. In the high

light the details of the kernels should be nearly, if not quite, lost, their simple shape and character showing in the half light, and then being lost again in the shade.

Notice in the illustration how beautifully the bending leaves repeat similar curves, the one above the other, making an admirable motive for decorative treatment, either in an upright oblong or turned so as to repeat horizontally. Place a small "finder" — an oblong of paper with an oblong opening in this case about one inch by three inches — over the three leaves at the right of the stalk and study the effect. Place a shorter and slightly wider "finder" over the top of the stalk, including the top and a part of the three leaves, and see what a good arrangement can be made. This illustration on the drawing-book page may prove valuable as a help in composition, as well as suggestive for treatment from nature.

"Then while I pause, my fieldward-faring eyes
Take harvests, where the stately corn-ranks rise,
 Of inward dignities
And large benignities and insights wise,
 Graces and modest majesties.
Thus, without theft, I reap another's field ;
Thus, without tith, I house a wondrous yield,
And heap my heart with quintuple crops concealed.
Look, out of line one tall corn-captain stands,
Advanced beyond the foremost of his bands,
And waves his blades upon the very edge
And hottest thicket of the battling hedge."

— SIDNEY LANIER.

Teachers sometimes say that they have no chance to get sprays or flowers for a drawing lesson ; perhaps they overlook the fact that the humble weeds of the field or the wayside are often better than garden plants or the forced products of the greenhouse. A trolley ride after school, on the day before the lesson, just beyond the city limits, will often lead to a wealth of bloom. One or two pupils to do the cutting and carrying may be helpful. While procuring material for the art lesson, subjects for nature study and botany will be at hand. In some localities a day or a part of a day is given to such excursions, and known as a "field day," the pupils gaining much by their study of nature "in the open."

Nearly all cut plants or flowers, wild or cultivated, will wilt at first, but, if cut near sundown and kept over night in a cool place, like a cellar floor, with the stems deep in water, they will revive by the next morning, and not only regain their original freshness, but keep it for some time.

Other Plants Suggested. — Among other plant forms of good size and interesting to study are the sunflower, mullein, burdock, and many large weeds.

The rubber plant, tobacco plant, and some of the small palms are valuable as examples of vigorous growth. Nature distributes a quantity of beautiful material through the woods, the meadows, the roads, and lanes. Eyes must be opened to see, appreciate, and select the best.



If this drawing-book is used in the spring instead of the fall, it may be well to reserve this page until large stalks of some kind can be obtained, or twigs with large leaves. The leaves of the horse-chestnut are very fine, being large and palmated.



As poets and writers find fruitful themes in the various seasons, the different aspects and products of nature, the following quotations may be suggestive :—

“Horse-chestnut, foremost of the wood
To dare his lengthening germs protrude,
Dark, clammy, hard, prepared the first
To hear the enlivening call, and burst,
With foliage cleft and spiral bloom,
The cerements of that living tomb.”

— BISHOP MANT.

“When at last the summer ripens,
And the harvest is gathered in,
And food for the bleak, drear days to come,
The toiling people win.”

— CELIA THAXTER.

“And he gave it for his opinion, that whosoever could make two ears of corn, or two blades of grass to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together.” — JONATHAN SWIFT.

“The varying year with blade and sheaf
Clothes and reclothes the happy plains.”

— TENNYSON.

“And thus let Art and Labor’s train
Their glorious course pursue,
And blade, and ear, and perfect corn,
The rolling year renew.”

— GEORGE LUNT.

THE STUDY OF COLOR.

Colors of Autumn. — It seems well in the fall of the year to give time to color study, for nature is then dressed in her gayest hues. The scales of color from light to dark are then full and rich, while the scales from one color to another, as from red to yellow, are unsurpassed.

“ Arrayed in its robes of russet and scarlet and yellow,
Bright with the sheen of the dew, each glittering tree of the forest
Flashed like the plane tree the Persians adorned with mantles and jewels.”

— JOHN G. WHITTIER.

The Three Colors. — If any one were to tell the three most distinctive colors, undoubtedly the reply would be, **yellow, red, and blue**; for these colors do not at all partake of each other's color nature. Therefore, the first color study is of *yellow, red, and blue*, to be sought in flowers, leaves, and fruit, in plumage, and in the sky, in fabrics, in decoration, and in pottery. Celia Thaxter has made a yellow, red, and blue study in her poem called “The Double Sunflower.”

“ But the double sunflower bloomed apart, far prouder than the rest,
And by his crown's majestic weight he seemed almost oppressed.
He held himself aloof upon his tall and slender stem,
And gloried in the splendor of his double diadem.

“ All clothed in bells of lovely blue, a morning-glory vine
Could find no friendly stick or stalk about which she might twine;
And prone upon the ground near by, with blossoms red as fire,
A scarlet runner lay for lack of means to clamber higher.

“ They both perceived the sunflower tall who proudly stood aside;
Nothing to them was his grand air of majesty and pride;
With one accord they charged at him, and up his stalk they ran,
And straight to hand their red and blue all over him began.

“ Oh, then he was magnificent, all azure, gold, and flame!
But, woe is me! an autumn breeze from out the northwest came;
With all their leaves and flowers the vines about him closely wound,
And with that keen wind's help at once they dragged him to the ground.”

The three colors that follow yellow, red, and blue are those that each partake of the nature of two of the first.

“ Saffron and sapphire and red
Waved aloft to their sisters below.”

— GEORGE MEREDITH.

Six leading colors.— Thus, **orange** inclines to yellow and to red; **green** inclines to yellow and to blue, and **violet** inclines to red and to blue, as J. G. Holland says:

“To atmospheres of red and blue,
That blent in violet aureole.”

Seeking the relationship of these six colors, they arrange themselves as Red, Orange, Yellow, Green, Blue, Violet:

“First the flaming red
Sprang vivid forth; the tawny orange next,
And next delicious yellow; by whose side
Fell the kind beams of all-refreshing green.
Then the pure blue that swells autumnal skies,
Ethereal play'd; . . .
While the last gleamings of refracted light
Died in the fainting violet away.”

— JAMES THOMSON.

Intermediates.— After these come colors of still closer relationship which bear double names showing whence they spring: **red orange, yellow orange, yellow green, blue green, blue violet, red violet.** These colors are called **intermediate colors** and arrange themselves readily with the six leading colors mentioned above so that there will be a color unit of twelve colors. These colors are frequently mentioned by their symbols—the initial letters of their names, thus R, RO, O, YO, Y, YG, G, BG, B, BV, V, RV, showing a continuous flow of color. If the colors of this unit be considered as arranged in a circle instead of a straight line, the flow will be continuous around the circle; for the red violet at the end of the line is closely related to the red at the beginning of the line, which it would meet were the line made a circle.

Broken colors.— In the fourth year **broken colors** were introduced in the regular order of color study, for the shades of the six leading colors were given. The shades of color, as well as the different grays, are *broken colors*. In the fifth year broken colors were studied still further in the shades of the intermediate colors. In the sixth year a special study of grays was introduced. These grays range themselves readily under the color names already given. They are **red gray, orange gray, yellow gray, green gray, blue gray, violet gray.** These take various names in literature, *red gray* being frequently spoken of as russet.

“When her fragrant fruit the orchard shed,
They helped to gather the apples spread
On the soft grass,— yellow, russet, red.”

— PHOEBE CARY.

Orange gray is very well known by its familiar name of brown. If you study the color in the "great ripe nuts, kissed brown by the July sun," you will feel the yellow and red and gray.

"Yellow and red were the apples,
And the ripe pears russet brown;
And the peaches had stolen blushes
From the girls who shook them down."

— JOHN G. WHITTIER.

Yellow gray has also the name of citrine. Yellow has so much the color of light and of the glint of gold that it is often expressed by gold.

"This lovely mountain-side,
In faintest purple dyed,
And golden gray."

— EDMUND GOSSE.

Green gray is the same as olive. The color, in its tints, is like that of the leaves of the olive tree and of the poplar.

"Hard by a poplar shook away,
All silver green with gnarlèd bark."

— ALFRED TENNYSON.

Blue gray is frequently called slate color, a name used largely in connection with fabrics.

"Down through the blue gray thyme, which roofs their courses with odor,
Rivulets, gentle as words from the lips of beauty, are flowing."

— LORD HOUGHTON.

And finally, *violet gray* may be expressed by heliotrope, although heliotrope is perhaps slightly redder than violet gray. A most beautiful transition of color through the day is given in the poem "Day and Night."

"From gray of dusk, the veils unfold
To pearl and amethyst and gold —
Thus is the new day woven and spun :

"From glory of blue to rainbow-spray,
From sunset gold to violet gray —
Thus is the restful night re-won."

— FIONA MACLEOD.

This study of various grays brings us to *gray* itself, in which all the colors lie as in mist.

“And gray clouds sailing slow before
A wind that will not stay.

“Built of all colors of lovely stones, —
A stair up into the sky.”

— GEORGE MACDONALD.

Standards. — Pupils should gain their ideas of the standards of these colors, and their tints and shades, from colored paper.¹ At this stage of the work pupils should have become quite familiar with the six leading colors and the six intermediates with their tints and shades. It will be remembered that the various degrees of a color, from light to dark, are called **tones**, the tones lighter than the normal (the full, pure state of a color) being called **tints**, and the tones darker than the normal being called **shades**. A color and its tints and shades — the tints placed above the normal and the shades below — form a **scale**. Scales of all the colors — positive colors and grays — from lighter to darker should be made in colored paper for the purpose of developing clear color perception. They may also be studied in nature, in fabrics, and in pottery. It is very interesting, as well as admirable color training for pupils, to form these color scales first in colored paper, and then in bits of textiles, or to select a beautiful colored object — as a feather, a spray of leaves, a flower — and discover the scales of color in the object, and reproduce those scales in colored paper.

The figures in historic ornament and in design may also be carried out in colored paper, as suggested in the several exercises on these subjects through this Manual.

Individual Colors. — Each strong individual color should, however, have its special study. Color days or color weeks, in which one particular color rules, or days in which yellow, red, and blue, or orange, green, and violet prevail, are a special delight to pupils, while at the same time their color perception is being strengthened. On such color days (it may be an orange day) there would appear on the cabinet a bit of orange pottery, girls would wear an orange bow and boys an orange tie, coreopsis and other brilliant orange flowers — nasturtiums show the tints and shades in a wonderful way — would be placed on the teacher's desk, and some oranges near by might finish the scheme. The pupils' work would be in borders of orange, in scales of orange, and in harmonious arrangements.

¹ See the color manual “Suggestions for Instruction in Color.” Published by The Prang Educational Company. The references to drawing-book pages in the color manual do not apply to the books of the Elementary course.

Colored paper furnishes standards of color to be studied and arranged for the development of color perception and color expression ; the providing of water-colors as school material adds another most responsive means of color expression.

Water-colors may be used for work in Representation, in Composition of color harmonies and of landscape, and in Decoration.¹ In water-color, the use of three colors only — yellow, red, and blue — has much greater educational possibilities, develops more individual power, and gives finer results in a direct way than the use of a greater number of colors. See **Water-Colors**, pages 59–62. The printed water-color outlines of historic units give a remarkable opportunity for color composition. As the outlines are all ready, the pupil can give himself wholly to his expression of color harmony.

Fine Thought. — The Color Manual furnishes suggestions concerning the various colors and tones to be used in this year and the method of study, together with poetical quotations to enhance the delight of color study. Other quotations are added here.

Red. — The children will be eager to continue their search for references to color and will seek for examples in descriptions of flowers.

“The red pennons of the cardinal flowers
Hang motionless upon their upright staves.”

— JOHN G. WHITTIER.

It will be of especial value to them now in their color training to note the colloquial color names of different tones of red.

“The peach ripens to a rosy bloom.”

— S. H. WHITMAN.

Call the attention of the pupils to the use of the same color name in different color senses. For instance, in the two quotations that follow, the word *pink* is used for two very different colors — both colors, however, being tints of red violet of different hues rather than tints of normal red — the foxglove inclining very much more to violet in color than the apple-blossom.

“With its dainty blossoms, pink and white,
The apple blooms for our delight.”

— JAMES THOMSON.

“The tall pink foxglove bowed his head.”

— LORD HOUGHTON.

¹ Mr. Ross Turner gives valuable suggestions in his “Handbook to accompany a color scheme for the kindergarten.” Published by The Prang Educational Company.

Then there are such different color names for different hues of red — **crimson** being a red that has a violet hue — that is really **red red violet**.

“ And where the woodbine shed upon the porch
Its crimson leaves, as if the year stood there
Firing the floor with his inverted torch.”

— READ.

And **scarlet** is the name for the red that has an orange hue — that is really **red red orange**.

“ In scarlet clusters o’er the gray stone wall
The barberries lean in thin autumnal air,
Just when the fields and garden-plots are bare,
And ere the green leaf takes the tint of fall,
They come, to make the eye a festival.”

— THOMAS BAILEY ALDRICH.

Burroughs speaks of finding the columbine growing from a seam in a steep rock. He calls it

“ A jet of foliage and color, shooting out of a black line on the face of a perpendicular mountain wall, and rising up like a tiny fountain, its drops turning to flame-colored jewels that hung and danced in the air against the gray, rocky surfaces.”

Orange. — Once known, it is impossible to mistake this brilliant color, or to pass it by unnoticed. It makes its glowing presence known in many gay blossoms and berries, and gives a hint of its beauty in bird and butterfly,

“ The loveliest of lovely things
A butterfly with orange wings,”

in the dazzling tones of sunset, and the changing hues of the fire.

“ Purple the narrowing alleys stretched between
The special shocks, a purple harsh and cold.
But spotted, where the gadding pumpkins run,
With bursts of blaze that startle the serene
Like sudden voices — globes of orange bold,
Elate to mimic the unrisen sun.”

— CHARLES C. D. ROBERTS.

Lowell tells of the

“ Gold of the reddening sunset,”

and that

“ Here dozed a fire of beechen logs, that bred
Strange fancies in its embers golden red.”

These quotations seem particularly apt when we think how yellow and red, playing together, make orange. And then there is in the bitter-sweet the presence of the two colors.

“ Now overhead,
Where the rivulet loiters and stops,
The bitter-sweet hangs from the tops
Of the alders and cherries
Its bunches of beautiful berries,
Orange and red.”

— ARCHIBALD LAMPMAN.

Yellow. — The gay tones of yellow are described in many a pleasant verse : —

“ Upon the lawn lie floods of yellow light,
And yellow puff-balls, downy, soft, and round,
The dandelions, make the greensward bright ;
Upon the lawn lie floods of yellow light,
Above are yellow buttercups in flight,
Gay sparks of light that flicker from the ground ;
Upon the lawn lie floods of yellow light,
And yellow puff-balls, downy, soft, and round.”

— HANNAH PARKER KIMBALL.

And the yellow is very likely to pass into yellow green, as in the lines which follow : —

“ Down, deep down in the blossoming grass,
That rustles dreamily all day long,
And only the yellow butterflies pass
And the green-gold bees with their hum-drum song.

“ Golden buttercups lean above,
And daisies white with hearts all gold,
Golden lily-bells nod their love,
And the golden sunshine all doth fold.”

— *Baby Bobolink's Cradle.*

Green. — The search for reference to color in literature is an unconscious training in color discrimination. The children cannot fail to feel the quality of this color, —

“ For green is to the eye, what to the ear is harmony, or to the smell the rose.”

The pupils will also like some reference to the shades and to the variations in hue.

“But still, and green, and tall, and stately,
On the river’s winding shores
Stand the occidental plane trees.”

— JOHN G. WHITTIER.

“In spring they lie one broad expanse of green,
O’er which the light winds run with glimmering feet;
Here, yellower strips track out the creek unseen,
There, darker growths o’er hidden ditches meet;
And purple stains show where the blossoms crowd,
As if the silent shadows of a cloud
Hung there becalmed, with the next breath to fleet.”

— JAMES RUSSELL LOWELL.

And with these come the green grays, so soft and restful.

“Hard by a poplar shook away,
All silver-green with gnarled bark.”

— ALFRED TENNYSON.

Blue and Violet.—The children may make special search for references to the tones of blue and of violet.

“Blue sky and bluer sea, And harebell at my feet, Blue yet more utterly, Why is your hue so sweet?	“What fibre of my soul Thrills at your loveliness? Why should a tint control My heart like a caress?
---	---

“Blue sky and bluer sea,
And harebell at my feet,
How can mere color be
Beyond all telling sweet!”

— GEORGE MACDONALD.

“There breathe your balm, sweet violets!
Dear twilight flowers whose lovely hue,
More tender than the tenderest blue,
Yet not as purple sad, appears
Most like transformèd tears.”

— HARRIET MCEWEN KIMBALL.

“Far in the west sinks down the sun
On bars of violet and gold.”

— LEWIS MORRIS.

They will be doubly delighted if they can find reference to two colors in association, or playing one into the other, as blue into green or into violet.

“Where, like a shoaling sea, the lovely blue
Played into green.”

“Turquoise, in blue stars set, with iolite,
That violet-tinted gem which somehow hides
In Indian hills. Azures and purples bright
Play daintily across its sparkling sides.”

— EDWIN ARNOLD.

“At its short, brave tips,
Full-clustered flowers of vivid purple blue,
Yet bud-like, with shut lips.”

— WILLIAM CULLEN BRYANT.

The purple, too, which lies between the violet and the red, and which is a peculiarly rich hue of violet red violet (VRV) is a favorite with the poets. This color name covers, however, many hues. Blue blue violet (BBV) was meant by the purple blue in the verse above. Lowell also used purple blue :—

“Far up on Katahdin thou towerest,
Purple blue with the distance and vast.”

The varying hues to which the name purple is applied will be seen in the lines quoted below.

“Lilac bushes
That shook their purple plume,
And when the sash was open
Shed fragrance through the room.”

— JEAN INGELOW.

“And near the river's trembling edge,
There grew broad flag-flowers, purple pranked with white.”

— SHELLEY.

“The ash her purple drops forgivingly
And sadly.”

— JAMES RUSSELL LOWELL.

Color Contrasts.—It is hoped that the work of this grade will lead to the study of beautiful contrasts of color. For these, many suggestions for color schemes will be found in nature. It will be necessary, however, in carrying out any such schemes in colored paper to remember that there are usually intermediary effects of black, white, or gray, or of varying tones and hues of the contrasted colors, which soften and harmonize the two principal colors in the scheme.

It is possible to make quite a scale of contrasts with any color. Green is contrasted through the color unit in the quotations below. But varying hues of green must be imagined, to harmonize with the different colors.

“ Quiet farm-fields, green and low,
And bright with blooming clover.”

— JOHN G. WHITTIER.

“ Scarlet tufts
Are glowing in the green, like flakes of fire ;”

— WILLIAM CULLEN BRYANT

Bryant here refers to the painted cup.

“ Oranges bright
Like golden lamps in a green night.”

— ANDREW MARVEL.

“ Once with a landlord wondrous fine
A weary guest I tarried,
A golden pippin was his sign,
Upon a green branch carried.

“ Mine host he was an apple tree,
With whom I took my leisure,
Fine fruit, mellowed juicily,
He gave me of his treasure.”

(*Translation from the German.*) — EDWIN ARNOLD.

“ A little marsh plant, yellow green,
And pricked at tip with tender red.”

— ALGERNON SWINBURNE.

“ Where, like a shoaling sea, the lovely blue
Played into green.”

“ Come hither, hither, pretty fly,
With the pearl and silver wing ;
Your robes are green and purple,
There's a crest upon your head.”

— MARY HOWITT.

Whittier speaks of “ the birch's pale green scarf,” and in another place gives the following harmony with gray.

“ A gray rock, tasseled o'er with birch,
Above the waters hung.”

All these and many other beautiful contrasts can be used in schemes of color for dress, for textiles, for drapery, for the furnishing of a room, and for ornament.

REPRESENTATION.**NATURE.**—Trees. Form. Life and Growth.**ART.**—Selection. Choice of Aspect. Rendering.

[The pupil sketches trees, studies the examples on the drawing-book page for suggestions as to rendering, chooses a tree, decides upon its most beautiful aspect and draws it in the book, expressing the characteristics of the tree and seeking for beauty in the rendering.]

The Study of Nature.—One needs constantly to go to nature to study “values,” or the relation of one part of the landscape to another, to study skies, mountains, forests, and the broad plains; to view these at different times of day and under different conditions. Yet it should be borne in mind that studies alone, however truthful and accurate, are not enough in themselves. Their product should also be a greater appreciation of the beautiful and a better command of the language of self-expression in terms of Art. A sketch or even a finished drawing may be correct, and yet entirely devoid of æsthetic feeling. When we can combine good drawing with artistic quality the result is a delight to all.

Change of Aspect.—In drawing trees the pupils should be led to see their different aspect under different conditions. Sometimes when the sun is low behind a tree, with the tree between the eye and the sun, the tree (or even masses of trees) will appear of one tone of shade or color. When the sun is high the light is quite diffused, the shadows are short, and effects are not as striking as earlier or later in the day.

If the sketch is a single tree, then that should be the point of interest, with the foreground and distance subordinate to it.

When trees are viewed at a distance their form will be definite as a mass but details of light and shade or gradations of color will be lost. This is well shown in the sketch of the two apple trees on the upper right-hand part of the drawing-book page. The nearer apple tree at the bottom of the page shows that the tree is in a strong light which falls quite directly from above.

Notice that the shade from the masses of foliage is underneath, the masses are not very decided, so the general effect of the tree is simple and flat. If it were toward sundown, and the light were at either side of the tree, the tree would show shade away from the light and the shadows on the ground would be strong and long. The simpler and flatter the treatment is kept, the better the effect. When shade

and shadow definitely call for recognition, they should be put in broadly and then let alone.

An artist, in working out of doors, chooses the same hour each day and as nearly as possible the same conditions of light and atmosphere. He works on one study or picture only a short time or while the effects remain about the same ; if, on the contrary, he worked all day on one subject, on the same paper or canvas and from the same point of view, he would have a set of shadows following the course of the sun. An experienced artist can, it is true, block in his shadows and general effects hastily, working on later from memory and from knowledge of the way the scene should look : but, as a rule, it is safer for serious study of out-of-door effects for every one to paint or draw only a little while in the same spot on the same day. Some artists, recognizing this fact, and desirous of improving the opportunity of working, keep several sketches going at the same time, and either finish them in the studio or return at the same hour of the day to the same spot for their completion.

“One man there was who had unconsciously struck a new note in landscape painting. Night after night it was his habit to linger at the window, wondering over the mystery and suggestiveness of the night. When the moon was shining there was no sleep for him. What simple, flat masses of groves and trees! What far stretches of distance! And how wondrously the whole was enveloped in atmosphere! In time came his discovery of the pearly light of the early morning, when the colors of the opal are scarcely less beautiful than the dewy freshness of the hazy distance, or the soft moist green of the foreground and tree. Corot was wont to rise in the summer at three o'clock in the morning, take a French breakfast of coffee and roll, and work out of doors until seven. In these hours he discovered many of the secrets of light and *plein air* painting which were withheld from those who knew nothing of the day in its early dawning. Here was great gain. Moreover, his technique was, like himself, simple, large, *naïve*.”—HELEN M. KNOWLTON in *Modern Art*.

Material for Composition.—The trees on page 4 of the drawing-book may be used as the principal motives in compositions ; such study and treatment will prove interesting and also valuable in helping the pupils to select good positions when sketching out of doors. It is not enough to sketch “what you see,” when, by taking a better point of view, the composition of the sketch may be greatly improved.

Encourage the pupils to add to their portfolio, or scrap-book collection, photographs and pictures of graceful and characteristic trees. See Manual, Part IV., for added suggestions in this direction.

Now that the camera is so universal, it should not be a difficult matter to secure good examples. By such means individual trees may be studied, their

growth and characteristics noted. Such examples may be used as motives for compositions and translated either into simple outline with ink or pencil, or carried out in solid mass in ink or water-color. In all such cases, the characteristic form against the background should be preserved, but without any effort to express light and shade. After the study of photographs and illustrations, have occasional memory sketches.

The tree on the bank at the upper part of the drawing-book page, would lend itself admirably to simple treatment in ink or water-color. It may be at the left of a horizontal or a vertical oblong, with land or hills suggested in the distance to the right, with an expanse of water for the middle distance and foreground. In ink, one or two tones or values may be used. In water-color, a scheme of pale blue, three greens, and brown would be effective: pale blue for the sky and water, blue-green for the distance for the mass of the tree foliage, and a warmer green for the bank; brown for the tree trunks. Suggest the use of only a few tones, but let the pupils study how and where these may be placed to the best advantage so as to give the best effect. The washes should be flat, clear, and not too heavy. See suggestions for the use of water-color, pages 59 and 62.



Preparatory Study.— On no account depend entirely upon the drawing-book illustrations, valuable as they are, as helps to good technique. Strive, if possible, to have a “field day” precede the drawing upon drawing-book page 5, that the pupils may have added material. Different textures should be treated differently, and by careful and sympathetic study the pupils will come to feel this and express them properly.

Freedom of Expression. — Care should be taken not to oppress the pupil with too rigid or conventional ideas as to what constitutes good technique. As far as possible he should *express himself*, yet should be helped, and guarded against mannerisms. The touch that would give the glint and glitter on glass or on a tin pan would be quite out of place on a tree trunk or any rough substance. Sometimes very smooth bark will show strong light in some places, but, unless a tree trunk be the object of study, do not make much of this light. Sometimes strong lights and darks may be shown, with here and there points of accent to give character to the whole.

Growth, not Results, Desired. — The pupils should realize that, while their efforts cannot equal the work of masters, they may be in the right direction, and so give promise of excellence in the future.

Words from the Artists. — A. Wallace Remington, the English landscape painter, says: —

“Landscape painting offers a series of problems to which there is no parallel amongst those which have to be attacked by the figure painter, and some of which in point of difficulty and complexity put any of the latter into the shade.”

It is, Remington thinks, important that this should be better recognized, because, although landscape, the latest development of pictorial art, has gradually taken a higher and higher position in public estimation, it is still given a sort of secondary rank.

An English writer, speaking of Remington’s work, says: —

“Mr. Remington makes a large number of pencil studies, and seizes every opportunity of taking rapid color notes of transient effects. Whether on his walks or on his bicycle, in the train or on the *diligence*, he is never without his brush, always observing, studying, and transcribing nature’s subtlest changes. He believes that this perpetual training of eye and hand, and this constant addition to the storehouse of the memory, prepare the artist to attack with greater confidence and surety the deliberately chosen subject.”

Fine Thoughts and Poets’ Pictures. —

“Memories of things beautiful are the seeds from which the best invention springs. A designer moves us only when he recreates the intensities of nature in her sweetest and most pathetic moods. Our supreme aim should be the expression of the beautiful.” — T. R. SPENCE.

“Nature as nature, no matter under what form, human, animal, vegetable, inanimate, with her irregularities, trivialities, variations, has her *raison d’être*.

“Once understood, one loves her: she becomes an endless source of enjoyment.” — HIPPOLYTE TAINE.

“Vigor is expressed in every position of the healthy oak; it has vigorous youth, vigorous prime, and vigorous old age.”

“A huge Oak dry and dead,
Still clad with reliques of its trophies old,
Lifting to heaven its aged, hoary head
Whose foot on earth hath got but feeble hold.”

— EDMUND SPENSER.

“And in the meadow tremulous aspen-trees
And poplars made a noise of falling showers.”

— ALFRED TENNYSON.

“When the broad Beech its ample shade displays
The gray smooth trunks distinctly shine
Within the twilight of their distant shades.”

“Again the blackbirds sing; the streams
Wake laughing, from their winter dreams,
And tremble in the April showers
The tassels of the maple flowers.”

— JOHN G. WHITTIER.

“Wild cherry boughs above us spread
The whitest shade was ever seen.
And flicker, flicker came and fled
Sun-spots between.”

— JEAN INGELOW.

“The ash, that courts the mountain air,
In all her painted blooms array'd,
The wilding's blossom blushing fair
Combined to form the flowery shade.”

— JOHN LANGHORNE.



BOOK 9, PAGE 6.

SEVENTH YEAR BOOK, PAGE 6.

REPRESENTATION.

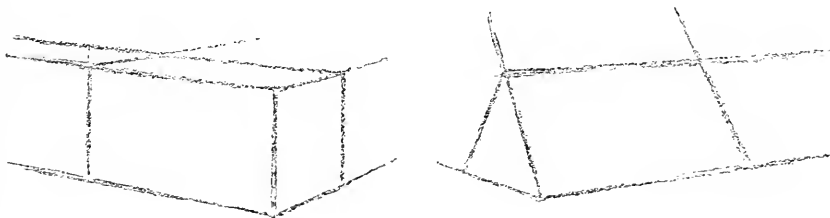
TYPE SOLIDS.— Square and Triangular Prisms. Appearance. Proportion. Convergence. Foreshortening.

ART.— Position of Models. Rendering.

[The pupil sketches the square and triangular prisms turned in various ways, gives thoughtful study to discover the principles of perspective involved in the appearance, and draws in the book, striving for truth in the representation and for beauty in the rendering.]

Elements of Perspective.— The pupils have already become acquainted with the main principles of angular perspective as found in the cube and square prism. — Book 7, page 6 ; Sixth Year book, page 6.

They are now to apply the principles of foreshortening and convergence to the drawing of a model in which new ways will be necessary. By reviewing these principles in the square prism, their application in the drawing of the angular prism will be more readily effected.



Suggestions for the Teacher.— The work at this stage is to lead to concentrated attention upon a few main points, and then to get a number of applications of these points through quick work calling for observation and good judgment.

Lead the pupils to study the examples on the drawing-book page and to find the square and triangular prisms in the houses shown. Lead them to make light line sketches of the houses, or parts of them, seeking to reproduce the general placing of the converging lines. Then let them sketch the square and triangular prisms both below and above the eye. It is best to have the models horizontal and turned for this exercise. Sketches may be made of the models in several different positions. Change in position helps the power of seeing.

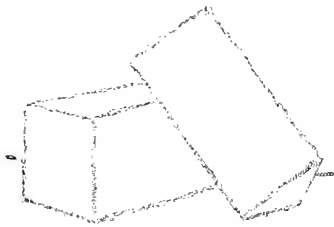
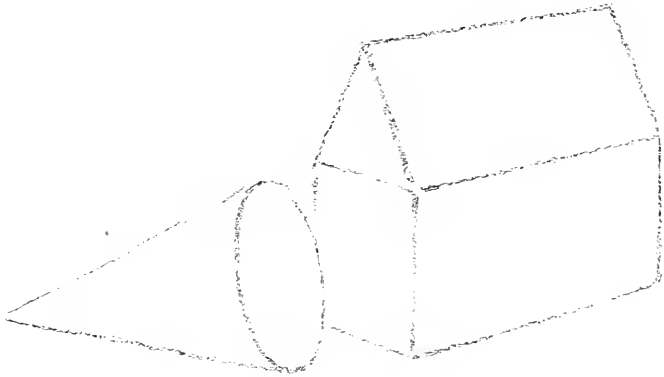
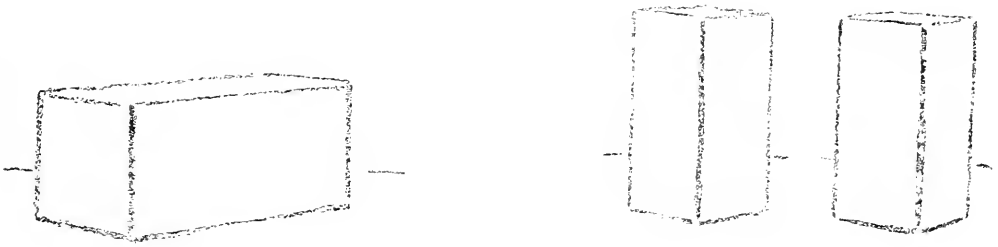
It is not well to place drawings of these models upon the blackboard as a help to the pupils, for each pupil should see and draw from his own model, observing that horizontal edges of each of the prisms appear to converge when held or placed above and below the eye and turned at an angle. It is better to discuss the underlying construction of the models and of the leading lines of the houses shown in the illustrations *after* the pupils have thoughtfully sketched them in; then suggestions and corrections can be made and the sketching proceed. If much is said to the pupils at first, they are apt to draw, not what they see, but what they think they ought to see.

Suggestions for the Pupils. — Study the Shakespeare house, — the top line of the roof, the line of the eaves, the line where it rests on the ground. Sketch the end of the house with five lines, imagining where the ground line is. Sketch the long lines of the roof. For this part of the lesson use practice paper, as this sketching is intended only as a help in determining the direction of the leading lines of the Shakespeare house, — which ones in the illustration are drawn as if above the eye and which below. Whenever the lines seem to be drawn horizontal, this will show the level of the eye. Imagine that the house has two ends alike, and draw the farther end with two lines. Sketch one of the windows in the roof in a similar way. Sketch the main lines of the Miles Standish house in the same way. Plan to draw the square prism horizontal and turned, of a size suitable for the upper half of the space on the drawing-book page, and the triangular prism similarly placed on the lower half of the space. Try different horizontal positions for each model. Choose the ones you like best for each model, and draw on the page, bringing out the forms by a wise use of dark and light lines.

Appropriate Quotations. — All are helped by finding what great thinkers have to say on a special subject.

“Establish the fact of the whole. Is it square, oblong, cube, or what is it? Keep in mind to look at the map of the thing.” — WILLIAM MORRIS HUNT.

“Do not think that you can learn drawing, any more than a new language, without some hard and disagreeable labor. But do not, on the other hand, if you are ready and willing to pay this price, fear that you may be unable to get on for want of special talent. It is indeed true that the persons who have peculiar talent for art draw instinctively and get on without teaching, though never without toil. It is true, also, that of inferior talent there are many degrees; it will take one person a much longer time than another to attain the same results, and the results thus painfully attained are never quite so satisfactory as those got with greater ease when the faculties are naturally adapted to the study. But I have never yet, in the experiments I have made, met with a person who could not learn to draw at all; and, in general, there is a satisfactory and available power in every one to learn drawing if he wishes, just as nearly all persons have the power of learning French, Latin, or Arithmetic, in a decent and useful degree, if their lot in life requires them to possess such knowledge.” — JOHN RUSKIN.



BOOK 9, PAGE 7.

SEVENTH YEAR BOOK, PAGE 7.

REPRESENTATION.**HISTORIC HOUSE.** — Form. Proportion. Appearance.**ART.** — Selection. Choice of Aspect. Rendering.

[The pupil selects and sketches a very simple house, if possible one possessing historic interest, chooses a beautiful aspect, studies thoughtfully, considering form, proportion, appearance, and draws it in the book, making application of the principles discovered in the preceding exercise, and seeking for beauty in the rendering.]

Suggestions for the Teacher. — As the pupils have studied in the preceding lesson the convergence of the leading lines of the square prism and the triangular prism in different positions, above and below the eye, and as this knowledge will be of value in the drawing of any house of simple construction, it may be well for them to enlarge one of the illustrations on page 6 of the drawing-book, and place the drawing on page 7. Careful study of the manner of rendering in the example will be of great help toward good technique in original sketches, or in translation of photographs, or any good drawings of historic or otherwise interesting houses which the pupils may bring to the schoolroom. While copying in this way should on no account take the place of sketching from the real thing, it will be a great help toward an intelligent treatment in more original work. A reproduction of a photograph of "The Wayside Inn" and a drawing are given on Plate VI. See how it has been simplified by selection.

Lead the pupils to sketch lightly, with very few lines, and of a suitable size for the drawing-book page, the house chosen. See that these lines are correct in perspective according to the example. As the drawing is to be considerably larger than the example, this work will require much care. The pupils should study the example so carefully that their drawings will resemble the original in a very marked degree.

For sketching out of doors, try to help the pupils to select an appropriate subject, one not too complicated in lines, but simple in structure and presenting not too many difficulties. If there is no local house of historic interest, then one may be chosen which is of interest to the pupils from personal association, or one which seems especially suitable for picturesque treatment.

A deserted house is often very suggestive for sketching. It has always been a favorite subject with the poets.



The Wayside Inn.

Historic Houses.—The interest in historic houses is very great in this grade, since, in most cities, that part of United States history which pertains to the Colonial period is being studied. In Higginson's and in Eggleston's History of the United States many suggestions may be found which will add interest to the study of the historic houses of Colonial days, of which the Miles Standish house is a fine example. Interest in the homes of English authors, poets, and other people of note is stimulated by the study of literature.¹

In Plymouth, Duxbury, and neighboring towns in Massachusetts, were built the early homes of the pilgrims. At first they were only log cabins, built hastily and roughly as shelters from the severe weather and hostile Indians, but, as the colony prospered and became established, the style of architecture improved. The Governor Winslow house at Plymouth, recently restored by a new owner, is a fine example of good construction. Most of the material was brought from England, and it was built in a manner that would seem almost to defy time and weather.

The Roger Williams house is preserved at Roger Williams Park, Providence. This is of great interest in connection with the early settlement of Rhode Island.

Among historic houses connected with the life of Washington is Mount Vernon, the home of Washington, on the Potomac near the city of Washington. There are houses at Newburgh, N.Y., and Morristown, N.J., where Washington made his headquarters, and many others have that association or tradition. The Longfellow house, at Cambridge, Mass., was also honored by Washington when he was near Boston. The birthplace of Longfellow was in Portland, Me., and the old house is well preserved.

In Boston and vicinity there are many notable buildings connected with Colonial history — the old State House, Faneuil Hall, the Old South Church, the newer State House, with its gilded dome, and many others.

Through all the Middle, Southern, and Western states, as well as some parts of New England, the houses of early settlers are still to be found. Nothing in this country is more picturesque than the Mission houses along the Pacific coast. These may also be found in Florida and in Canada. No wilderness seemed too profound, no place so lonely or so far removed from the society of his fellow man, as to daunt the spirit of the early fathers of the Church in their endeavor to help the savage to a higher spiritual life. Whatever may be one's belief, the courage and heroism of their lives must be admired.

¹ A beautiful set of drawings of scenes near Shakespeare's home is published by L. Prang and Company, and will be of great service in gaining interest in this work.

Suggestions for the Pupils.—What size will you make your drawing? Study the illustration you are to follow, and think how much larger it should be to fill your sheet of paper well. Study the main lines of the house you are to draw. Sketch the house lightly on your paper, noticing how the lines of the roof, the tops and bottoms of the windows, and the lines at the ground converge as they recede from the eye.

Correct the direction of these lines if necessary by *drawing over them*, keeping the lines light. Do not allow yourself even in blocking to keep erasing your lines. An eraser should be used with much reserve, if at all. Think before you place a line and there will be no need of erasing. Erasing spoils the quality of the paper for the use of any medium and leads to a very foolish waste of time.

Study the way the roof and walls of the house are rendered. Notice how the end which is in shade is treated. See how the windows and doors are expressed. Study the foliage around the house. See how simply it is done. Notice the quality in line; a hard line suitable for a diagram is devoid of artistic feeling. It expresses nothing but bald facts and has in it nothing of the sentiment which it is desirable to express. The two drawings of the same house, the home of Oliver Wendell Holmes, page 117, illustrate this point admirably. Draw now on the drawing-book page, striving to improve your work.

Value of Seeing and of Drawing.—Far-seeing thinkers have long recognized the place of seeing and of drawing in social and economic development.

“Hundreds of people can talk for one who can think; and thousands can think for one who can see.”—JOHN RUSKIN.

“One fact remains, however, and all sound criticism of art is based thereon. The artist may let his fancy run riot, may amplify and idealize nature and her phenomena, but a mastery of natural form, a deep-seated knowledge of his art, must always form the groundwork on which his work is based.”

“Drawing is of the greatest use in after life, and above all it has the effect of leading to accurate habits of observation and a more distinct knowledge and mechanical facility than almost any other kind of manipulation; it is a sovereign remedy for correcting idle habits, and of the greatest benefit to the scholar; it is a most valuable adjunct to education.”—LORD BROUGHAM.

Added Interest.—“The first object that strikes the eye of the stranger approaching Boston in any direction by land or sea is the gilded dome of the State House. The State House, illustrated on page 118, was built in 1795, upon what was then known as ‘the governor’s pasture,’ a part of the Hancock estate. Charles Bulfinch was one of the agents charged with its erection, and was practically the architect. To his good taste Boston was indebted for many excellent edifices put up at that period. The corner-stone was drawn to the hill by fifteen milk-white horses, representing the number of states of the Union at that time.”



The House that the Carpenter Built.



The Artist's Thought of the Poet's Home.

“Boston's State House is the hub of the solar system. You couldn't pry that out of a Boston man if you had the tire of all creation straightened out for a crowbar.” — OLIVER WENDELL HOLMES.

“A brave old house! a garden full of bees,
Large drooping poppies, and queen hollyhocks,
With butterflies for crowns, — tree peonies
And pinks and goldilocks.”

— JEAN INGELOW.

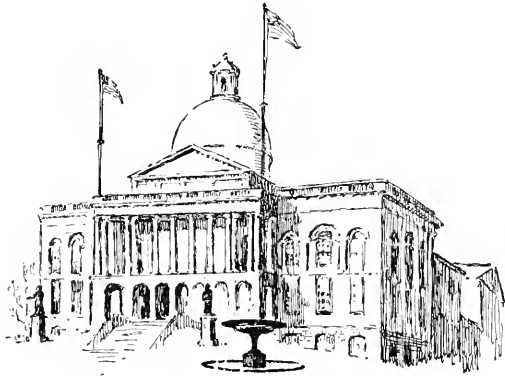
“I remember, I remember
The house where I was born,
The little window where the sun
Came peeping in at morn.”

— THOMAS HOOD.

“O wanderers from ancestral soil,
Leave noisome mill and chaffering store;
Gird up your loins for studious toil,
And build the home once more.

“Come back to bayberry-scented slopes,
And fragrant fern, and ground-mat vine;
Breathe airs blown over holt and copse
Sweet with black birch and pine.”

— S. C. ARMSTRONG.



THE STATE HOUSE, MASSACHUSETTS.

BOOK 9, PAGE 8.

SEVENTH YEAR BOOK, PAGE 8.

REPRESENTATION.

NATURE.— Figure Studies. Action. Proportion.**ART.**— The Pose. Choice of Aspect. Rendering.

[The pupil makes sketches of a figure posing, omitting detail and expressing simply the general characteristics, criticises the work thoughtfully, comparing it with the model, and draws in the drawing-book from the pose, studying the examples for suggestions as to rendering.]

Study of Illustrations.— Before deciding upon the figure subject for this page, it would be well for the teacher and pupils to study the illustrations on the drawing-book page, and then choose the pose.

Position of Model.— The girl in the chair shows an easy pose, and if a kitten could be obtained the pupil's sketch might be similar. The Roman boy with the dog suggests a good pose for a modern boy, as the position is easy and natural. In order that all may have a good view the model may sometimes sit upon a table or the teacher's desk if that is flat. While this places the figure considerably above the eye, the perspective will not be sufficiently affected in most cases to be important.

Simple Treatment.— In figure work hold the pupils to simple action studies for much of the time, as the object is not merely to produce pictures, but to develop power. They find great difficulty in drawing the human face, and for this reason it will be better usually when drawing the entire figure to block the head, observing only the general contour. Artists often do this when making studies for their pictures or where intent on some special effect. This is admirably shown in the sketch by La Farge on page 1 of the drawing-book, where the study of drapery in the wind is the object of the sketch. The form of the head is drawn, but not the face. The action studies on the same page by Hunt show the preliminary steps to a very beautiful picture. An artist in composing a picture makes many sketches or studies of parts which his power of selection finally enables him to combine as a whole. If the pupils always



try to make a sketch with considerable finish, they may develop a certain facility, but it may be at the expense of good drawing.

“Respecting the drawing of the outline of the figure we should realize that there are in the human form a succession of more or less gently undulating convex contours. These have parts that are almost straight, and it is valuable to see straightness, but a mannered and empty straightness is not at all characteristic of nature.” — ONSLOW FORD.

Study of a Special Part. — There may be times when it will be best to have a very careful sketch or study of detail, perhaps of a hand, a piece of drapery (even a face), with the drawing of good size, each touch showing close study. A leading artist, also a fine art teacher, said, in speaking of his teaching: —

“When I find a pupil getting into a careless way of working, or indeed, all of the pupils in the studio, for sometimes such a falling away from serious work seems epidemic, we go back to pure line and severe drawing of some special part. There is nothing like it for bringing about a renewed appreciation of the fact that ‘Art is long,’ and that fine technique serves a poor use when it only veneers bad drawing.”

William M. Hunt, in “Talks on Art,” said some good things in this direction in his characteristic way. He realized not only the value of careful work in line as well as tone, but he was also a firm advocate of direct copying, even tracing, at times, to get the spirit and feeling of the original.

“Your figure has pretty movement and expression, but it lacks firmness, hardness. You are so afraid of hard lines! You need not make them thin and wiry. Make them broad and full.

“Draw that ear carefully; it is permanent, always staying just in its place. It cannot laugh or cry. It has no change of expression, like the other features, which in a sketch you are permitted to draw with a little less care, because you may reach an expression without great painstaking. You have the *ensemble* of that head, but the ear shows that you don't know how to draw; shows just how long you have been studying. At the same time, there are plenty of people who could draw that ear with correctness, but who would have no idea of producing the *ensemble* as you have done. And here I must repeat what I have said so often. Trace Albert Dürer; see how he renders an ear. Some of you are tracing, but not all. When you come here in the morning, and find that you don't feel just like work, take out the Dürer photographs, trace, copy, do them from memory, make them a part of yourself.” — HUNT.

Passages in verse and prose may also prove helpful in regard to the character assumed and the costume worn by the model for pose drawing in the schoolroom. A clear bit of description strengthens the concepts of the pupils greatly. A few direct questions are sometimes an aid.



Sketch. — Lucy Fitch Perkins.

The mental pictures should be simple, that the true spirit of the scene may be grasped. Encourage earnest effort and do not look for finished compositions, as they would be impossible and really not desirable. Such work should be optional and entirely dependent upon the desire to express something on the part of the pupil. Even if only a part of the picture is attempted, it will be better than no effort at all. The timid pupil, who sketches the well and its surroundings without the woman drawing the water, or the tower without the man ringing the bells, in Longfellow's poem, will, if his effort is encouraged, feel more confidence next time to attempt a suggestion of the figure. Perhaps the woman has drawn the water, or the man has rung the bells!

The leaving out of an important feature in a sketch suggests the dilemma of an artist who also felt equal to attempting some things and yet not all things. A marine painter with more talent than patronage was once called upon by an old sea-captain who said he was willing to pay him handsomely for a picture of his ship, "true to life," in a fresh, strong breeze, with every sail set. The artist could paint the sea, calm and serene, or wild and angry, dashing against the rocks, or softly lapping a sandy beach, but he could not paint a ship. Something of this he tried to tell, but to little purpose. The sea-captain had seen some of his pictures, and liked them; he gave the name of the dock where the ship could be seen, gave some information regarding details (such as the fact that the ship had new sails) and departed. The artist went to the docks and studied the ship, but the furled sails and restful appearance gave him little suggestion of the same ship on the high seas. It would be too bad to disappoint the captain, and his purse was empty. After much thought he painted the picture. It was a boundless stretch of water with not a sail in sight. The reason that the artist gave the sea-captain for not painting in the ship was so ingenious that he not only bought the picture, but always told the story with a chuckle. "You see," said the painter, "your ship is so fast, she sailed away before I could get a good look at her."

Different things appeal to different temperaments. To some it is the beauty of a flower, a tree, a bit of fine form and color in a vase or a jar; to others, something more endowed with active life, as the human figure, or an animal. While the regular art training in the schoolroom should be definite and so arranged as to help along all lines, optional work and especially home work should allow much latitude and choice of selection by the individual pupil. Suggestion is so much more effective in all teaching than compulsion.

Word pictures may be taken from poems or prose and prove very suggestive. Maud Muller with her rake is effective, and the dress is simple and easily arranged.



Maud Muller. — Edith Clark Chadwick.

“Two fair maidens in a swing,
Like white doves upon the wing,
First before my vision pass;
Laughing, as their gentle hands
Closely clasp the twisted strands,
At their shadow on the grass.

“Then a homestead among farms,
And a woman with her arms
Drawing water from a well;
As the bucket mounts apace,
With it mounts her own fair face,
As at some magician's spell.

“Then an old man in a tower
Ringing loud the noontide hour,
While the rope coils round and round
Like a serpent at his feet,
And again in swift retreat,
Nearly lifts him from the ground.

“Then a school-boy, with his kite
Gleaming in a sky of light,
And an eager, upward look;
Steeds pursued though lane and field;
Fowlers with their snares concealed;
And an angler by a brook.”

— HENRY W. LONGFELLOW.

“The shades of night were falling fast,
As through an Alpine village passed
A youth who bore, mid snow and ice,
A banner with the strange device
Excelsior.

“A traveller, by the faithful hound,
Half-buried in the snow was found,
Still grasping in his hand of ice
That banner with the strange device
Excelsior.”

— HENRY W. LONGFELLOW.



FROM DRAWINGS BY PUPILS OF THE SEVENTH YEAR.

“ Hannah, sitting at the window binding shoes ” suggests a good subject ; also, Evangeline gazing toward the sea. Longfellow gives a number of pictures in succession in his poem, “ The Rope-walk,” given on page 124. A Greek costume is not difficult, and its simple, long lines give a chance for good treatment. Boys at their work, or at their sports, make good models, as the drawings at the right as well as those on page 124 show. There are in these drawings vigor and action as well as simple rendering.

The Pencil an Effective Medium.

— The pencil readily lends itself to the simplest methods of expression, yet “ it is a medium capable of representing both tone and line.” If the pupils try to express color with the pencil, it helps them to see the proportion of masses of light and dark.



WORK OF PUPILS OF THE SEVENTH YEAR, REPRODUCED IN MINIATURE.

Suggestions for the Blank Pages in Book 9.

Choice. — Some of the teachers may wish to use the space on all of the pages for progressive work in some particular line, as in out-door sketching of historic houses, or in figure drawing, in which

pages 1, 2, and 15 of the drawing-book, will be helpful — or for advanced work in decoration, and this will prove especially enjoyable if brush-work is possible.

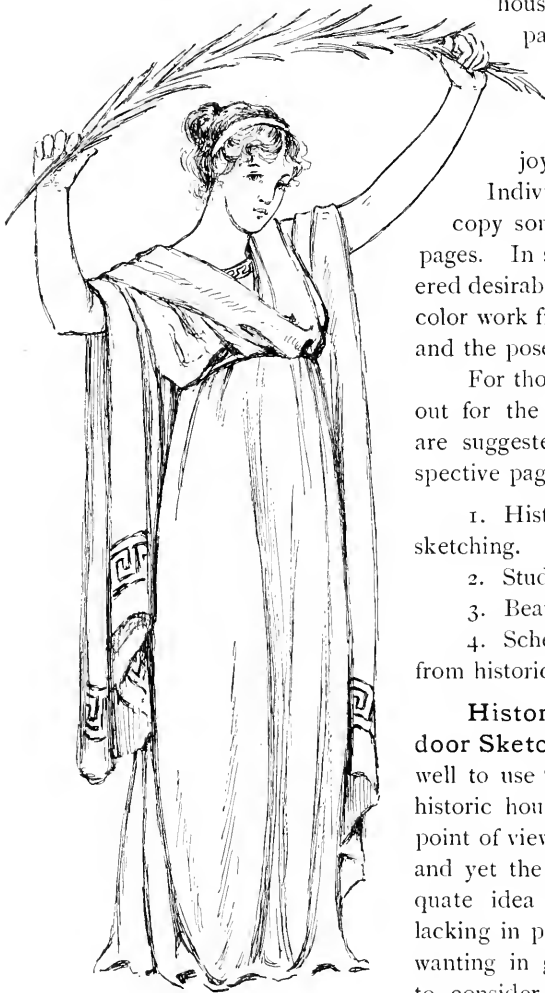
Individual pupils may be permitted to copy some of the work on the illustrative pages. In some instances it may be considered desirable to devote these pages entirely to color work from beautiful objects, from nature and the pose, and from historic ornament.

For those who desire work definitely laid out for the four pages, the following lines are suggested, to be carried out on the respective pages in the order given.

1. Historic houses or other out-door sketching.
2. Studies of animals or birds.
3. Beautiful objects in water color.
4. Schemes of color in colored paper, from historic ornament.

Historic Houses or Other Out-door Sketching. — It is, of course, always well to use "selection" in all art work. An historic house may be drawn from a certain point of view with perfect truth and accuracy and yet the drawing may fail to give an adequate idea of the house, may be utterly lacking in picturesqueness, and may be quite wanting in good composition. Lead pupils to consider then, the point of view chosen

and to note also any accessories that may be drawn (lightly and sketchily so as not





Drawn by Pupils of the Seventh Year.

to attract attention from the house) which will add to the pleasing associations and to the composition.

How pleasant ! This old house looks down
 Upon a shady little town,
 Whose great good luck has been to stay
 Just outside of the modern way
 Of tiresome strut and show ;
 The elm trees overhead have seen
 Two hundred new-born summers green
 Up to their tops for sunshine climb ;
 And since the old colonial time,
 The road has wound just so."

— LUCY LARCOM.

If there is to be landscape sketching, let the point of view be considered carefully, and remember that if in the scene chosen there should be something that mars the composition, that may be omitted, for beauty is the thing sought, and not a photographic reproduction. This work may be done with pencil or the brush, as circumstances allow.

" Before me rose an avenue
 Of tall and sombrous pines ;
 Abroad their fan-like branches grew.
 And, where the sunshine darted through,
 Spread a vapor soft and blue,
 In long and sloping lines."

— HENRY W. LONGFELLOW.

" A house on a fair English hill ; away
 Stretch undulating plains of gold and green,
 With park, and lake, and glade, and homestead gray ;
 And crowning all, the blue sea dimly seen."

— LEWIS MORRIS.

" Dove-winged against a tender, turquoise sky
 The white smoke flits ; or through the lambent air
 Quivers to fading violet spirals fair ;
 Or shifts to gray, curled upward heavily."

— HANNAH PARKER KIMBALL.

And if the circumstances will not permit outdoor sketching, then let the pupils work from pictures of memory or imagination. Pennell speaks of such pictures of memory and imagination in "The Picture Gallery." In the manual for the Sixth

Year, there will be seen on Plate IX. illustrations of fine imaginative landscape work by pupils of the Sixth Year.

“There is a dim, long gallery in the brain,
Thick woof'd and hung with pictures of the past :”
“These are the Chambers of the Imagery ;”
“Precisely accurate from the mystic glass
Of the soul's camera.”
“. . . These with fancy forms
And airy nothings of the inner world.”

Studies of Animals or Birds. — The illustrations on page 8 of the drawing-book will suggest the need for much animal study. The illustrations of work by pupils of the seventh year show how such studies are made in some schools.

“The pretty red Squirrel lives up in a tree,
A little blithe creature as ever can be ;
In the joy of his nature he frisks with a bound
To the topmost twigs, and then down to the ground,
Then up again like a winged thing,
And from tree to tree with a vaulting spring.”

— MARY HOWITT.

Birds may also be the subject for studies. They require very quick sketching, which is a very good thing.

“You must have the bird in your heart before you can find it in the bush.
“The song-birds might all have been hatched or brooded in the human heart.
“If one is a lover of birds, he sees birds everywhere.
“People who have not made friends with the birds do not know how much they miss.
“Seeing and hearing the birds and knowing their names is one of the greatest pleasures of life to me.” — JOHN BURROUGHS.

“When they chatter together, — the robins and sparrows,
Bluebirds and bobolinks, — all the day long,
What do they talk of ? The sky and the sunshine,
The state of weather, the last pretty song :
“O birds in the tree-tops ! O robins and sparrows !
O bluebirds and bobolinks ! What would be May
Without your glad presence, — the songs that you sing us,
And all the sweet nothings we fancy you say ?”

— CAROLINE A. MASON.

Beautiful Objects. — Simple beautiful Pottery forms can now be obtained in such fine color that they form very attractive subjects for the brush even singly.

They may be arranged also in groups or with some soft drapery harmonizing in color as a background. Two or three pictures could be made from the following verse :

“The quiet room, the flowers, the perfumed calm,
 The slender crystal vase, where all aflame
 The scarlet poppies stand erect and tall,
 Color that burns as if no frost could tame,
 The shaded lamplight glowing over all,
 The summer night a dream of wealth and balm.”

— CELIA THAXTER.

Schemes of Color from Historic Ornament. — By the study of colored sheets of historic ornament, it will be seen that each style not only had its special and distinctive figures and arrangements, but also that each style had its color scheme or schemes. It is very interesting to study these color schemes and to reproduce them in colored paper. Strips of paper two inches in length have been found to be convenient for this purpose. These strips are pasted like scales, but lap more or less according to the relative amount of a particular color in the scheme.

There might be added to the page a figure or border worked out according to the scheme. It would be well to have the work done from the Egyptian or the Greek style, so that pupils may have them recalled and may also be able to compare them with the Roman style.

“With triglyph, metope, and pediment
 Full sculptured, and discreetly crowned
 With stately antefix of blue and red.

“And rich on fillet, band, and cornice
 Bright color woos the sight
 In ornament of purest curve,

“Echinus, bold and simply marked,
 With astragal of beads and pearls
 Of shining gold on ground of red,

“Guilloche of braids with jewels set,
 And frets of interlacing bands
 Of blue and red on golden field,

“Soft curving ovolo with egg of blue
 Contour'd with gold, and dart incarnadine.
 Harmonious on ground of green.”

REPRESENTATION.**NATURE.**— Grain. Trees. Life and Growth.**FIGURE STUDIES.**— Action. Proportion.**TYPE SOLIDS OR OBJECTS.**— Form. Appearance.**ART.**— Selection. Arrangement. The Pose. Position. Choice of Aspect. Rendering.

[The teacher assigns the work according to the needs of the class or of individuals.]

[The pupil makes sketches, criticises the work thoughtfully, making use of knowledge gained in previous exercises, and draws in the book, with simple expression of truth of representation, and seeking for beauty of relationship and of rendering.]

The Exercise.— This page is left optional, that there may be an opportunity to emphasize or give further practice on any work that the teacher may desire.

The above topics suggest the very close connection that can be made between the regular art study and other studies, such as history, geography, literature, nature-study, manual training, and even economics. This may be done by bringing the minds of the pupils to consider, when dwelling on these topics, their broad relation to each other and their bearing upon life in its various aspects in the past, present, and future, as for example :—

The beauty of the fields of grain ; the artist's pictures of such scenes. The countries which are the great producers and consumers of the world's supply of grain. The poets' word pictures of seed-time and harvest. The life of the grain and the manner of growth. The dignity of labor.

The tree as a feature of the landscape ; the great painters of landscape. The characteristic trees of different countries. The poets' appreciation of trees. The names and the classification of native trees. The use of the tree and its parts in the manual arts and in providing shelter for man. The danger to our water supply if we do not protect the forests and consider the needs of the future as well as the present. The establishment of reservations, parks, and playgrounds as adding to the health and happiness of the people.

The various kinds of human, animal, and bird life, and their relation to art, to each other, and to life generally. The great sculptors and painters, historic and modern, who have used such motives for art productions of various kinds. The

human race in different countries ; animals and birds of different kinds and of different countries, and the study of their life and habits. The proper treatment of animals and birds.

Good construction, the basis of all good architecture and sculpture, and good construction, the basis of good drawing. Ceramic art. Choice of the true and the beautiful, not only wise selection but good arrangement. The costumes worn by the people of different countries : simple, historic, or characteristic costumes for the study of the pose.

These suggestions are given for the enrichment of the work as it goes on, keeping the same broad view constantly in mind, — the development of character, and culture.

Nature. — A scientist, on being asked if he would make naturalists of the children in the schools, replied, "Yes, I would, if leading them to observe, to study, and to think for themselves, means that." The study of nature and art should lead to a greater enjoyment of life and a higher spiritual outlook.

Under the general topic of landscape in relation to art, it will be of interest to the pupils to learn that landscape among the old masters was made little of, owing probably to the greater interest which the painters of the Renaissance felt for religious subjects, and also owing to their slight knowledge of the laws of perspective and of "values" or the proper relation of one part to another, each and all so arranged as to produce depth in the picture. The old masters used occasionally bits of landscape as backgrounds to their figures, and treated them very conventionally.

"Rembrandt, the first master who made a general use of light and shade as the chief element in a work, is also the father of modern landscape in that he was the first who made landscape appeal directly to human sentiment. All that the landscape painter knows under the name of 'effect' is just the expression upon Nature's countenance, and 'effect' is the result of changing tones and shadows, of veiling mist, of the breaking forth of light, — of all, in short, that Rembrandt first brought within the painter's power of realization. Landscape painting in the modern sense is only possible through the employment of that charm of mystery, the value of which in art he was the first to discover." — G. BALDWIN BROWN.

To encourage added appreciation of nature, it would be well to lead the pupils to observe special aspects, as the appearance of the sky at night, to study the colors of the sunset, and the effect of twilight. If they are using water-color, memory sketches will be of value in this connection.

Night gives always a sense of mystery. This comes with the lengthening shadows at twilight ; it deepens as the earth grows darker, while the sky holds

still a soft glow left from the brilliant sunset. Later the stars come out ; perhaps the landscape is bathed in moonlight. How even the commonplace becomes beautiful under the light of the moon ! Few artists have been painters of such scenes. Cazin has given us some fine examples of moonlight effects. How beautiful are his village streets, so devoid of life, with all sleeping, the moon and stars alone keeping watch !

George Inness, the greatest American landscape painter, was especially successful in his treatment of the mystery and beauty of twilight. In a notable collection of his pictures, shown in New York not long after his death, there was one among many which left an indelible impression of its great beauty. The interest centred upon a stretch of sea in a distance, the twinkling gleam from a lighthouse, and the mystery of the coming night. The spiritual quality of his pictures was even more remarkable than the masterly technique.

The greatest painter of sunsets was the English painter, Turner. No one should ever go to London without seeing some of his wonderful creations. Claude Lorraine was also fine in his treatment of color, aerial perspective, and atmospheric effects in landscape. It has been said that Turner tried to walk in his footsteps. If so, it was a case of the pupil going beyond the master. The sunset has inspired poets as well as artists to represent its beauty.

“ The summer sun is sinking low ;
 Only the tree-tops redden and glow ;
 Only the weather-cock on the spire
 Of the neighboring church is a flame of fire !
 All is in shadow below.”

— H. W. LONGFELLOW.

“ You put in so many lights and darks that your work is mystery overdone — a negation of fact.

“ You see a beautiful sunset, and a barn comes into your picture. Will you grasp the whole at once in a grand sweep of broad sky and as broad mass of dark building, or will you stop to draw in all the shingles of the barn, perhaps even the nails on each shingle, — possibly the shaded side of each nail? Your fine sunset is all gone while you are doing this.” — HUNT.

“ Again I see the day decline,
 Along a ridged horizon line ;
 Touching the hill-tops, as a nun
 Her beaded rosary, sinks the sun.
 One lake lies golden, which shall soon
 Be silver in the rising moon ;
 And one, the crimson of the skies
 And mountain purple multiplies.”

— JOHN G. WHITTIER.

Grain.—Seed-time and harvest have always been fruitful subjects for artist and poet. “The Sower” of Millet is well known. Jules Breton, Le Rolle, L’Hermitte, have told us many stories of the fields, and in our own country Enneking has no rival in depicting the rich, warm hues of autumn and the tender sentiment of the passing year.

“Heap high the farmer’s wintry hoard,
Heap high the golden corn!
No richer gift has Autumn poured
From out her lavish horn!”

— JOHN G. WHITTIER.

“Dim dawn behind the tamarisks — the sky is saffron-yellow,
As the women in the village grind the corn,
And the parrots seek the river side, each calling to his fellow
That the Day, the staring, Eastern Day, is born.”

— RUDYARD KIPLING.

Trees.— In speaking of trees, one of the greatest lovers of nature says:—

“The pine is the tree of silence. Who was the goddess of Silence? Look for her altars amid the pines,—silence above, silence below. Pass from the deciduous woods into the pine woods of a windy day, and you think the day has suddenly become calm. Then how silent to the foot! One walks over a carpet of pine needles almost as noiselessly as over the carpets of our dwellings. Do these halls lead to the chambers of the great, that all noise should be banished from them?

“How friendly the pine tree is to man,—so docile and available as timber, and so warm and protective as shelter. Its balsam is salve to his wounds: its fragrance is long life to his nostrils; an abiding, perennial tree, tempering the climate, cool as murmuring waters in summer, and like a wrapping of fur in winter.

“No other tree is so widely useful in the mechanic arts, or so beneficent in the economy of nature,—a house of refuge for the winter birds, and inn and hostelry for the spring and fall migrants. All the northern creatures are more or less dependent upon the pine. Nature has made a singular exception in the conformation of the beaks of certain birds, that they might the better feed upon its cones, as in the cross-bill.”— JOHN BURROUGHS.

“Upon a pasture hill a pine-tree stands,
And in the air holds up its slender hands;
A double sheep-track turns beneath the tree,
Dips to the firs, and seeks the meadow lands.”

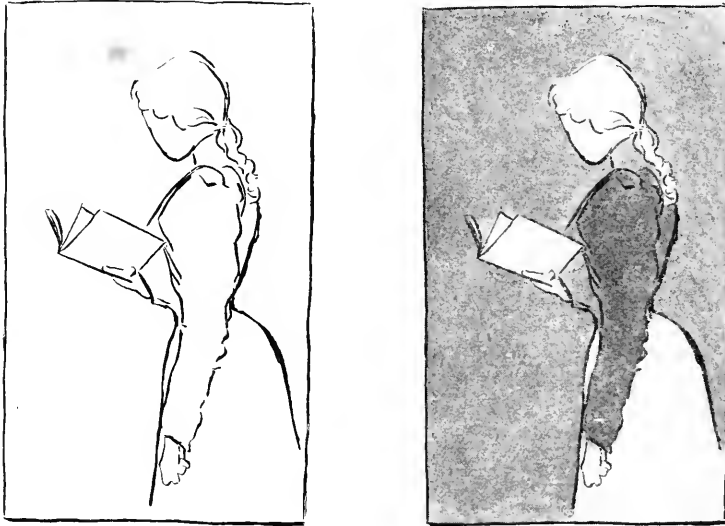
— PHILIP HENRY SAVAGE.

Figure Studies.— It seems easier to catch the spirit of figures in violent or striking action sometimes, than those in repose, but it must be borne in mind that

such positions are difficult for a model to keep for more than a few minutes at a time; it is necessary to guard against weariness.

A few facts regarding the human figure are well to remember. The proportions of a child are quite different from those of an adult, the head, hands, and feet being much larger in proportion to the rest of the body than those of an adult. The shoulders are much narrower in proportion to the figure, and the features of the face are set lower in the skull, than those of an adult.

The illustrations on Plate VII., reproduced from actual drawings made by seventh grade pupils in a public school, show one excellent plan for an exercise in figure drawing. The pupils first drew oblongs of pleasing proportions, then made pencil sketches from the posed model, placing the sketches within the oblongs so as to produce a good effect of proportionate spacing, and keeping the drawing very simple, — using as few lines as would serve to express the form in a vigorous way.



Next, the pupils laid sheets of their Japanese tracing paper over the first sketches, tracing the lines with brush and black ink, occasionally simplifying the drawing still further by leaving out some pencil line which on second thought seemed superfluous. The bodice of the girl was then filled in on the tracing sheet with a flat wash of water-color, and the background with another wash less positive in color, the white paper giving still another value.

Such an exercise, wisely handled, does a great deal toward developing judgment

and feeling in regard to space composition, ready appreciation of essentials, and a sense of harmony in combinations of color values.

Type Solids or Objects. — No forms, however beautiful in color or contour, can take the place of the type solids as a basis for construction in drawing from objects similar to the type solids. This is recognized in many of our art schools, where they are used in connection with talks upon perspective and object drawing. Simply knowing theoretically the structure of these type solids is not sufficient; they should be studied and drawn from directly.

“Do not think, by learning the structure of a thing, that you can learn to draw it. Anatomy is necessary in the education of surgeons; botany in that of apothecaries; and geology in that of miners. But none of these will enable you to draw a man, a flower, or a mountain. You can learn to do that only by looking at them; not by cutting them to pieces. And don't think you can paint a peach, because you know there's a stone inside; nor a face because you know a skull is.” — HUNT.



REPRODUCTION IN MINIATURE OF WORK OF A PUPIL OF THE SEVENTH YEAR.

Art Selection. — Perhaps one of the most important duties of the teacher is to guide the young mind toward high ideals. It is not enough to be clever; the ability to execute should be directed in such a way that the product shall be elevating. Art may depict the humorous, even the grotesque, and yet keep to its legitimate use as a graphic language for thoughts worth knowing, but when it descends to rendering the definitely ugly, it is only a step farther to the coarse and low. An eminent art critic said of this tendency: —

“Of late, a passion for sheer ugliness has bewitched many. That to be repulsive is to be powerful, is a most foolish formula, yet it is one that too many realists and idealists appear to accept as gospel, even if they do not put the statement into words. To shock is quite within the reach of the least competent artist; to disregard academic rules is much easier than to obey them. In a long run, it is genuine power in expressing ideas with expression that will survive.” — GLEESON WHITE.

Choice of Aspect. — In sketching from nature or in making a composition there is a chance to choose the point of view. If the first place selected is not satisfactory, another can be taken, or the sketch can be altered a little.

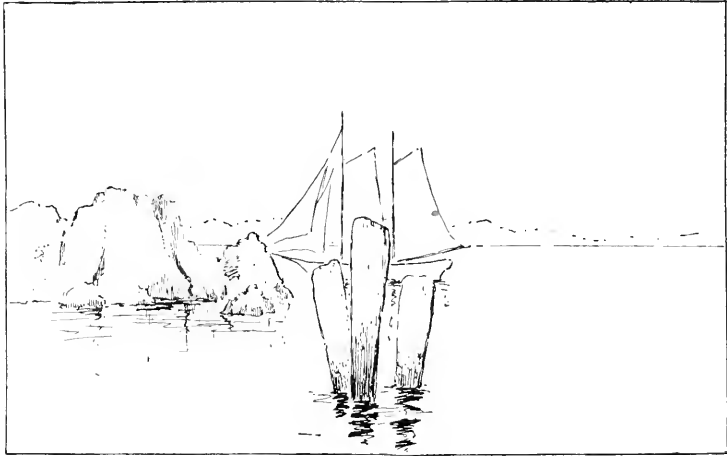
“Here are the results of experience acquired from antiquity down to our own time; start from here, do as your predecessors have done, — apply your reasoning faculties to making use of acquired knowledge, but obeying it only when it fulfils the needs of the present. It is not permitted to you to ignore what has been done before your time, it is a common store-house, a good acquired; you must know its extent and value; but add to it the aid of your intelligence; do not go backward. There is but one method of not going backward in architecture, — it is to make the art the faithful expression of the necessities of the times as one sees them, that the edifice may be in truth the envelope of that which it contains.” — VIOLETT LE DUC.

THE SUBJECT OF DECORATION.

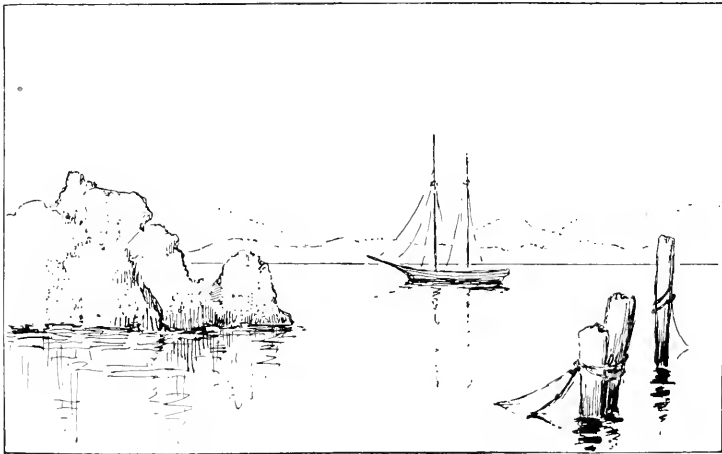
In the earlier books of this series children have been led, through both observation and original experiment, to feel the main essentials of beauty in ornament. From the present point onward, the effort is not only to deepen and strengthen their sense of beauty and their creative imagination, but also to lead them to use in their decorative design all the knowledge and skill acquired through other lines of art instruction, and to apply them to definite ends or purposes. Studies of landscape, animals and human figures, as well as studies of plant growth, geometric form and simple space divisions, are to be used as material and as means in creative compositions.

Henceforth the underlying ideas of principality, opposition and balance are to be more definitely studied; symmetry, proportion, rhythm, contrast, breadth, stability and repose are to be sought for in original work. Examples of the best mural decoration of living masters are to be studied as the course advances, for their inspiration and suggestiveness along these lines. It is in Decoration of the highest type that man's art creation culminates, completing and crowning the best industrial art with the noblest phase of fine art. It is this phase of art study which gives the greatest opportunity for the development of the highest creative powers of the pupils.

“Our way of looking at things is composition. So that it might be said that we compose in our very way of looking at nature, without ever thinking of any copy, any imitation of this appearance of nature in art. And we say that this or that is more beautiful, meaning that beauty is the thing that we love, as it takes form for us, through our choice.” — JOHN LA FARGE.



JUST AS IT HAPPENED.



THE ARTIST'S CREATION THROUGH SELECTION AND COMPOSITION.

BOOK 9, PAGE 11.

SEVENTH YEAR BOOK, PAGE 11.

DECORATION.

EXAMPLES. — Historic Ornament. Roman. Principles of Beauty.
ART. — Rendering. Expression of Color.

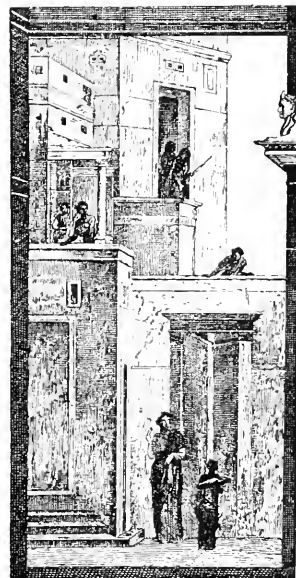
[The pupil studies the examples on the drawing-book page, observing the application of ornament, sketches the examples in outline, striving to discover the principles of the ornament, plans for the enlargement of one or both examples, or designs another endeavoring to apply the principles observed, and draws in the book, striving to retain the beauty of line and of space relation shown in the example and showing color by any desired medium.]

Historic Ornament. — The needs of any people are primarily food, clothing, and shelter; then follows that higher spiritual want, the desire for beauty. It is of great interest to see how the various people of the world have striven to meet that desire. It manifests itself in fine pottery forms, in graceful line and harmonious color in clothing, and in imposing architecture — all enriched with fine ornament.

It is of even greater interest to see that while these various peoples meet their various conditions, and therefore produce diverse results, they all exemplify in their finest results certain principles of beauty. See pages 29–31. To show the development of beauty in ornament by the various nations, there have arisen collections of the ornament of the various leading people, called Historic Ornament. See page 28 for a statement of the leading styles.

Through fine examples of historic ornament, the principles that govern the production of the beautiful are presented concretely, and the pupils while studying and drawing them continually feel their influence, thus gaining not only in knowledge, but also in culture. For the constant association with fine forms fills the mind with beauty and, with the right stimulus, makes the creation of beauty possible. And still further, as Plato says, —

“The beauties of earth are steps by which man mounts heavenward, from one fair form to two fair forms, from fair forms to fair actions, from fair actions to fair notions.”



WALL PAINTING OF A ROMAN STREET,
 FROM A HOUSE ON PALATINE HILL.

The ornament of any country or people reflects in itself the characteristics of the people and of the land which they inhabited.

"Thus in any museum we can see certain great differences in things;—which are so evident, so much on the surface, as almost to be our first impressions. They are the marks of the places where the works of art were born. Climate; intensity of heat and light; the nature of the earth; whether there was much or little water in proportion to land; plants, animals, surrounding beings, have helped to make these differences; as well as manners, law, religions and national ideas."—JOHN LA FARGE.

But it is necessary to know something of these conditions in order to comprehend the ornament. So a knowledge of the general conditions of ancient Rome will add greatly to the interest in Roman ornament.

Rome and the Roman Empire.—The situation of Rome, the capital city of the empire, in the centre of Italy, was a most advantageous position in which to extend its power and civilization northward and westward. Climate, soil, and material resources were also in its favor; the only drawback being the absence of good harbors. Therefore, in the early days, the Romans were conquerors by land rather than by sea. The foundation of the city dates back to 753 B.C. It was early influenced by the Etruscans on the north and by the Greek colonies in the south of Italy. The Etruscans were engineers; the Greeks were not only builders, but architects and artists as well. These combined influences produced a composite art. Rome extended her influence until, at the time of Augustus, the Roman Empire reached from the North Sea to the Desert of Sahara, and from the Black Sea to the Atlantic Ocean—one thousand miles in width from north to south, and fully twenty-seven hundred miles from east to west. Roman art is not confined to Rome alone, but is the art of the empire as well. Throughout this vast domain ruins of coliseums, aqueducts, temples, baths, triumphal arches, palaces, dwellings, are still to be found, together with sculpture and objects of decoration.

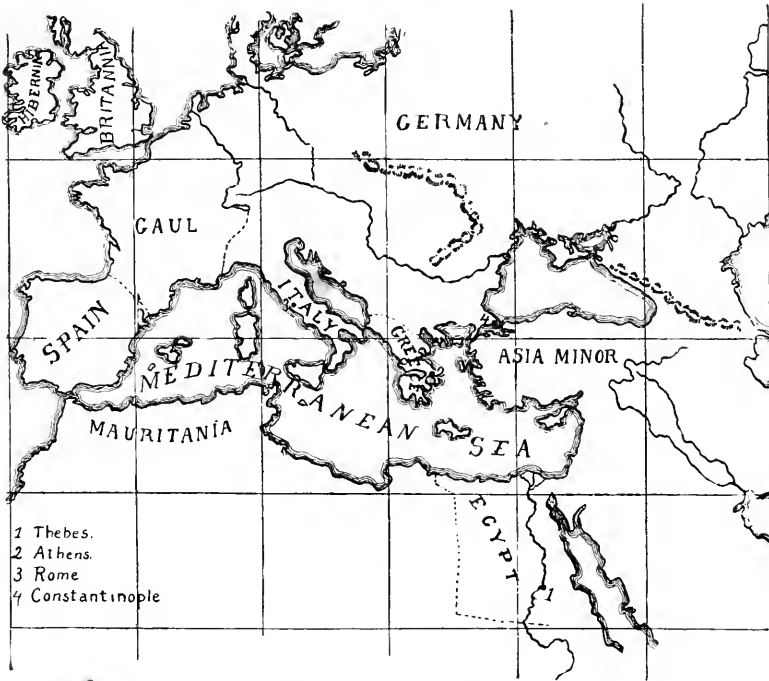
A map of the Roman Empire at the time of its greatest glory is given here. Lead the pupils to observe the central position that Rome occupies; her power seemed to extend almost equally in all directions.

Attention might be called also to the path of civilization and the arts. The pupils will be interested to notice that it ever follows the course of the sun, moving always westward. From Egypt and the East civilization and art sought its centre in Greece, thence passed to Rome, and from there has spread through Europe and across the Atlantic. Art may find its next great centre on our continent.

The Roman People and How They Lived.—The three great ancient nations showed very different characteristics. The Egyptians lived a gay, merry life, though they were given to symbols and ceremonies. They were hard task-

masters, and were also a fighting people, taking captive many prisoners, whom they slew or held as slaves ; they made many campaigns, but they did not gain a large territory.

The Greeks lived a simpler life than the Egyptians in every way ; they worshipped their gods sincerely, but with less ceremony, and were fond of meeting in the market places for orations and for discussions. They were, however, warmly devoted to their country, and always fought heroically in its defence.



MAP OF THE ROMAN EMPIRE.

The Romans differed from both ; they were pleasure-loving, voluptuous, and indulgent in every luxury. But they were a conquering race and extended their imperial power over the most of the known world.

Their houses, at first simple, became very elaborate. The distinguishing feature of every Roman house was the *atrium*, the common living-room, named, probably, from *ates* (black), on account of the smoky color of the room from the fire, which had no special outlet, but went out the door or through the opening (*impluvium*)

in the roof. It is interesting to note that the proportion of the *atrium* was as 2 to 3 or as 3 to 5. These are the proportions of the *golden cut*. In the centre of the *atrium* was a marble cistern (*compluvium*), into which poured the water which, collecting on the roof in a rain, ran toward the *impluvium*. Around the *atrium* were halls and rooms, varying in size and number according to the wealth of the occupant. The excavations at Herculaneum and Pompeii have thrown much light on Roman habits of life. In the pictures of Pompeian interiors on Plate VIII., something of the general construction of the houses may be seen, and the *atrium* and *compluvium* will be readily found. The walls were frequently most elaborately decorated with paintings and mosaics in brilliant colors. Imaginary columns, painted in perspective, formed panels on which were gay pictures. Ruins of palaces found upon Palatine Hill show a most remarkable combination of apartments, including living-rooms, halls, gardens, baths, and courts. They were decorated with mosaics and statues.

Tiberius -
Louvre -



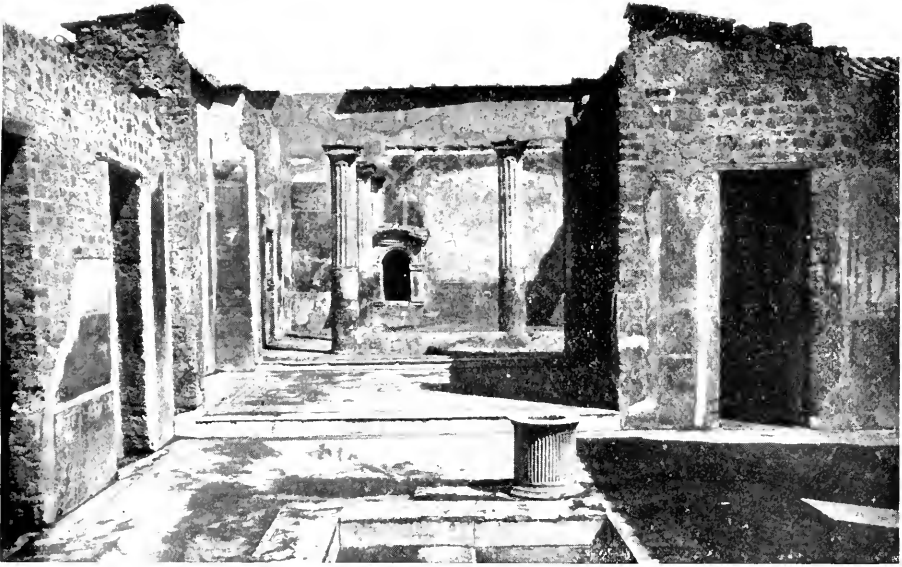
Juno -



Cæsar
Augustus
in the Vatican -



Their dress was similar to but much more elaborate than that of the Greeks. It consisted of two and sometimes three pieces,—a *tunic*, a *toga*, and a *pænula*. The *tunic* was a short rather close-fitting undergarment with short sleeves and having a girdle about the waist. The *pænula* was a simple mantle without sleeves. The *toga* was the distinctively Roman garment for men and women. It was of



Pompeian Interiors.

ample dimensions, oblong, and rounded at the corners. Its length was three times the height of the wearer from the shoulder down. It was first folded lengthwise not exactly in the centre and then skilfully thrown about the shoulders and arms.

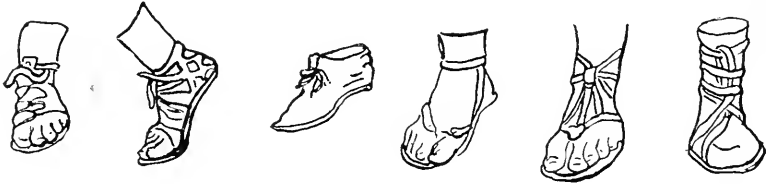


The illustration is of a wall painting found at Herculaneum. According to the inscription, it was painted by Alexander, an Athenian, some time before the Christian era. It represents a group of Roman women, two of whom are playing "five stones"; to the pebbles used, there have evidently been added some small objects.

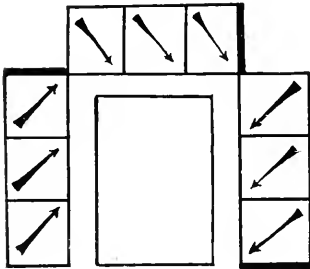
The head covering was very simple, for the Romans cared very little for it, the head being generally left uncovered ; in case of great necessity the toga pulled



over the back part of the head gave sufficient protection. The feet were frequently bare, but various kinds of sandals and shoes were worn, the number of thongs to the sandals indicating the rank or position of the wearer.



The Romans reclined on couches at the dining-table in the position indicated by the arrows, the arrow-head representing the head of a person. The oblong in the centre represents the table. There was no couch at the fourth side, that the servants might have opportunity to serve.

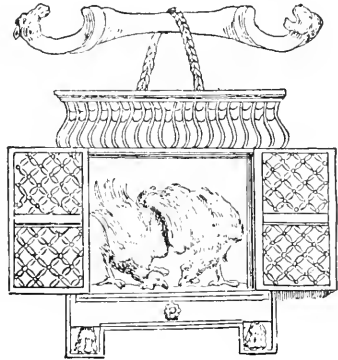


The men transacted business about the *forum* or public square, and there held public meetings. See page 144. The Roman wife administered the affairs of the house, and instructed the children and appeared to some extent in public affairs.

The Roman boy in families of good standing was carefully educated. At seven years he began the training for a citizen and a soldier. He swam, and rode, and threw the javelin : at the same time he learned to be quiet, modest, and respectful, and pious toward the gods. He was required to write a great deal and to practice in arithmetic. His sums were all done in Roman numeration — where the number 89 was required, he was obliged to write LXXXIX. To be at the head of the class was glorious. He studied grammar and he learned to be eloquent. When he had attained a certain degree of advancement, about the sixteenth year, he was allowed to take the

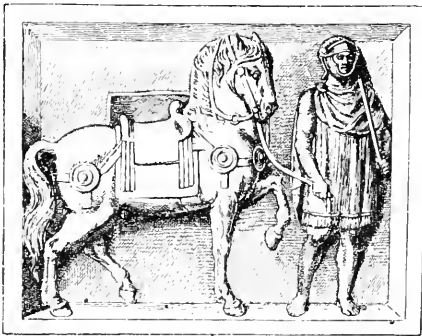
toga with some little ceremony, thus marking his passage from youth to manhood. He might grow to be a senator or a commander.

The Romans never entered on any important undertaking without endeavoring to learn the will of the gods by studying omens. There were men called augurs who watched and interpreted these omens. A space in the temples was assigned to the augurs, that they might be secluded from the intrusion of outsiders. They studied signs in the sky, as the flight of birds, or the behavior of chickens while eating (if eager to eat, a good omen — if indifferent, a bad omen), the cries and motion of animals, and the phenomena of fear. The illustration shows fowl kept for observation by augurs.



Roman tombs were frequently square altars called *cippi*; on the panels of the *cippus*, the one whom it commemorated was represented. Two of these sculptured panels are given here.

The panel at the left represents a Roman about 75 A.D. He wears a helmet, and has a fringed *tunica*, over which his mantle clasped at the throat is thrown. He



is armed with a short spear and leads his horse by the bridle. The horse's harness is ornamented with metal disks (*phalerae*).

The panel at the right is a memorial of Caius Marius, and represents him charging on horseback and hurling a spear. His breast is covered with a leather protector on which are metal disks which he has received in recognition of military service. Below they are repeated, nine in all, on a larger scale. The armlets shown in the corners above are also military gifts.

Roman Forum. — Of this vast empire the seat of power was Rome, a city of innumerable streets and buildings. Within its walls dwelt more than two million souls. It was a truly magnificent city, its fora and public squares containing temples, triumphal arches, and other public edifices of great splendor.

The Roman Forum, see illustration, page 16 of the drawing-book, was the chief place of public assemblage. Originally it was simply an irregular space in the valley surrounded by the hills of the city. Here were built temples in honor of the gods; halls in the names of the emperors; triumphal arches and columns in honor of victors and heroes; statues to statesmen and men of fame.

“ Over the Alban mountains the light of morning broke ;
 From all the roofs of the Seven Hills curled the thin wreaths of smoke :
 The city-gates were opened : the Forum, all alive,
 With buyers and with sellers, was humming like a hive.
 Blithely on brass and timber the craftsman's stroke was ringing,
 And blithely o'er her panniers the market-girl was singing ”

— T. B. MACAULAY.

In the vicinity were the palaces of the Cæsars and the Coliseum, see illustration, page 16 of the drawing-book. Successive emperors built anew or added to the splendor of the magnificent civic architecture, and new fora and new buildings were built at enormous cost. The Forum Romanum was the chief, while that of Trajan was the most extensive and the finest from an architectural standpoint.

Amphitheatres, Baths, Aqueducts, Basilicas, Triumphal Arches, Tombs. — Every Roman city had its important places of amusement. Foremost among them was the amphitheatre or coliseum for the exhibition of gladiatorial combats and contests of wild beasts. In the theatres were enacted the dramas. The baths or *thermæ* were immense establishments containing halls, courts, chambers, hot and cold water baths, swimming-baths, gymnasia, gardens, lecture halls, and lounging-rooms. These were built on a most extravagant scale, regardless of cost. Aqueducts for conveying water into the cities were supported by arches in crossing valleys; and most important remains still exist at Rome, in southern France, Spain, and elsewhere. Triumphal arches and columns were built to commemorate great events, victories, and enterprises. See illustrations, page 16 of the drawing-book.

Tombs of equal magnificence were built; these tombs varied in size and style. The tomb of Hadrian was two hundred and thirty feet in diameter. One of the best preserved tombs is that of Cecilia Metella on the Appian Way. The *basilica* was another Roman building intended for judicial and commercial purposes, and often built on a magnificent scale. Maxentius began the Temple of Peace, afterwards completed by Constantine; a picture of its ruins is given.



Tomb of Cecilia Metella.



Basilica of Constantine.

Roman Art. — The Egyptians dwelt along the banks of the Nile River, and built their everlasting temples in honor of their many gods. They decorated temples and tombs with symbolic characters, the chief of which was the lotus, symbol of the resurrection of the soul. The Greeks lived among the beautiful mountains and along the deeply indented shores of the peninsula of Greece, the coast of Asia Minor, and the islands of the Ægean Sea. In their chief cities they erected superb temples to enshrine the statues of their gods. The Greeks were artistic and poetic in the idealistic sense. Wherever they colonized, there flourished civilization and culture. The Romans were conquerors and lawgivers, and Roman art is a reflex of the people — practical, utilitarian, and realistic. Use rather than beauty, quantity rather than quality, were too often their art precepts.

Roman art is characterized by splendor, magnificence, and richness of detail. The Romans were unable to appreciate the simplicity of Greek construction with its beautiful ideal proportions. Neither could they appreciate Greek ornament with its elasticity of curves, its purity of lines, its space values, harmonious color effects, and adaptation to purpose. The subtle curves of the Greek vase and of Greek mouldings meant little to the Romans. For these they substituted geometric curves and mathematical proportions. Being of the most practical turn of mind, but possessing the power of invention, they originated and perfected buildings for utilitarian purposes, such as were unknown before their time. The care with which they worked out detail may be seen in the illustrations of the door of the Pantheon with its detail, given on page 144.

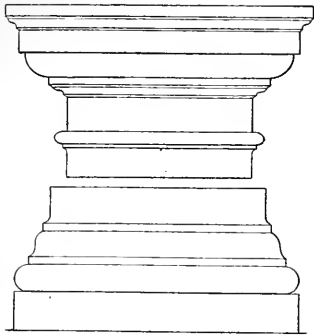
With the Greeks art was a matter of feeling, with the Romans it was more a matter of understanding and of utility. The Greek temples were comparatively small and situated in prominent places where their beautiful outlines could be easily seen and comprehended; the Roman buildings were of greater extent and variety. Basilicas, arches, tombs, amphitheatres, theatres, and villas were constructed for religious, civic, and domestic purposes. Buildings were erected for the glory of the state and for the glory of the individual. They were covered with a lavish display of ornament, rich as a whole, but lacking in æsthetic qualities and refinement of feeling.

Vaulting. — For hundreds and even thousands of years preceding the time of the Romans, the architecture of the Egyptians, Assyrians, and Greeks was dominated by one constructive principle, — that of the lintel. The lintel is the horizontal slab of stone covering openings supported on both sides by masonry or by columns. Egyptian and Greek architecture is purely a lintel architecture. The Egyptians curved the ceilings of some of their tombs to imitate the vault of heaven, decorating

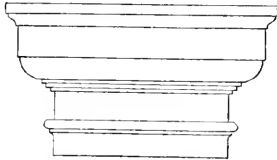
its blue surface with golden stars. They did not know the construction of the true arch. The Greeks may have known its construction, but they did not employ it. It remained for the Romans, a race of engineers, to develop the arch. Undoubtedly they observed its use by the Etruscans, but they perfected its use, and, as an element of construction, completely revolutionized the art of building. They learned first that the semicircular arch could be used to span a wide opening, which, in its simplest form, is illustrated by ordinary sewer construction. They further learned that two arches could intersect one another, and the roof over the intersecting spaces be made to support itself. This was a great advance in engineering skill, but the intersection of two arches gradually led to the most triumphant achievement of all, the construction of the dome. See illustration of the Pantheon, page 16 of the drawing-book. The Romans gave the arch and dome to posterity, and the lintel and the arch combined have dominated construction ever since. Every building in the world can be classed under lintel or arch construction, or the combination of lintel and arch construction. These two fundamental principles of construction, the mere method of covering openings, have controlled building and architecture throughout the ages. The illustrations on page 16 of the drawing-book show the use of the lintel, arch, and dome.

Architectural Orders. — The Doric and Ionic orders were used and perfected for all time by the Greeks. The Corinthian order was employed by them, but not freely. The Romans used the Doric and Ionic orders, but especially favored the more elaborate Corinthian style, which they further embellished, producing an order sometimes known as the Composite. See illustration on page 10 of the drawing-book. The Romans also utilized the Tuscan order, which was a simple form of the Doric used by the Etruscans. The Romans had not the patience to work out subtle proportions, and the great number and extent of Roman buildings that were constructed soon led to a regular system of proportions for the Five Orders: the mouldings of these Orders being outlined by arcs of circles rather than by the more subtle curves of the Greeks. This system of proportions was formulated by Vitruvius, a Roman architect of the time of Augustus. It was brought out in more detailed form by Vignola in the sixteenth century.

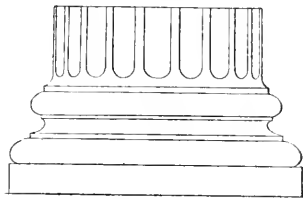
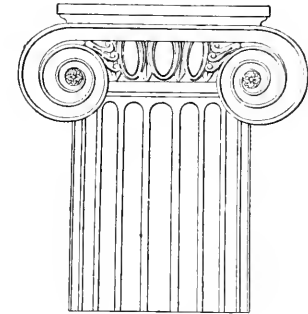
The Greeks employed a single Order in the construction of a building; the Romans oftentimes combined three, placing the Doric, the most substantial and severe, on the lowest story, the lighter or Ionic, on the second story, and the decorative Corinthian, on the third story. Instead of constructing columns in drum sections, they employed monolithic shafts, see illustrations of the Pantheon and of the Temple of Saturn in the Roman Forum, page 16 of the drawing-book; these



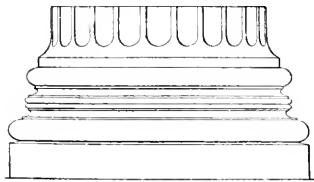
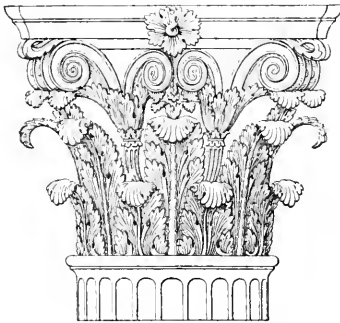
ROMAN DORIC, FROM THE COLISEUM, ROME



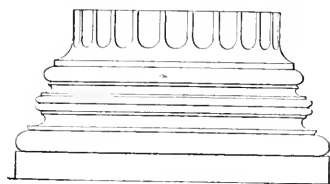
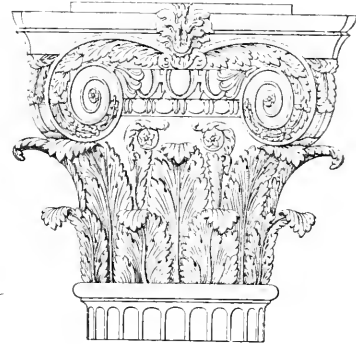
ROMAN DORIC ORDER,
THEATRE OF MARCELLUS, ROME



IONIC ORDER,
TEMPLE OF FORTUNA VIRILIS, ROME.

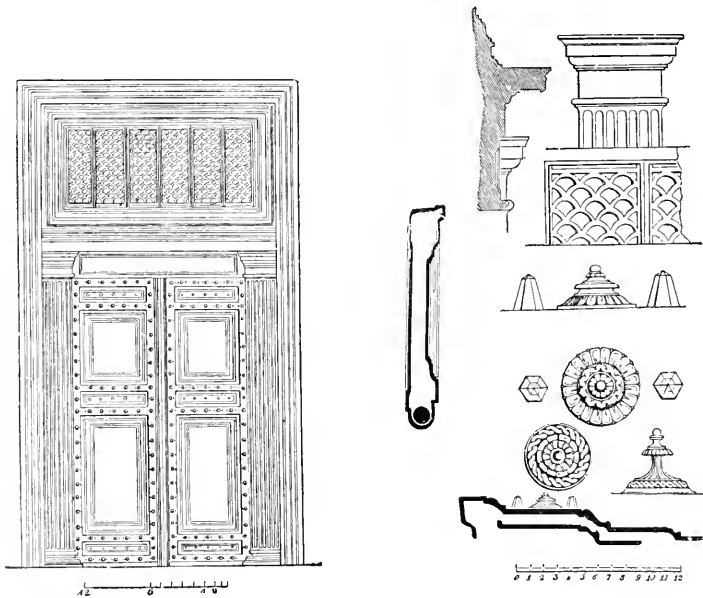


CORINTHIAN ORDER,
PANTHEON, ROME



COMPOSITE ORDER
ARCH OF TITUS, ROME

were often of porphyry or other expensive stone highly polished to bring out the color. The Greeks used columns for purely constructive purposes, while the Romans often made them a decorative feature, as engaged columns against wall spaces or as part of an arcade, having no constructive value. See illustration of Arch of Constantine, page 16 of the drawing-book. They also mounted columns on pedestals to secure greater height without altering the proportions. In the building of their temples the Romans employed both rectangular and circular plans, which they often combined to produce variety.

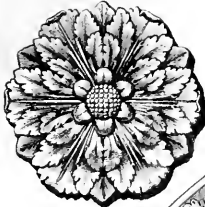


DOOR OF THE PANTHEON WITH ITS DETAIL.

Roman Decoration. — As in building, so in decoration, richness of effect was preferred to refinement in design. The care with which they carried out detail can be seen in the illustration of the door of the Pantheon. In place of the simplicity and delicacy of Greek ornament, the Romans substituted an abundance of conventional ornament. The scroll, rosette, and acanthus were the motives most freely used, being combined in a great variety of designs. The human figure, part realistic and part fanciful, was introduced into designs with acanthus forms, wreaths, ribbons, masques, and other grotesque forms of life.



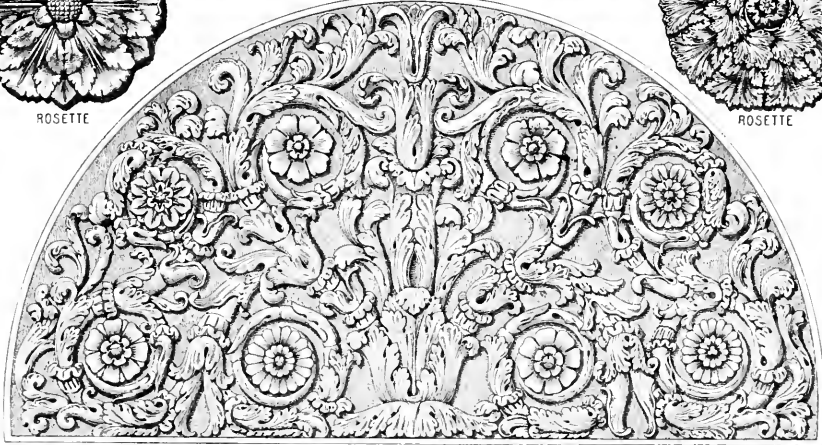
FROM THE TEMPLE OF PEACE, ROME



ROSETTE



ROSETTE



FRAGMENT FROM THE MATTEI PALACE, ROME



PILASTER FROM THE VILLA MEDICI.



FRAGMENT FROM THE VILLA MEDICI, ROME



ORNAMENTED TORUS.



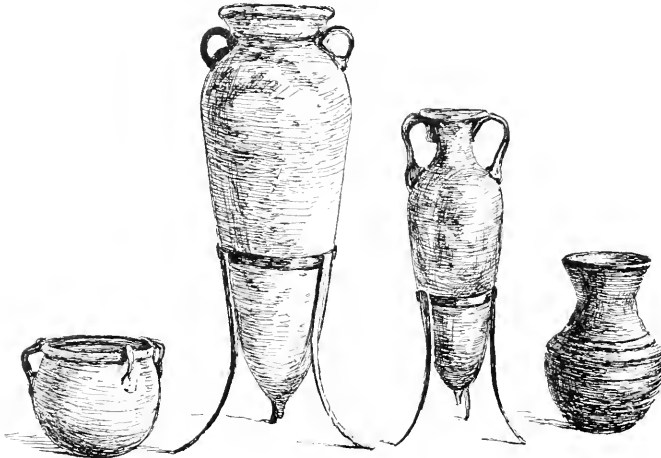
PILASTER FROM THE VILLA MEDICI.

Roman Decoration.

The walls of buildings were covered with plastering and embellished with brilliantly colored designs. Mosaics were freely employed. Pompeii and Herculaneum give us many examples of this form of decoration.



The illustrations show various forms of glass cups, pitchers, and vases discovered at Pompeii.



Examples. — The illustrations on drawing-book page 10 convey an idea of the extreme richness and luxuriance of Roman ornament. The capital from the Arch of Titus is shown in connection with the entablature so as to give a better idea of it in its relations. The love of the Roman for abundant decoration is again seen here in the ornament of the mouldings of the architrave, in the sculpture of the frieze, and in the imperial mouldings of the cornice, showing power and magnifi-



Pompeian Mosaics.

cence. The acanthus leaf seen in the examples on this page appears almost constantly in Roman ornament. It is interesting to trace it in its various modifications and adaptations. See also page 149 for the use of the acanthus. The scroll, which with the Greeks is simple and rather severe, is clothed with the acanthus leaf, and usually in the centre of each spire there is a rosette, as illustrated in the examples from the Temple of Peace and from the Forum of Nerva.

Pupils' Work. — Lead the pupils to see how the luxury and extravagance of the Roman people showed themselves in their ornament, and also that such ornament is not suited to present civilization and ideas of living. There are, however, in it certain elements of beauty that make it worth study. The sweep of the scrolls is fine, and the distribution, spacing, and balance are good. The scroll from the Temple of Peace is translated into line on the drawing-book page; the rosette at the bottom of the page is similarly translated into line. Pupils may render these line drawings enlarged on drawing-book page 11, or they may select other examples and translate them into line, or they may themselves design a scroll ornament. A careful study of line, curvature, and occupancy of space is necessary for this work. Either pencil painting or the brush is very suitable for this work.

Books to be Read. — The following books will be found of interest to pupils and teachers:¹ —

History of Rome. V. Duruy.

The Story of Rome. Arthur Gilman.

Ben Hur: A Tale of the Christ. Lew Wallace.

Young Folk's History of Rome. C. M. Yonge.

Lays of Ancient Rome. T. B. Macaulay.

Zig-Zag Journeys in Classic Lands. Hezekiah Butterworth.

Zig-Zag Journeys in the Mediterranean. Hezekiah Butterworth.

¹ A set of small reproductions of photographs and drawings from Roman architecture and ornament, with brief descriptive notes, has been prepared by the publishers of this manual, and is known as the Prang Note-book Illustrations. Teachers will find this set of special interest in connection with the study and drawing of Roman ornament. (For particulars, see the list at the end of this volume.)

BOOK 9, PAGES 12 AND 13.

SEVENTH YEAR BOOK, PAGES 12 AND 13.

DECORATION.

EXAMPLES.—Historic Ornament. Byzantine. Principles of Beauty.
ART.—Rendering. Expression of Color.

[The pupil sketches some of the examples on the drawing-book page, chooses one for reproduction, and makes an enlarged sketch, criticises the work thoughtfully, considering the character of line and the space relations, or designs an ornament showing the principles of beauty found in Byzantine ornament, and draws in the book, seeking for beauty of line and of space relation, and showing color by pencil painting, brush and ink, water color, or colored paper.]



Byzantium.—This ancient city occupied an incomparable position on the Bosphorus, which furnished a harbor, still known as the Golden Horn. Its beautiful curve resembled the horn of a stag or of an ox, and the term *golden* expressed the riches which were wafted into this secure and ample port from all parts of the world. The city commanded the opposite shores of Europe and Asia; the climate was agreeable, the soil readily yielded to cultivation, the harbor was fine, and the position was easy of defence.

When Constantine the Great decided to transfer the capital of the Roman Empire from Rome to Byzantium, he wrote to his officers, "Send me word, not that your edifices are begun, but that they are finished." Thus urged, the new city was built in four years, and was called Constantinople.

"Green, azure, and vermilion, fret with gold,
Blaze the domed roofs in many a globéd fold
Of splendor, set with silver studs and disks:
And, underneath, the solemn obelisks.

* * * * *

"To the broad base of granite pedestals
That prop the gated ramparts, round about
The wave-girt city: whence flow in and out
The wealth and wonder of the Orient World."

—OWEN MEREDITH.



Mausoleum. — Galla Placidia. — Ravenna.



Mausoleum. — Galla Placidia. — Ravenna.

The People.—As the Roman or Byzantine Empire so soon passed away, the people by whom the Byzantine style of art and architecture was formed have no name as a nation. They were Romans and Greeks and also people of Germanic races. They had in large measure the manners and customs of the Romans; for although the Germanic people came in with very simple and many times barbarous customs, they adopted the luxurious ways of the Romans. At the time of Constantine there was very great wealth in the Roman Empire. Large supplies of grain and oil were distributed publicly so that every one was supplied with food.

Luxury prevailed everywhere. There was great sumptuousness in living and elegance in costume, the beauty of costly silken fabrics being enhanced by the abundant use of precious stones in decorative patterns. These may be seen in the illustration below, taken from a fresco in a convent near Trebizond. The figure in



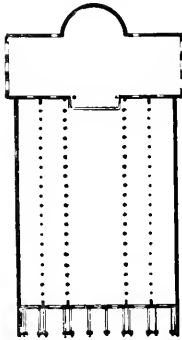
the centre is the Emperor Alexis, "emperor of the whole of Anatolia," in a jeweled cope, wearing a rich tiara and holding a sceptre. At his right is the figure of the Princess Irene, "Mother of the Eagle, the very pious king, Lord Alexis," wearing a diadem like those still worn by Russian princesses. She holds the model of a church, distinguishing her as the foundress of a monastery.

The third figure is Theodora, "the very pious ruler and empress of all Anatolia." She bears a sceptre in one hand and a disk in the other. Her dress and robe rival the robes of Irene in richness. They are all heavily jeweled.

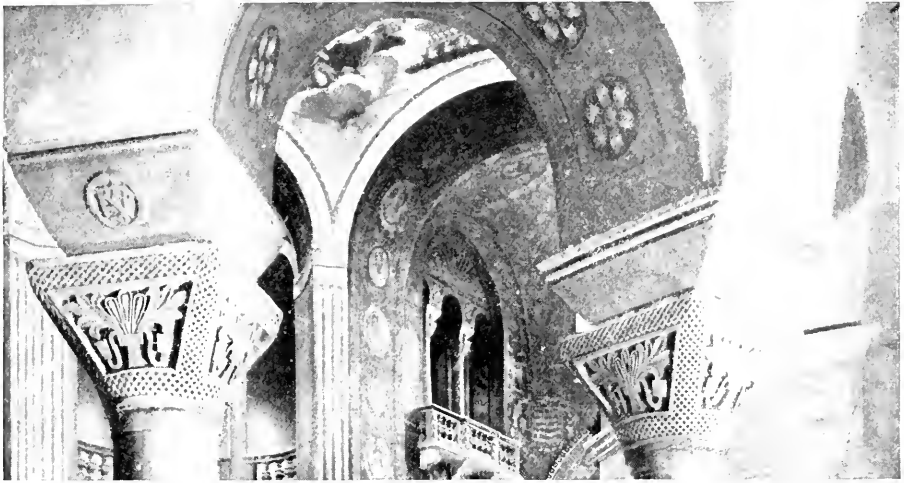
Dwellings of the people at this time were largely after the style of the Roman houses, while ordinary dress had not greatly changed. The increase of color was, however, marked; for while with the Romans togas were white by law, except in the case of the imperial purple worn by the emperors alone, yet, in the Byzantine period, other colors, scarlet, violet, and purple, with the additions of precious stones, were worn by many. The people were classed as patricians and plebeians, as with the Romans, and slaves were kept, as by the Egyptians, Greeks, and Romans. All the luxury of the time, as well as the symbolism of their religion, is seen in their architecture and ornament.

Origin and Development of Byzantine Architecture.—As has been said, Constantine made Byzantium, on the Bosphorus, the “New Rome” of the Roman Empire, changing its name to Constantinople. The new capital became a city of great importance. The two centuries that followed were periods of great building activity. Great wealth produced new and great buildings. Many of the architects and artists employed were Greeks from the islands of the Ægean and from the coast of Asia Minor. Contact with the Oriental people of the East also produced a great fondness for brilliant and harmonious color effects. It was but natural, therefore, that out of the traditions of Roman art and the newly inspired art of the early Christians, influenced by the Greeks and Orientals, a new style should be formed, which is known as the Byzantine.

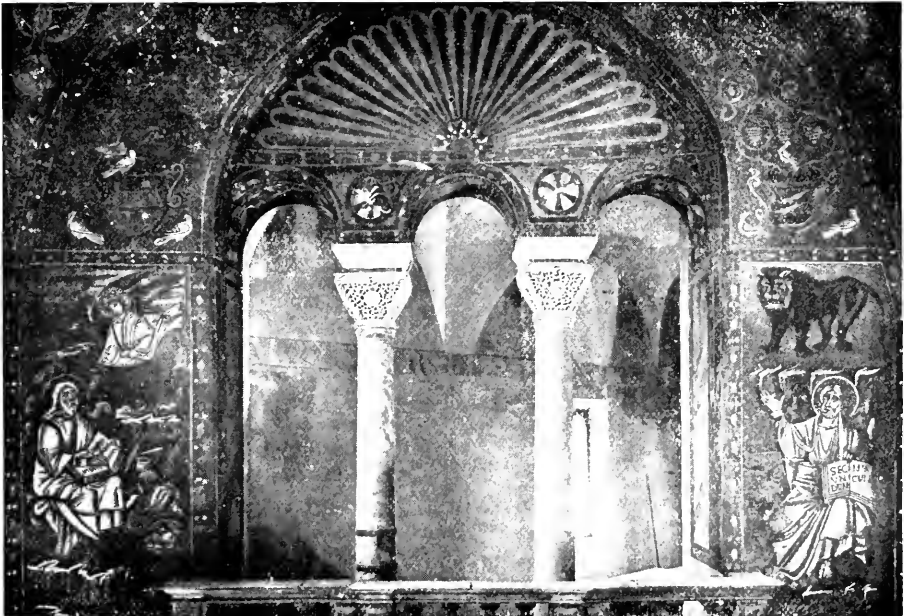
In 329 A.D., Constantine gave formal recognition to Christianity. Classic art in Rome had passed into decay. Out of this decline the people of the new religion brought into existence a new art for a new purpose. The public and private basilicas were well adapted to the requirements of Christian worship. The early Christians either made direct use of the pagan basilicas or built churches of similar plan. The Christian basilica was usually oblong in plan; in the centre was a broad and lofty nave, flanked by single or double aisles. The side aisles were separated from the nave by columns which carried the wall of the clerestory above. Both nave and side aisles were covered with a wooden roof. The exterior of the basilica was plain and without decorative treatment. The most typical examples of the Christian basilica are at Ravenna, built in the early part of the sixth century. The interior was made beautiful by the use of colored symbolic decorations in glass mosaics, the most importance being attached to the decoration of the half-dome of the apse, and the triumphal arch; see Plates XI. and XII. The mosaic decora-



PLAN OF A BASILICA.



Church of San Vitale. — Ravenna



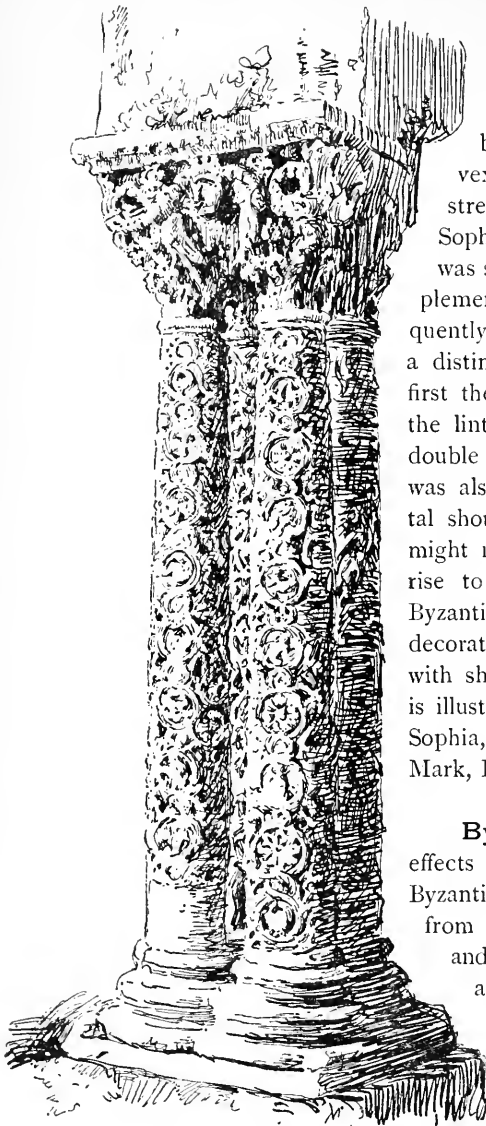
Church of San Vitale. — Ravenna.

tions usually consisted of symbols and pictures illustrative of church doctrines and Bible stories. The mausoleum of Galla Placidia at Ravenna, Plate XI., is a most interesting example of Byzantine structure.

In many particulars the Byzantine style was similar to the early Christian ; the latter, however, was concerned with the basilic form and wooden roof, while the vault and dome characterized the Byzantine. The Romans had perfected these features, and in moving the capital to the East, the one constructive feature that was impressed upon the builders more than anything else was the dome — so much so, that the architecture of the eastern capital may be spoken of as dome construction. It has influenced the people of that region throughout the centuries, and is now one of the most characteristic features of Mohammedan architecture. See illustrations of Santa Sophia and St. Mark, on page 16 of the drawing-book, and of St. Mark, Book 10, page 16 ; Seventh Year Book, page 32.

The dome, as employed by the Byzantines, rested upon four semicircular arches, and the triangular spaces of masonry between were known as pendentives. In the Roman buildings, notably the Pantheon, the dome rests upon a circular wall or plan, but in Byzantine architecture a new foundation was substituted. By the new construction the architects were enabled to build churches oblong in plan, with aisles ; the dome being employed as a central feature, supported by heavy piers, covering the central portion of the cross formed by the intersection of what might be called the nave and transept. The arms of this cross formed three apses, which were covered by half-domes, as shown in the illustration. Many openings and windows were carried round the lower portion of the dome, forming a circle of openings and producing great lightness of effect. A most noted Byzantine church is that of Santa Sophia, built at the time of Justinian (522–538 A.D.), see illustration of Santa Sophia, on page 16 of the drawing-book ; another is that of San Vitale, at Ravenna, built about 525 A.D., see Plate XII. ; a third, the church of St. Mark, in Venice, commenced in 977 A.D., page 16 of the drawing-book. St. Mark's is largely Byzantine in style, although it contains features which belong to other styles. The churches of St. Mark and Santa Sophia are described on pages 167 and 169.

Columns and Capitals. — The Romans made free use of the column for constructive and decorative purposes, but they rarely used it in arch construction. Enormous piers of masonry served for the latter purpose, while columns of beautiful marble were sometimes made to carry lintels or horizontal entablatures. In the early Christian and Byzantine styles there came about the desire to abandon the



FROM MONREALE.

lintel, the support being derived from arches between columns. As the concave surfaces of the Corinthian capital did not form a requisite support for the thrust of the arch, it became necessary to curve the capital convexly in order to obtain greater volume and strength. See illustration of capital from Santa Sophia, page 13 of the drawing-book. The capital was surmounted with a cubic block of stone, a supplementary abacus or dossier whose height was frequently greater than that of the capital itself. This is a distinguishing mark of Byzantine architecture. At first the Byzantine architects retained a portion of the lintel above the capital, and thus was formed the double or cushion-shaped capital, see Plate XII. It was also necessary that the ornament upon the capital should be in very low relief, so that the capital might not be weakened by undercutting. This gave rise to a low relief decoration, which is distinctly Byzantine. The acanthus was used as a motive for decoration. It was highly conventionalized and cut with sharp, jutting points. This style of decoration is illustrated by the capital from the church of Santa Sophia, and the moulding from the church of St. Mark, Book 9, page 13, as well as on page 160.

Byzantine Ornament.—The first definite effects of Christianity upon art are to be seen in Byzantine ornament. It is, in this way, separated from the great ancient styles,—Egyptian, Greek, and Roman. It is the first of the new era, and belongs to the styles of the Middle Ages. Byzantine ornament is distinctly symbolic. Its chief materials were symbols of the Christian faith.

Like the early Christian, the Byzantine churches had but little exterior decoration. Interior wall spaces, however,



Cathedral, Palermo.



Cathedral, Monreale.



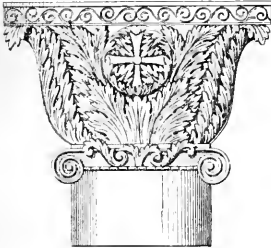
CHURCH OF ST SOPHIA, CONSTANTINOPLE, VI. CENT.



CHURCH OF ST SOPHIA, CONSTANTINOPLE, VI. CENT.



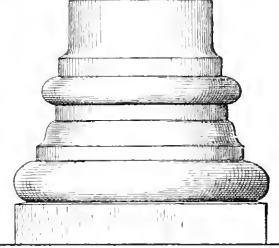
CHURCH OF SERGIUS & BACCHUS, CONSTANTINOPLE, VI. CENT.



CHURCH OF ST MARKS, VENICE XI. CENT.

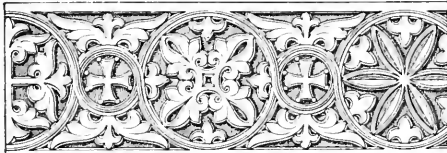


CHURCH OF ST SOPHIA, PADUA, ITALY. VI. CENT.



FROM THE CHURCH OF ST SOPHIA, TREBIZOND, TURKEY VI. CENT.

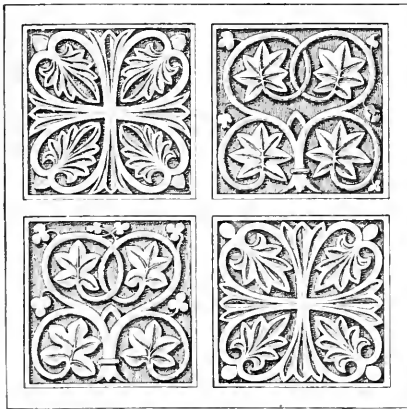
BYZANTINE CAPITALS AND BASE.



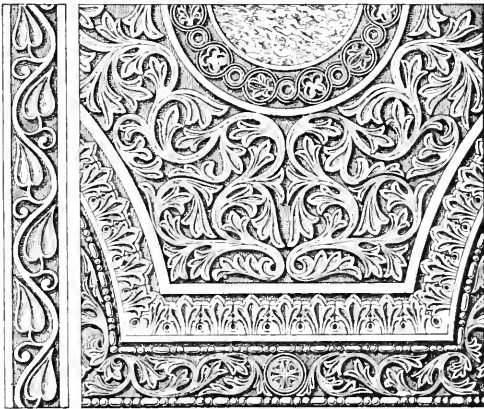
FROM THE CHURCH OF ST SOPHIA, CONSTANTINOPLE, VI. CENT.



FROM THE CLOISTER HORMISDAS, AGIOS SERGIUS, CONSTANTINOPLE, VI. CENT.



FROM THE CHURCH OF ST SOPHIA, CONSTANTINOPLE, VI. CENT.



FROM THE CHURCH OF ST MARKS, VENICE, XI. CENT.

Byzantine Ornament.

were richly ornamented, nearly all designs being in color and executed in mosaics. The backgrounds were usually of gold, blue, or delicate green, with a great leaning toward blue-green, upon which were placed brilliant, harmonious, and effective designs. The motives were largely symbolic and allegorical. Groups of saints and Bible scenes occupied the larger spaces of the half-dome of the apse, while crosses, monograms, and other Christian symbols filled the smaller spaces. The walls were often paneled with rare and costly marble slabs and columns. Carved ornament was little used except on capitals.

Examples. — The illustrations on pages 12 and 13 of the drawing-book were gathered from various sources, thus showing the wide range of the Byzantine style — from Constantinople, from Italy, and from Sicily. The church of St. Mark in Venice and of Santa Sophia in Constantinople have already been alluded to several times, and are briefly described on pages 167 and 168. The relief examples from these two churches on page 13 of the drawing-book show the angular character of the sculpture. The mosaics shown on page 12 are from the cathedral of Ravello, a town near Amalfi, in Southern Italy. The cathedral was celebrated for its decoration, and especially for its fine bronze gates.

Southwest from Ravello are the towns of Palermo and Monreale, on the north-west coast of Sicily. The cathedral of Monreale, by virtue of its remarkable and profuse mosaic decorations, ranks among the finest of mediæval churches. The cathedral of Palermo is richly ornamented externally as well as internally with intersecting arches and with fine mosaics. Although both these cathedrals were erected under Norman direction, the artists and artisans were Greeks who gave a Byzantine effect to Roman basilic forms.

Pupils' Work. — These examples of historic ornament should be studied for their beauty, which results from the repose of symmetry, the rhythm of repetition, and the agreeable variety produced by fine lines and spaces well balanced.

A row of sketches from the examples might be made at the top of the space on the drawing-book page, and one of the examples enlarged below in any medium desired. If the teacher desires, some pupils may design mosaic work, as suggested by the examples from Ravello on page 12 and from Palermo on page 13.

Chords of color might be worked out in colored paper.¹ See *Color*, page 96. The *Color Manual*, page 136, can also be studied to advantage here. Some example may be worked out in colored paper, or may be painted on a background of colored paper.

¹ "The Prang Examples of Historic Ornament," prepared in water-colors by Mrs. Hannah Johnson Carter, will be of great help to teachers and pupils.



Cloisters. — Monreale.



Interior. — Monreale.



Cathedral. — Ravello.

Added Interest. — The drawing of the human figure was extremely conventional at this period, as will be seen in the illustration on page 156 and in those below.



FROM A MOSAIC IN ST. SOPHIA'S, THESSALONICA.

The drawing of trees and rocks is of the same conventional character.

Books that may be Read. — Both teachers and pupils who are interested in this subject will find pleasure and profit in reading more about it ; a few books are mentioned.

The Byzantine Empire. C. W. C. Oman (Stories of the Nations).

Europe in the Middle Age. • Oliver J. Thatcher and Ferdinand Schmidt.

History of Charles the Great. (Charlemagne.) J. J. Mombert.

Roman and Mediæval Art. William H. Goodyear.

Byzantine Architecture. C. F. M. Texier and R. P. Pullan.

Constantinople. Edwin A. Grosvenor.

The Church of Sancta Sophia, Constantinople. W. R. Lethaby and Harold Swainson.

DECORATION.**SPACE RELATIONS.** — Examples of Historic Ornament.**ART.** — Rendering. Expression of Color.

[The pupil studies the examples of historic ornament given on the drawing-book page, noting the characteristics of the different styles and observing thoughtfully the space relations, designs one or more frets, and draws in the book, showing color by any desired medium and seeking for beauty of effect.]

Preparation for the Lesson. — The pupils will probably be able to tell something about the different styles of ornament, represented on the drawing-book page, from their previous study of the historic styles. They will be interested in the symbolism of the first example, a characteristic Egyptian decoration, representing in a conventional way the lotus and papyrus growing in the river Nile — the symbol of food for body and mind. The zigzag lines represent the waters of the Nile. Let them study here the division of the space, the balance of light and dark, the small quantity of black giving brilliancy while the white background gives lightness to the whole.

Lead them to study the placing of the Assyrian figure in the oblong, just a little removed from the centre, while the wings give balance to the whole. Call attention also to the touch of black, and the balance of light and dark in the figure of the Assyrian god.

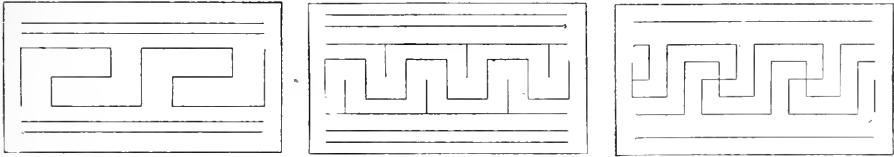
Study in the same way the example of Greek brush work. A very characteristic example has been chosen here. There is no attempt to represent any existing thing, no thought of symbolism. The design is simply an assemblage of beautiful brush marks, each having direct reference to others, — each contributing to the general lines of curvature, — each a part of the whole. The distribution of the three tones is very fine.

Then, after their study of Roman ornament, the pupils will recognize in the Roman example the characteristics of Roman life, — luxury and power, — as shown in the strength of the curve beneath its luxurious clothing. The space here is well filled.

Lead the pupils to see that in the example of Roman ornament the light and dark are produced by light and shade. The beauty of Roman ornament was produced by a good balance of light and dark, through fine drawing and modeling ;

it was strong and decided, but usually too elaborate to be really good ornament. A word might be said here as to the necessity of a good balance of light and dark in modeling or carving on a building. This is the secret of good raised ornament.

Frets or Meanders.—The characteristics of the people and their surroundings may be seen in the frets illustrated in the drawing-book. The Egyptian gives an especially horizontal effect, reminding one of the level stretches of river and land in Egypt. The Assyrians built magnificent structures on elevations reached by long flights of steps, of which the Assyrian fret is a reminder. In the Greek fret may be seen the even serenity of the people; the fine balance of light and dark, of motion and repose, gives to this fret that peculiar attraction which has made it, as it were, immortal. The Roman fret is more complex, more complicated; it uses two elements, the square and the band, instead of simply the band, as in the Greek fret. Moreover, there are two bands instead of one, and interlacing comes in as a new disposition of these bands. The means of producing the fret are also more elaborate, for the Roman is in mosaic while the Greek is produced by the simpler and more direct means of the brush.



Have the pupils study especially the interesting arrangement of light and dark in the various frets shown. Frets are usually composed of continuous lines or bands arranged in rectangular figures. An almost endless variety may be designed and carried out by the pupils. The frets above are Greek; the figures below are units of Japanese frets.



Mr. Dow, in his book on "Composition," speaks of a fret as a variation of a straight-line theme, and in this connection mentions repetition as "one principle by which line-music may be composed"; and, still further, speaks of the designing of a

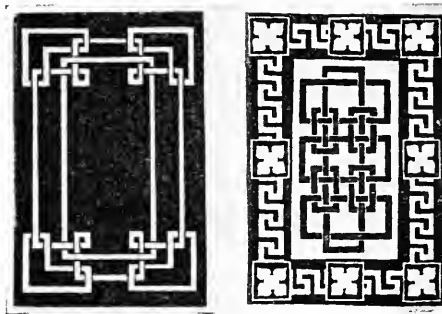
fret as "the production of a rhythmical beauty in terms of straight line, to which shall afterward be added the beauty of dark and light."

He suggests that a fret be developed from a row of vertical lines, connecting them in such ways as may appeal to the designer. But he says, "Beware of *mere invention*, without appreciation." He especially says of the lines used, "See that they are well proportioned, one to the other, and delicately spaced. Then you may use repetition to give a subtle quality of musical movement."

Suggestions to Pupils.— Sketch your design for a fret on practice paper, taking care to keep it simple, avoid intricate interlacing, and try to get a good balance of light and dark.

A section of two borders might be shown on the page. Draw in the design lightly on the drawing-book page, finishing with ink and brush. If desired, color might be used, taking care not to have the coloring too strong; perhaps coloring suitable for a mosaic border might be used. The Roman fret shown represents a Pompeiian mosaic. Terra cotta and black might be combined in a simple fret. Where the colored papers are used, a border might be carried out with ink on the red gray (russet) paper.

To produce the terra cotta with water color, combine the three colors—red, yellow, and blue—with an excess of the red and yellow. Black in water color may be obtained by combining the three colors, working directly from the cakes of paint and using an excess of blue.



BY STUDENTS OF PRATT INSTITUTE.

BOOK 9, PAGE 15.

THIRD YEAR, PAGE 15.

ILLUSTRATIVE PAGES.

AN ARTIST'S SKETCHES. — John La Farge.

The Illustrations. — The opportunity to watch a master at work is a great help to the student. Boys and girls in this grade, having attempted to solve various problems in pose drawing, will be sufficiently intelligent to study earnestly the pencil sketches by John La Farge, reproduced on drawing-book page 15. A brief account of the artist will be found on pages 85, 86 of this manual. He has spent several years in Japan, and these sketches are among the many brought home from his Eastern journeys.

Pupils will like to know that a great man like La Farge is continually making sketches, often fragmentary sketches, just as a musician experiments over and over with a few bars of music, or an author experiments with words and phrases, trying to find the most perfect expression for a fine thought or a beautiful feeling. The sketch on the left half of the page was marked by the artist himself with the memoranda that appear near it. In the upper left corner, near the girl's hair, he says, "Too dark." In the upper right corner he makes a note, "head too much this side." (In view of these self-criticisms, notice the pose and color in the sketch of the head on the right half of the same page.)

The memoranda at the right of the full-length figure are memoranda of the actual color of the various parts of the dress and read: "dress, lavender, white sash with red flowers highly projected, sky blue skirt, pink neckerchief, white under-dress, to left near neck black or dark blue and white check, red ornament in hair," etc. These notes would naturally refresh his memory if he ever wished to show the figure in color.

See, on the right half of the page, how La Farge tried the effect of slightly different arrangements of line and of light-and-dark in the draperies held by the girl's right hand, and those around and under her left arm. Artists pay great attention to the lines of the drapery about a human figure, in order that these may, at the same time, express the vigorous, living form beneath, and be, themselves, beautiful to the eye.

In this connection, study the draperies of the Greeks as seen in Manual, Part IV., of the Elementary Course, of the Romans as shown on pages 142, 143, and 145, and the drawing of Byzantine draperies on pages 155 and 161 of this Manual.

ILLUSTRATIVE PAGES.

ROMAN AND BYZANTINE ART. — Arches, Temples, Theatres, and Churches.

Roman Architecture. — The Pantheon, of which the ground plan is given in Book 10, page 10 ; Seventh Year Book, page 26, is a fine example of the characteristics of Roman structural forms. The circle appears in their ground plans and domes as well as in the arch, and its round curves are noticeable in much of their ornament. The full circular curves are a distinctive feature of Roman art ; the Greeks used the more subtle curves of the ellipse.

The Roman Forum. — The illustration in the middle of the page shows the principal buildings of the Roman Forum, and here may be discovered most of the characteristic members of Roman ornament. In it are seen, at the left in the background, the arch of Septimius Severus ; at the right, the ruins of the Coliseum. In the foreground are some columns of the Temple of Saturn. These show the Roman base and capital.

“In many a heap the ground
Heaves, as if Ruin in a frantic mood
Had done its utmost. Here and there appears,
As left to show his handy-work not ours,
An idle column, a half-buried arch,
A wall of some great temple, — it was once,
And long, the centre of their Universe,
The Forum, — whence a mandate, eagle-winged,
Went to the ends of the earth.”

— SAMUEL ROGERS.

Arch of Constantine. — This beautiful arch was erected during the reign of Constantine to commemorate his victories, 312 A.D. It was not in the Roman Forum. It was remodeled from an earlier arch on which the decoration was very fine.

Coliseum. — The Roman Coliseum is well known as the seat of the gladiatorial shows ; it is now a very beautiful and impressive ruin.

Byzantine Architecture. — Two examples of Byzantine architecture are given on drawing-book page 16, in addition to those shown on Plates XI.—XIV.

St. Mark's.—The church of St. Mark is one of the finest examples of the Byzantine influence in Italy. It is on the square of St. Mark, in Venice, the City of the Sea.

“There is a glorious City in the Sea.
 The Sea is in the broad, the narrow streets,
 Ebbing and flowing; and the salt seaweed
 Clings to the marble of her palaces.
 No track of men, no footsteps to and fro,
 Lead to her gates. The path lies o'er the Sea,
 Invisible; and from the land we went,
 As to a floating City, — steering in,
 And gliding up her streets as in a dream,
 So smoothly, silently, — by many a dome,
 Mosque-like, and many a stately portico.
 The statues ranged along an azure sky;
 By many a pile in more than Eastern pride,
 Of old the residence of merchant-kings;
 The fronts of some, though Time had shattered them,
 Still glowing with the richest hues of art,
 As though the wealth within them had run o'er.”

—SAMUEL ROGERS.

The church of St. Mark is built on the plan of the Greek cross, and this figure is repeated above by five large domes. The plan will be found in The Note-book Illustrations. The main part of the church was erected in 976 and 1071, but many latter additions have been made, especially in the mosaic decoration, the upper part of the *façade*, or front, not having been built until the fourteenth century. A wonderfully graphic account of this church may be found in Ruskin's “Stones of Venice.”

“Venice must of needs eternal be,
 For Heaven had looked through the pellucid air,
 And cast its reflex in the crystal sea,
 And Venice was the image pictured there.

“That strange Cathedral! exquisitely strange,—
 That front, on whose bright varied tints the eye
 Rests as on gems, —those arches, whose high range
 Gives its rich-broidered border to the sky,—
 Those ever-prancing steeds!”

—RICHARD MONCKTON MILNES.

Santa Sophia.—The greatest and most magnificent work of Byzantine architecture is the church of Santa Sophia, begun by Constantine, afterward partly destroyed and rebuilt by Justinian, 530 A.D. When the faith of Mahomet became the faith of the land, Santa Sophia was converted into a mosque, and various additions were made to it, like minarets, which partly concealed its original form. Its great dome rises one hundred and seventy feet above the ground. There are half domes at the east and west, and from these open smaller half-domed niches. The modification of the semicircular arch is noticeable. The circular curve of the Roman arch is extended beyond the semicircumference, and results in the horseshoe arch.

- “ Justinian, Emperor, and Augustus, bent
 On the imperial city's due embellishment,
 Whilst musing, sudden started up, and cried :
 ‘There is no worthy minster edified
 Unto the Ruler of earth, sea, and skies,
 The One eternal, and the only wise.
 Solomon the Great a temple built of old
 To the Omnipotent, at cost untold.
 Great was his power, but mine must his surpass
 As ruddy gold excels the yellow brass.
 I too a costly church will dedicate,
 To preach God's Majesty and tell my state.’
- “ Then called the Emperor an artist skilled,
 With sense of beauty and proportions filled,
 And said, ‘ In Wisdom's name I bid thee build.
 Build of the best, best ways, and make no spare,
 The cost entire my privy purse shall bear.
 Solomon took gifts of gold, and wood, and stone,
 But I, Justinian, build the church alone.
 Then go, ye heralds ! forth to square and street,
 With trumpet blare, and everywhere repeat,
 That a great minster shall erected be
 By our august, pacific Majesty ;
 And bid none reckon in the work to share,
 For we ourselves the whole expense will bear.’
 And as Justinian lay that night awake,
 Weary, and waiting for white day to break,
 The thought rose up, ‘ Now when this flesh is dead,
 My soul, by its attendant spirit led,
 Shall hear the angel at the great gate call,
 What ho ! Justinian comes, magnificent,

Who to the Eternal Wisdom, uncreate,
 A church did build, endow and consecrate,
 The like of which by man was never trod ;
 Then rise, Justinian ! to the realm of God.'

"Now day and night the workmen build ; apace
 The church arises, full of form and grace ;
 The walls upstart, the porch and portals wide
 Are tracel, the marble benches down each side.
 The sweeping apse, the basement of the piers ;
 The white hewn stone is laid in level tiers.
 Upshoot the columns, then the arches turn,
 The roof with gilded scales begins to burn.

"Next, white as mountain snow, the mighty dome
 Hangs like a moon above the second Rome.
 Within, mosaic seraphs spread their wings,
 And cherubs circle round the King of Kings,
 On whirling wheels, besprent with myriad eyes :
 And golden, with gold hair, against blue skies,
 Their names beside them, twelve Apostles stand,
 Six on the left, and six on the right hand.
 And from a nimbus set with jewelled rays,
 Looks calm, majestic down, the Saviour's face.
 Fixed is the silver altar, raised the screen,
 A golden network prinked red, blue, and green,
 With icons studded, hung with lamps of fire :
 And ruby curtained round the sacred choir.
 Then, on a slab above the western door,
 Through which, next day, the multitude shall pour,
 That all may see and read, the sculptors grave : —
 'This House to God, Justinian Emperor gave.'
 And now, with trumpet blast and booming gong,
 Betwixt long lines of an expectant throng,
 The imperial procession sweeps along,
 The saffron flags and crimson banners flare
 Against the sweet blue sky above the square.
 In front, the church of Hagia Sophia glows,
 A pile of jewels set in burnished snows."

— S. BARING-GOULD.

BOOK 10.

SEVENTH YEAR.—SECOND HALF

The Prang Elementary Course in Art Instruction is published in two separate editions, prepared to meet the varying conditions of the use of one or two books a year. In the edition providing for the use of two books a year, the books are designated as "No. 1," "No. 2," "No. 3," "No. 4," "No. 5," "No. 6," etc.; in the edition providing for the use of one book a year, the books are named "Third Year," "Fourth Year," "Fifth Year," etc. This Manual text has been especially prepared to meet the needs of both editions.

BOOK 10, PAGE 1.

SEVENTH YEAR BOOK, PAGE 17.

ILLUSTRATIVE PAGES.

FIGURES.—Herbert Adams. Abbott Thayer.

Illustrations.—The winged figures upon the drawing-book page appeal through their noble presence. They are essentially works of the imagination, showing high creative power. They show the human carried through the thought of man to the superhuman.

These two examples, aside from the elevating character of each separately, are also extremely interesting by contrast. The memorial figure by Herbert Adams is a sculptured figure; the winged figure by Abbott Thayer is painted. See how, in mass and detail, the sculptor and the painter have considered their materials. A painter gets his contrasts by form and color; a sculptor, by form and light and shade. The figure by Thayer is almost flat in treatment, while extremely expressive; the other enchants by its play of light and shade. In the one the drapery is most simple; in the other, the folds of the robe below the roll are like those of a Greek goddess in an antique statue, while above their graceful convolutions are many. The wings of the one are light and feathery; of the other, massive and strong.

In the one, the expression is that of devotion and readiness, shown not only in the face, but in the arms slightly raised and the uplifted wings; in the other, the calmness of one who has watched over and served, and now with dropped wings stands holding the record, calm and imposing. The drapery adds to the general expression of each—in the one, light and almost expressive of the motion that is foretold—in the other, wholly at rest.

The composition in each is also worth study. In the one, the arms but slightly raised are balanced, and even, as it were, drawn up by the uplifted wings; in the other, the wings are dropped, but the outstretched arms give the upward lift. The long, thin horizontal of the roll in the sculptured figure adds to the feeling of repose.

The true decorative treatment of the sculptured figure is fine, removing it far from a mere work of imitation. The scroll-like tendency of the wings, the same tendency in the drapery above the roll, wherein are hidden beautiful scrolls, and the foliated cross in the nimbus, are markedly decorative.

Herbert Adams studied in Boston and in Paris. He is now among the best known members of the Sculpture Society of New York. His work has been largely portrait busts and bas-reliefs; it is extremely individual, showing strength

with delicacy of treatment, reminding one in manner somewhat of Renaissance sculpture. Among his latest works are the half-sized busts of Demosthenes, Scott, and Dante, and statues of the Minerva of War and the Minerva of Peace in the Congressional Library, and the magnificent victories in the columnar line to the Dewey arch in New York.

Abbott H. Thayer was born in Boston, in 1849, and was brought up in the country. He thus became very familiar with animals, which he delighted afterward to paint. He began to paint from nature by himself when eight years old. At the age of eighteen, he studied in the Brooklyn Academy of Design, and in 1868 gained the gold medal for the best drawing from the antique. In 1875 he went to Paris, where he studied with Gérôme. His early pictures were of animals.

Of late years he has devoted himself to figures. His "Virgin Enthroned" and "Charity" rank among the finest works of American art. His pictures, in massing and coloring, appeal to one as the pictures of the old masters do, compelling attention. They are serious, noble, and dignified. They have, moreover, an indefinable, spiritual quality which shines through and out of the painting—a recognition of the beauty of humanity. The "Portrait," on Plate XV., is a sketch for a great picture, and the two heads below are companions to it.



BOOK 10, PAGE 2.

SEVENTH YEAR BOOK, PAGE 2.

ILLUSTRATIVE PAGES.

LANDSCAPE.— Woodbury, Rembrandt, Hunt, Homer.

Illustrations.—The four examples given show distinctly different treatment, and are very suggestive. Each is finely treated, and each is an example of good composition. In the examples by Woodbury and by Rembrandt, the line is the medium of expression; in those by Hunt and by Homer, the subjects are treated more in simple masses of light and dark, although with totally different effects. Horizontal lines prevail in the composition of all except that by Woodbury; in the latter the vertical is the stronger element. The landscapes are all noticeable for the abundance of light and for the peace and rest which they betoken.

There is here an excellent opportunity for comparison of work by different artists. The treatment of trees and of bushes is essentially different in each picture, showing that it is not necessary to follow one style of expression. The water is shown in the sketch by Rembrandt and in the "Noonday Rest" by the reflections. There is a good lesson, too, in foreshortening. In the "Noonday Rest" the boat is turned so that almost its whole length is seen, while Rembrandt has shown a boat almost completely foreshortened.

Winslow Homer has given his sketch a treatment that is almost flat, but that is very alluring. The sheep are only just indicated, but there is not the slightest doubt that they are sheep. The girl reclining among the roots of the tree is almost one of them, distinguished only by a line or two. The effect of the whole is that of sunlit repose.

The "Noonday Rest" is also very simple and seems to be a study of values, while at the same time the story of the rest at noon under a shady tree on a hot day is well told. A sketch of Hunt's life and work is given on page 83.

"Yonder a workman, under the cool bridge,
Resting at mid-day, watches the glancing midge.
While twinkling lights and murmurs of the stream
Pass into the dim fabric of his dream.
The misty hollows and the drowsy ridge
How like an airy fantasy they seem."

— EDWIN MARKHAM.

Charles Herbert Woodbury is a Boston artist. He draws, paints, and illustrates. His marine pictures have awakened especial interest. He has shown him-

self to a very remarkable degree a master of the lead pencil, and his drawings are eagerly sought.

Rembrandt Van Ryn (1607-1669) was born at Leyden, Holland. His parents were in comfortable circumstances. According to an old chronicler who wrote an account of Rembrandt's life, "They sent him to school to learn the Latin tongue, to prepare himself for the Academy of Leyden, that when he became of age he might serve the city and the republic with his knowledge"; but "he had no liking nor desire for his studies, because his natural inclinations drew him on to the art of painting and designing." He was sent, therefore, at the age of twelve, to a studio to follow this inclination. When about seventeen he began to observe for himself landscapes and outdoor aspects, men and women. As he progressed, he painted portraits and pictures; he drew with the pencil and pen, and etched and engraved; he is called the "prince of etchers." He also received pupils, who came to him eager for instruction. His first etching in 1628 portrayed his mother, and was a strong piece of work.

As works of Rembrandt and La Farge are both shown in this book, it will be of special interest to know La Farge's estimation of Rembrandt. In his "Considerations on Painting" he says:—

"The black etched line of Rembrandt will give me a far spreading horizon, not in the direction of his line, but running to it. A few scratches of his will make the earth sink or rise, remain solid, or be covered with water—no longer, in fact, be ink and paper, but light and air and shadow and varying form."

And, in his "Artist's Letters from Japan," he further says:—

"It will then be in what we call drawing—which is an abstraction, the synopsis of the outlines of things meeting together, of their relative intensities, of their own colors, of their relations to the place they are in. that is to say the picture—that this art of Japan, the daughter of the art of China, will attain its highest form; so that in reality those of us who think of it as appearing at its best only in color. in external charm, have not understood it. An etching of Rembrandt could fairly be said to represent, not so much in itself, but in its essence, what a great Chinaman would have liked to do in India ink—the material of all others which, even to us, is his especially. The line, the abstract line of Rembrandt, its elegance, its beautiful patterning of the surface, is concealed to us by the extraordinary richness of some of his modeling and the extreme gradations of what we call light and shade. But it is there all the same, as a geological foundation, in the same way that inside of the Titian's splendor of surface there is a decorative substructure as well balanced and fixed as a Venetian brocade—just as the works of other great colorists, as we call them (to designate more complex men), imply in their constitution and the



*Abbott Thayer
June 1897*

Portrait. — Abbott Thayer.

Drawn for the Prang Elementary Course.

mechanism of their technique, powers of design and drawing sufficient to furnish our armies of such draftsmen as flourish, for instance, in the Paris of to-day."

Rembrandt's greatest painting was "The Night Watch," and his greatest etching "Jesus Healing the Sick," more commonly known as the Hundred Florin piece.

He produced very remarkable effects by his concentration of light, thus making strong, but never harsh, contrasts of high light and deep shadow. His work was remarkable for its wide range of subject, wealth of imagination, and poetic creative power.

Winslow Homer, born in Boston in 1836, is one of the strongest of living American artists. His family moved to Cambridge when he was six years old, and he led a country life, in which he laid up stores for future work. At twelve years of age he had quite a large collection of his own crayon drawings. His work was encouraged by his father; and when he was nineteen, he was apprenticed to a lithographer in Boston. At twenty-one he set up a studio, where he designed for wood-engraving. In 1859, he entered the evening school of the Academy of Design, in New York. In 1861, he began to use color.

His pictures are full of strength and action and life — whether of sea or land. His marine pictures are especially grand and powerful, attracting and demanding attention. But all through his work runs the note of humanity. His portfolios abound with sketches of the human figure — many of them of children.



A SKETCH BY WINSLOW HOMER.

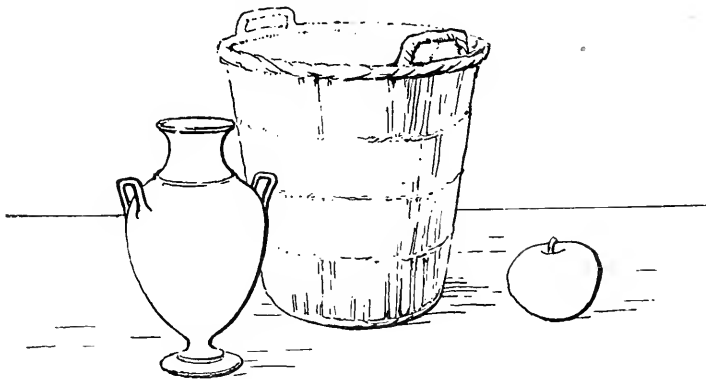
REPRESENTATION.

OBJECTS.—Form. Appearance. Light and Shade.

ART.—Selection. Composition. Rendering. Expression of Color.

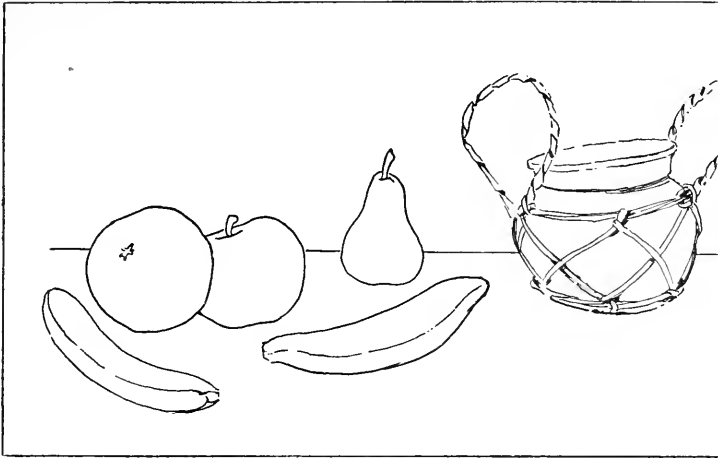
[The pupil selects and arranges objects of good form and color, striving for beauty in the composition, sketches the arrangement, makes thoughtful criticism of the work, comparing it with the objects, and draws in the book, showing light, and shade, and color, studying the example for suggestions as to rendering and as to expression of color.]

Beautiful Objects.—Either art objects alone, or both art and natural objects, may be chosen for this exercise. In the selection of material, beauty of form, proportion, and color are the essential points in individual objects, but for groups it is necessary to choose forms with regard to relative size, variety, harmony of form, harmony of color, and of general relations as to use. The vase and small screen in the illustration given in the drawing-book are such objects as are often seen together on either a mantle or a table. The dish, knife, and fruit are associated objects. A vase and books, a candlestick and an open book, and other similar arrangements, will be suitable for a study.

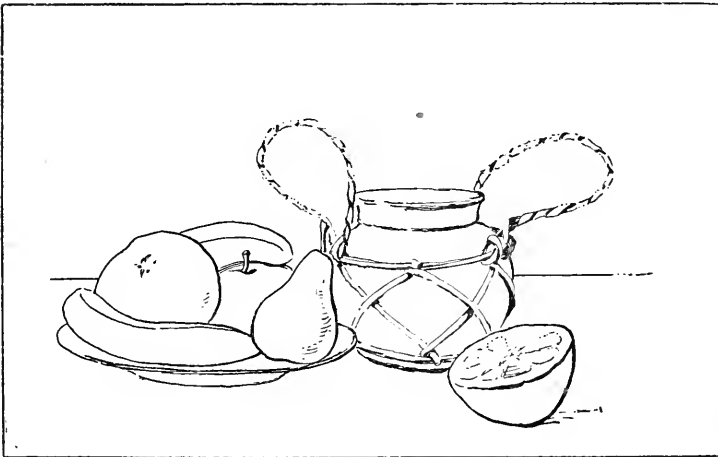


INCONGRUOUS AS TO SIZE AND CHARACTER.

Preparation for the Lesson.—Great care should be taken that the objects chosen seem properly associated, and their arrangement should be such as to ensure good composition. Objects may be beautiful in themselves and worthy of study, and yet present an inharmonious effect if not properly related to each other.



A SCATTERED ARRANGEMENT.



A GROUP SHOWING RELATION AND UNITY.

Contrast of Two Groups.

It seems better for the pupils to arrange the groups, as far as possible, with such suggestions from the teacher, in regard to proper relation, composition, and general effect, as may seem desirable, *after* the pupils have exercised their own taste.

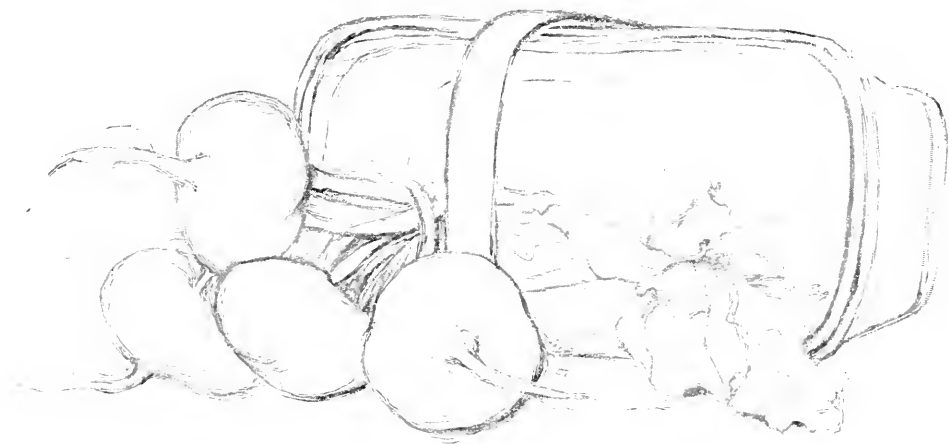
If their first arrangement is scattered and weak, with too many objects together, or with parts ill arranged, the pupils (given a little time) may see the poor effect themselves, and be ready to make the necessary changes. It is always better for the teacher to draw out the thought of the pupils than to be too ready to express her own views. The right word, the right suggestion at the right time, is often all that is needed to lead pupils to do clear thinking of their own.

Choice of Material.—In the selection of objects suitable for study, care should be taken that the forms be simple and not over-decorated. A slight suggestion of simple decoration in a drawing often adds very much to the general effect, but objects which are beautiful in form and color are sometimes over-decorated. They seem to call for the well known and oft quoted protest :—

“To gild refined gold, to paint the lily,
To throw a perfume on the violet,
To smooth the ice, or add another hue
Unto the rainbow, or with taper light
To seek the beauteous eye of heaven to garnish,
Is wasteful and ridiculous excess.”

—SHAKESPEARE.

If there is difficulty in procuring beautiful objects in the locality, such as Japanese or Dutch ware and pottery of various kinds, the best that can be obtained should be used. Plain glass ware of various shapes used in combination with fruit or flowers, or with smaller forms,—a plain glass pitcher and a small bowl, a glass dish of apples and a knife,—makes very interesting studies. If the small bowl is blue, or any other hue rather than white, its color may be suggested in the pencil handling, so as to give an agreeable contrast with the glass, and the texture of the glass may be shown by the glints of light and the proper treatment of the darks. A bright tin pan with one or two onions makes a good group, which, in spite of its homely suggestiveness, possesses much beauty. The brilliant reflections in the tin make it very interesting and valuable as a study of texture. Beets, radishes, egg-plant, and almost all vegetables are effective, not only for pencil treatment, but also for water color. For example, a red-brown earthenware dish combined with one or two carrots makes a suitable and agreeable group, and a fine, subtle study in color values. By making the best of the available and commonplace, it will become the more readily possible to add to the school supplies beautiful objects of art.



Still Life. — Edith Clark

Through seeing the interest of the pupils in their work, parents, school boards, and the public become responsive and inclined to help. Local dealers are often willing to lend fine pottery to the schools from time to time. The finest and most beautiful objects of art are needed in the schoolroom.¹ The decoration should be of the best kind, and the pupils should have the opportunity to enjoy the form and color of beautiful objects of art. As a means toward this end, utilize all the small possibilities at hand, making the most of their beauty and seeking always to bring gradually better and finer things into the school environment.

“Artists should descry abundant worth
 In trivial commonplace, nor groan at dearth
 If fortune bade the painter's craft be plied
 In vulgar town and country.”

—ROBERT BROWNING.

Rendering.—For treatment with either pencil or water color, direct light upon a group will be more effective than diffused light, and make the rendering much easier for the pupils. If a group is made up of small objects, such as small examples of Japanese pottery, it may be nearer the eye than a group of larger objects; but, in all cases, simplicity and breadth of effect should be sought rather than details. The pencil should be rather soft, of a texture available for a quick, sharp dark or for that velvet touch which is so peculiarly beautiful in good pencil handling. The pencil is the most practical and available of all mediums, and its power as a means of expression is gaining, rather than losing, with the artists. It is a medium especially effective in expressing values, and with a small sketch-book, is an ever ready instrument to record impressions.

“A delicate engraving, though its lines may be fine, is certainly not more delicate as an artistic expression than the pencil-strokes of any artist who can truly see and feel. Common and cheap as the lead pencil may appear, it is truly an artist's instrument, with powers of expression only limited by those of the man who holds it, and it deserves to be respected for itself.”—PHILIP GILBERT HAMERTON.

If a group of objects is to be rendered in water color, the group should be harmonious in color. The work should be free and simple, keeping as much as possible the purity of color. If the study is worked over, especially by an inexperienced hand, the freshness is lost and the result is usually dull and muddy. See pages 59-62.

¹ The Prang Educational Company has had a large variety of pottery manufactured by the best Japanese houses, for the purpose of furnishing primary and grammar schools with fine examples of beautiful form and color as material for study. The best teachers everywhere are feeling the need of such material in the schoolroom.

"Truth of detail is always, in a case of necessity, to be sacrificed to truth of mass. A blot, in right relations of tone and color to the rest of the work, is better than a number of correct details out of tune. Freshness is a greater virtue in a sketch than strict accuracy, either of form, light and shade, or color. A labored sketch is a spoiled sketch. Inequality of work is not an evil in sketches. They may be detailed in one place and in broad, formless masses elsewhere without inconvenience." — PHILIP GILBERT HAMERTON.

Love of the Beautiful. — An important feature of art education should be to inculcate a love of beauty, which will lead to a sense of fitness of things and higher ideals for daily life. The art of Japan has much to teach us in this respect, not only in its products, which show great appreciation of the beautiful, but in the life, customs, and manners of the Japanese.

As a people they are gentle and refined; children respect their elders, and all respect each other's rights and property in a way to put more civilized nations to the blush. If a man has a fine piece of carving, or any such object of art, he often places it outside his dwelling, with no fear of injury or theft, that his neighbor may enjoy it also. Art, in fact, enters into the life of the people of Japan and is worshipped as devoutly as in ancient Greece. It is said that "the artist is he who strives to perfect his work; the artisan strives to get through it." If this be true, then indeed is Japan made up of artists, for each workman puts his love for his work into everything he does.

We can hardly overestimate the power for good to which the development of a love for the beautiful may lead, affecting not only the conduct of the individual, but also our home and social life as a whole.

"If I have taken the common clay
And wrought it cunningly
In the shape of a god that was digged of a clod,
The greater honor to me."

— RUDYARD KIPLING.

Suggestions for the Pupils. — Study the objects in the sketch of the vase and lamp-screen. What color is the vase? How is it shown? What colors in the screen? How are they shown? Try to express these colors as they appear in the study in a practice exercise. Select objects for a study, thinking of suitable forms, harmony of color, and variety as to dark and light objects. Arrange the objects so as to express an idea, and so as to make the most of their form and color. Sketch the study lightly, and correct errors in proportion, perspective, and outline *without erasing*. Study the examples again for rendering. Finish the study, showing the color, and light and shade, as in the example given.

BOOK 10, PAGE 5.

SEVENTH YEAR BOOK, PAGE 21.

REPRESENTATION.**NATURE.**—Animal Studies. Form. Proportion. Action.**ART.**—Choice of Aspect and Position. Rendering.

[The pupil makes sketches of animals in different positions, expressing general characteristics and omitting detail, gives thoughtful study to the drawing, comparing it with the animal, and draws in the book, studying the examples on the drawing-book page for suggestions as to rendering.]

Subject for the Page.—If possible, let there be a study of animal life on this page. It may be a cat, a dog, a squirrel, a rabbit, or whatever can be procured. For suggestions in rendering, the illustrations on page 4 will well repay careful study, not only for the expression of life and individuality in each animal, but for the suggestiveness of the rendering. Call the attention of the pupils to the fact that some of the sketches are treated only in color, with little or no modeling. The mountain lion in two positions shows the dark color on the head and face, while the rest of the body is quite uniformly the same tone. These sketches were made during an exhibition of animals in Boston called "The Sportsman's Show." The specimens had not been long in captivity, and were in excellent condition. Notice the quick sketches in outline, mere action studies, giving positions that were held only for a moment. In contrast with these examples of restless life, the Assyrian lion is interesting as it presents good simple treatment of bas-relief, while the reclining panther by Barye represents the animal in the round, from the cast, with the modeling of the various parts carefully carried out, and suggesting the strong, bony framework and powerful muscles even in repose.

Animal Forms in Art.—In all ages the life and habits of animals have been of the greatest interest to the human race, and animal form has been used as an art motive quite as much as the human figure. It has been a prominent feature of decorative sculpture, always effective when treated with simplicity and dignity, and as a sincere effort to interpret the character of the different animals. It has also been the basis for the fanciful and grotesque in creative work.

"The most ancient works of art which we possess are representations of animals, rude indeed, but often strikingly characteristic, engraved on, or carved in, stag's horn or bone; and found in English, French, and German caves, with stone and other rude implements, and the remains of mammalia, belonging apparently to the close of the glacial epoch; not

only of the deer, bear, and other animals not inhabiting temperate Europe, but of some, such as the reindeer, the musk sheep, the mammoth, and the woolly-haired rhinoceros, which have retreated north or become altogether extinct."—SIR JOHN LUBBOCK.

In our own time and country, F. S. Church undoubtedly ranks first in the fanciful treatment of animals. His work always shows much delicacy of sentiment as well as humor. On page 15 of Drawing-Book 5, this is well brought out in the frantic leaps of the belated hare as he sees the tortoise so near the goal. Mr. Church paints usually in a high key with sunny effects, the general scheme of color tending toward tints rather than full tones, the whole subordinate to the attractive figures which tell their own story in their action.



Among the painters of animals, one of the most popular is Landseer, the English artist, whose characteristic representations of deer are well known. He was also a great lover of dogs and painted them admirably. His drawings were usually serious studies, but one of his famous pictures is "Laying Down the Law," where a dog is seated at a table, reading from a book, while many other dogs are clustered about him listening to the words of wisdom. The illustration above is from a drawing by Landseer.

“What the Greeks did for the horse, and what, as far as regards domestic and expressional character, Landseer has done for the dog and the deer, remains to be done by art for nearly all other animals of high organization. There are few birds or beasts that have not a range of character which, if not equal to that of the horse or dog, is yet as interesting within narrower limits, and often in grotesqueness, intensity, or wild and timid pathos, more singular and mysterious.” — JOHN RUSKIN.

Millet and William M. Hunt painted animals sympathetically as well as powerfully, Millet's picture called “The New-Born Lamb” being very tender in treatment, while the horses in “The Flight of Night,” by Hunt, are remarkable in their effect of power and reserve strength. This is one of a series of decorative compositions that were in the State House at Albany, New York. Rosa Bonheur was a loving student of animals all her life. “The Horse Fair” and its companion, “Coming From the Fair,” are very famous; “Ploughing” is also a strong picture, showing oxen in the fields. See the reproductions from pictures of sheep by Millet and Le Rolle, Drawing-Book 9, page 2; Seventh Year Book, page 18. Perhaps the strongest painter of cattle was Paul Potter, of the Dutch school. “Paul Potter's Bull” is often seen among photographs and reproductions. For the study of horses in action, the American artist, Frederick Remington, has given us some remarkable examples. He has lived upon the saddle and has studied the horse most carefully, the result being shown in his masterly treatment. Specimens of his work in black-and-white may easily be obtained from leading magazines, as he has illustrated many stories and sketches of western life upon the plains.

Animals in Sculpture. — Conspicuous and powerful as a sculptor of animals was Barye, of whose work Theodore Child says: —

“Such realism in the sculpture of animals, such forceful and passionate rendering of life and movement, have never before been seen. Often he would go and sit for an hour or two on a bench in the *Jardin des Plantes*, and while he seemed to be sleeping or idling, he was really reflecting over some difficulty of his art. Then suddenly he would rise, walk briskly toward the tiger or lion cages, or walk home to his studio to work. Barye loved color as well as form, and some of his water colors are magnificently executed. Nothing could be more characteristic of the great sculptor's temperament than their sincerity, frankness, and vigor. So rudely did he sweep the surface of the coarse-grained paper, that Théophile Gautier used to say that Barye's brush was made with the mustaches of a Numidian lion.”

Among the American sculptors who have made fine use of animals are St. Gaudens, Kemeys, and A. P. Proctor. See also The Elementary Course Manual, Part IV., pages 180-183.

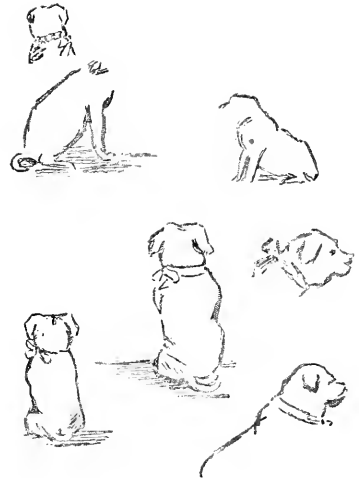
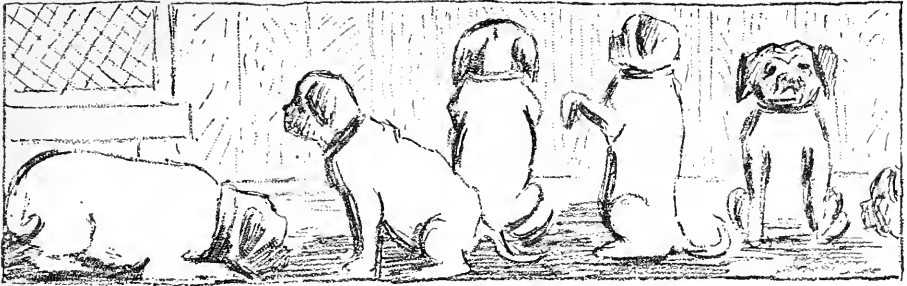
Picture Study.—As the general culture side of this work is an important one, it would be well, for the benefit of the pupils, to collect magazine reproductions or photographs of notable animal pictures with animals conspicuous in them. In the different drawing-books of this series there are many beautiful examples. Encourage also such collecting by the pupils; lead them to enjoy pictures by coming in sympathy with the spirit of the artist who created them.

Pupils' Work.—The animal sketches shown on page 187 are reproduced from the work of pupils in a seventh grade public school. A pet dog was brought into the class and quick studies were made, each pupil working from his own standpoint.

Animal Casts.—Casts from the Barye bronzes may be had from the leading cast dealers, and afford admirable examples for study. Among the subjects are several tigers, an elephant walking and an elephant running, some bears, lions, panthers, rabbits, etc., some in high relief and some in the round. In the art schools it is often found desirable for the students to alternate work from life with work from the cast. The absolute repose of the cast gives opportunity for very reflective and careful study of structure and muscular development, which is likely to lead to similar observation when studying from life.



Characteristics of Animals.—We know some of the differences in detail which exist in the physical characteristic of northern and southern countries, but we do not see them always in their broad relation to each other, nor realize the contrast which is evident in the flora and fauna of various countries, produced, undoubtedly, by physical conditions. The most logical and practical study of nature seems to come first through immediate environment, such as native trees, plants, birds, and animals, but even so, a comparison between the manifestations of such life in our own country and in others will be of great interest and value for school study.



Drawings from Life by Seventh Year Pupils, reproduced in Miniature.

"We know that gentians grow on the Alps, and olives on the Apennines; but we do not enough conceive for ourselves that variegated mosaic of the world's surface which a bird sees in his migration, that difference between the district of the gentian and of the olive which the stork and the swallow see far off, as they lean upon the sirocco wind.

"Having once traversed in thought this gradation of the zoned iris of the earth in all its material vastness, let us go down nearer to it, and watch the change in the belt of animal life: the multitudes of swift and brilliant creatures that glance in the air and sea, or tread the sands of the southern zone: striped zebras and spotted leopards, glistening serpents, and birds arrayed in purple and scarlet. Let us contrast their delicacy and brilliancy of color, and the swiftness of motion, with the frost-cramped strength, and shaggy covering, and dusky plumage of the northern tribes; contrast the Arabian horse with the Shetland, the tiger and leopard with the wolf and bear, the antelope and the elk, the bird of paradise with the osprey." —JOHN RUSKIN.

"The squirrel in his shingly shagbark's bough,
Now saws, now lists with downward eye and ear,
Then drops his nut, and, with a chipping bound,
Whisks to his winding fastness underground;
The clouds like snows drift down the streaming atmosphere."

— J. R. LOWELL.

"God at first the sun created,
Then each mighty constellation;
Wild beast he created later,
Lions with their paws so furious:
In the image of the lion
Made the kittens small and curious."

— HEINE.

Suggestions for Pupils. — If a live animal is available for study, make either a single complete sketch or a number of quick sketches of parts, according to the quiet or restless behavior of the subject. If one of the drawings on page 4 is to be reproduced, plan carefully its enlargement and placing, to look well in the space provided.



BOOK 10, PAGES 6 AND 7.

SEVENTH YEAR BOOK, PAGES 22 AND 23.

DECORATION.

EXAMPLES.—Historic Ornament. Romanesque. Space Relations.
ART.—Rendering. Expression of Color.

[The pupil studies the examples on the drawing-book page, observing the use of ornament, sketches some of the simpler examples, chooses one or more for reproduction, considers carefully, searching for principles of beauty, and draws one in the book, seeking to retain the beauty of the example, or draws an original design, using the principles embodied in the example, and expressing color, if desired, by pencil painting, brush and ink, or water color, or by colored paper.]



HISTORIC ORNAMENT.—The primitive needs of man are for food, shelter, and clothing; the desire for beauty follows close upon these. From the earliest times and among all sorts and conditions of people, the love of beauty has always found some means of expression. It is found embodied in the forms and decorations of pottery, in the colors and patterns of woven stuffs; above all, in architecture, sculpture, and painting. Different peoples and different ages have expressed in very different ways the desire for beauty common to them all, but, as one studies the work they have left behind, it is found that, starting from widely different standpoints, they often reached the same elementary principles of beauty,—certain principles which seem to underlie all beauty. So, when studying either to appreciate better the beauty in the art work of others, or to express better our own inward conceptions of beauty, it is a great help to see how the people of old times felt about such things, and in how many different ways they embodied their own beautiful ideals. This is the main purpose of studying Historic Ornament.

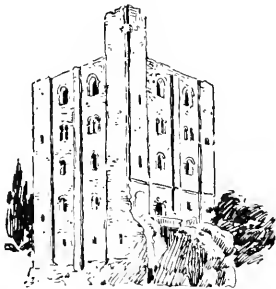
Again, the ornament of any country or people reflects in itself the characteristics of the people and of the land which they inhabited. But it is necessary to know something of these conditions in order to comprehend the ornament.

The Age.—In speaking of the Egyptian, Greek, and Roman styles, and to a certain extent of the Byzantine style, it is possible to speak of the country in which the style flourished and of the history of the nation or the people that produced it.

But the Romanesque style was confined to no particular people or country—it prevailed in Italy, France, Germany, and England.

It must be considered, then, rather the product of the times than of a people or country. At the end of the fourth century the Huns and the Goths, the one nation forcing the other on, overran Europe. The Visigoths became hired soldiers in the Roman army, and finally settled in Spain and spread over Southern France. Other German tribes were pushed across the Rhine by the Huns, and finally one of their chieftains (Odoacer), became the king of Italy. The old Roman population was by no means exterminated, but the character of the people was greatly changed by so large a Germanic element. The year 476 A.D. marks the final fall of the capital of the Western Roman Empire. The Dark Ages closely followed upon this event. Gradually the northern races, the Celtic and Germanic, became Christianized, receiving culture from the Romans and spiritual influences from the church.

How People Lived.—Through all the mixture of races—Huns, Ostrogoths, Visigoths, Franks, and Germanic people, Angles, Saxons, and Scandinavians, together with Romans—it may be imagined that there was great variety in modes of living; yet the one that really dominated was that of the feudal system. The lords lived in great castles, and close under their walls were villages in which the dependants and retainers lived. The castles along the Rhine, with their villages and parish churches, give an idea of this manner of life.

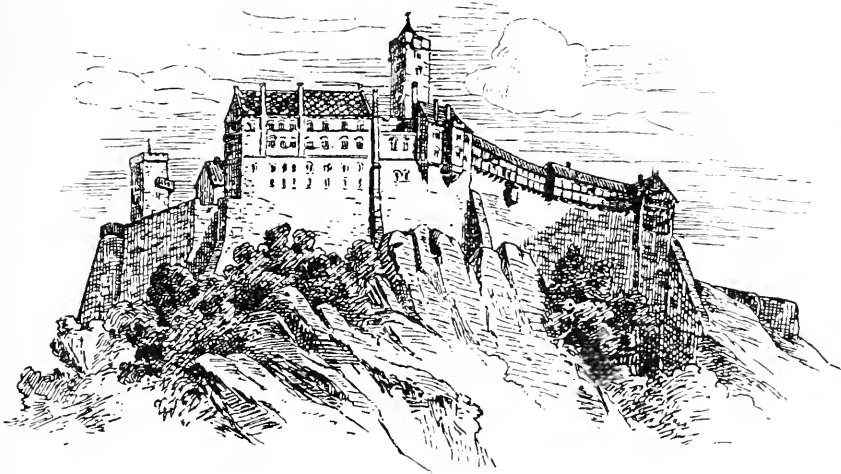


The great man's castle was in one sense a palace and in another sense a fortress for the protection of his vassals as well as his own family in time of need. Hedingham Castle, in Essex, England, illustrated above, is a fair example of a feudal castle. The interior, with its heavy piers and round-arched openings for windows and doors, gives one a vivid notion of the heavily picturesque setting of life in those romantic,

—if uncomfortable—days. It was doubtless some such great living-room as this that Lowell had in mind when he described Sir Launfal's castle in winter:—

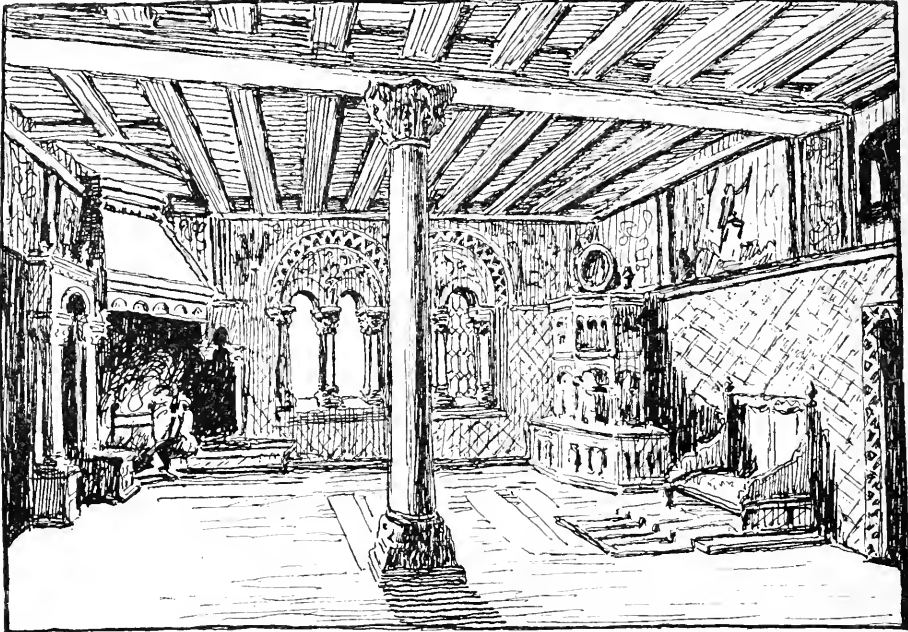
“Within the hall are song and laughter;
 The cheeks of Christmas glow red and jolly,
 And sprouting is every corbel and rafter
 With the lightsome green of ivy and holly.
 Through the deep gulf of the chimney wide
 Wallows the Yule log's roaring tide.”

Gibbon speaks of the *palaces* of the early kings as to “be esteemed only in the light of profitable farms.” The people lived in houses which were roofed, but which consisted of only a single room or hall, which was the common abode of the family, the servants and domestic animals. In the better class of houses, and even in the castles, the hall was the common and essential dwelling-place. Later several stories were added, each story being a room. Finally, each story was divided into rooms, but still the hall was the centre.



The illustration above shows the castle of Wartburg, at Eisenach, Germany, which was the castle of a prince, the residence of a Thuringian landgrave. It is one of the finest existing examples of Romanesque secular monuments. It has been well restored and is occasionally occupied now by the Grand Duke of Weimar. In such a castle hundreds of guests were often entertained for days. The illustration on page 192 shows the room of the landgrave. The details of this room are good illustra-

tions of Romanesque interior structure and decoration — the pillar, the round arch, the zigzag and leaf ornament, and the heavy furniture. Note the fireplace; chimneys were an invention of this period. They are said to have been built in France as early as the eleventh or twelfth century. What a great change in structural as well as external architecture just this one feature made!



Walls were hung with tapestries and many times even the floors were covered with them. In many cases these tapestries were wrought by ladies, as a means of passing the spare time which their mode of life afforded. The beams of the ceilings were frequently carved or covered with painted ornament.

“There she weaves by night and day
A magic web with colors gay.”

— *Lady of Shalott*, ALFRED TENNYSON.

Dress went through various stages. The coronation robes of Charlemagne, see page 193, illustrate an early period. While primitive in form, they are rich in ornament. Many kings have been deservedly called great, but Charlemagne is the only one with whose name great (*magnus*) has been blended.

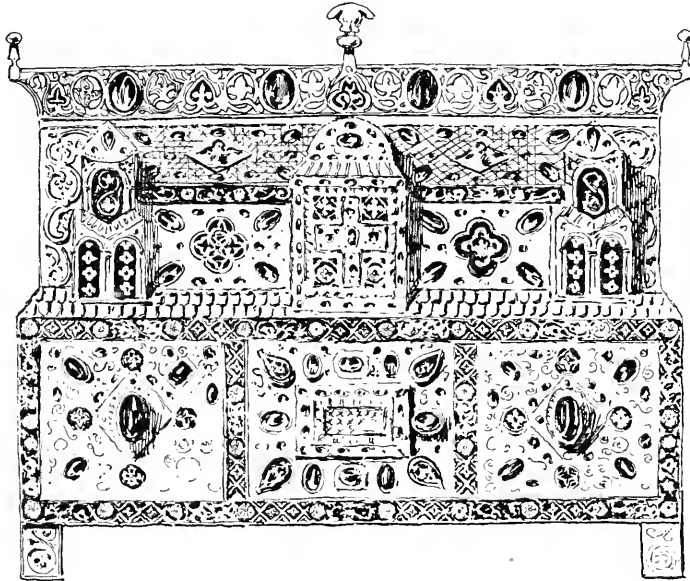


Coronation Robes of Charlemagne.

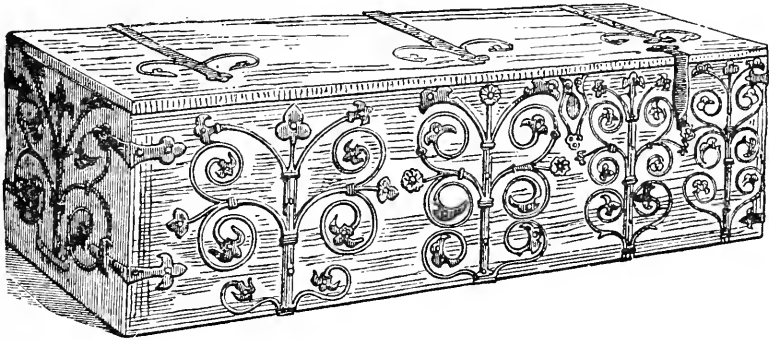
He founded schools and introduced many arts to his people, but did not himself learn to write until of mature years. With all these people there seemed to be this mixture of barbarism and ignorance with a native strength that appreciated and appropriated what was good in others.

Jewels were very largely used in decoration as well as in dress. Some jeweled ornaments are given here. See in the bag and its ornaments the prevalence of the circle and the sphere, forms strongly characteristic of Romanesque art.

A clasp to a bishop's cloak and a shrine, here illustrated, the work of a Romanesque goldsmith of the twelfth century, show how much the beauty of color in gems appealed to the people.



The furniture was simple and massive ; large closets and chests, like the one illustrated below, took up a great part of the room, the chests serving for seats as well as for repositories. Men were skilled in metal work and used it in a fine decorative way. They seemed to have the same feeling about metal in general that Ruskin has about iron.



“Here’s for you to cut, and here’s for you to hammer. Shape this, and twist that. What is solid and simple, carve out; what is thin and entangled, beat out.”

The metal work seemed to suit the vigor of these people, who, coming from barbarian stock, had brought with them so much freshness and strength.

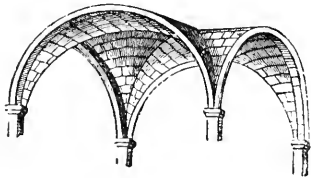
They received social and mental culture and the arts from the Romans, and on the spiritual side were uplifted through Christianity. To all of these people, the church was the central point, and their art and architecture culminate in the church. Their beautiful illuminated manuscripts, from which so many of the examples in the drawing-book were taken, were mainly* Psalters, The Gospels, Books of Prayer, and other religious works. It is noteworthy, however, that in their monastic libraries, fully half their manuscripts (for printing was not yet invented) were classical.

Romanesque Art.—While the Eastern Empire was developing an art peculiar to itself, known as the Byzantine style, see page 154, the Western Empire, though less progressive, was developing a style of its own. Christianity, affected by the surrounding luxuriance of Roman art, expressed itself in an art characteristic of the new sentiment of the age. This resulted in a distinct style called Romanesque, which dominated in Italy, France, Germany, and England. In Italy, however, the Romanesque leaned strongly toward the Byzantine.

A new art then gradually grew up to meet the new conditions of the times. This art was based upon Roman and Byzantine traditions. The Roman style naturally had the greater influence over the architects of the north, owing to the many ruins of Roman monuments which were found in the cities which had formed a part of the vast Empire of the Romans. The new style, the Romanesque, reached its highest development in the tenth and eleventh centuries.

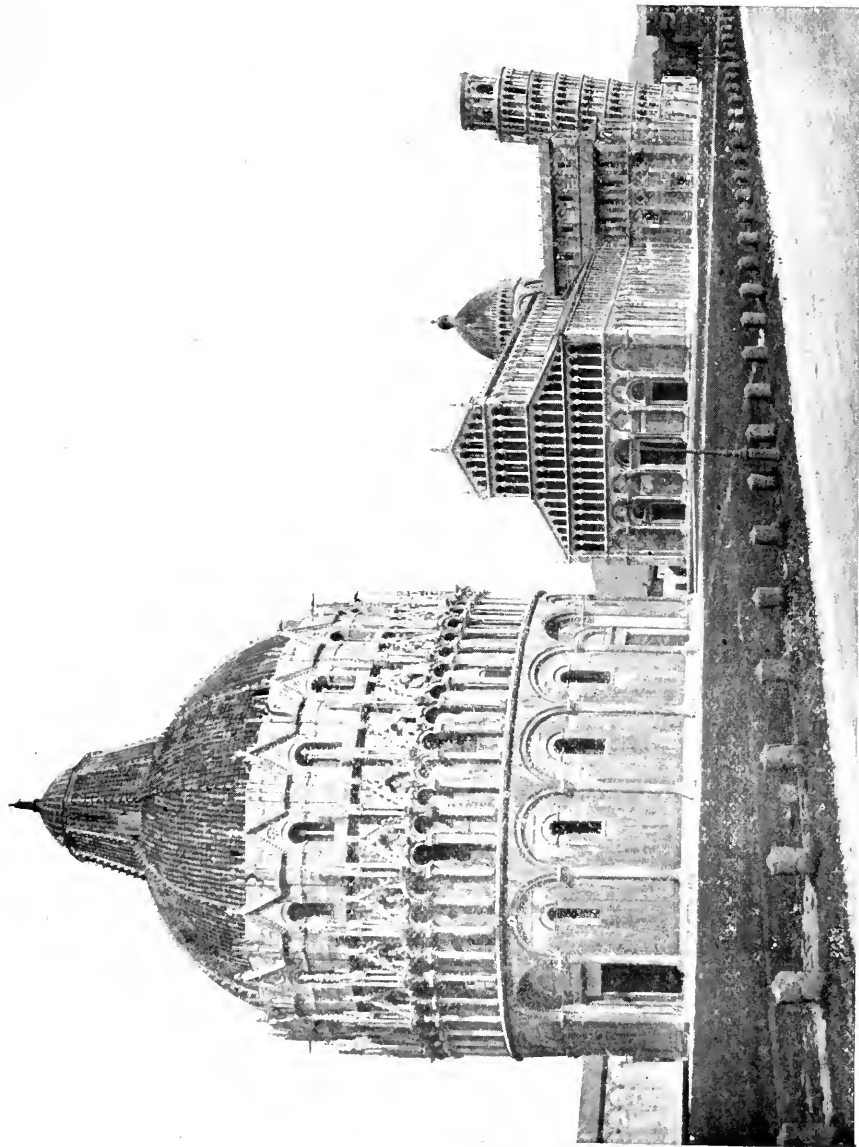
Characteristics of Style.—As the Romanesque style had its origin and fullest development at a time when the church was in absolute control, Romanesque architecture was distinctly ecclesiastic. As it was not a time of wealth and enterprise, the buildings of the north had little of the splendor of the interior of the Eastern churches. The thought of the architects was centred in the construction of a simple, substantial, fire-proof building with little decoration. In order to make the buildings fireproof, stone roofs were necessary. This stone vaulting required thick walls for support, which naturally produced a massive style of architecture. See illustration, Cathedral of Worms, Book 10, page 16 ; Seventh Year Book, page 32.

Vaulting.—The problem of vaulting underlies all Romanesque construction, and forms the basis of that more beautiful and refined style, the Gothic, which is characterized by the pointed arch.



The massive walls were cut by small window and door openings, and these, in turn, were covered by semi-circular arches. In course of time richly carved and recessed mouldings were carried around the door openings, somewhat lessening the appearance of massiveness. The mouldings also decorated clustered columns, which were surmounted by cushion-shaped capitals or frequently by an imitation of the Corinthian. See illustrations—Doorway at Calvados, France ; St. Mark's, Venice ; Church of the Apostles, Cologne, and Cathedral of Worms, Book 10, page 16 ; Seventh Year Book, page 32. Strong, bold, carved ornament was used. Animals, birds, and human forms were often introduced into the ornament as well as into the carving of the capitals. A fine example is seen in the Griffin, Museum of Angoulême, Book 10, page 16 ; Seventh Year Book, page 32.

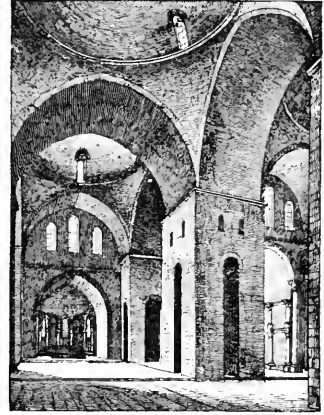
Examples.—One of the best examples of the Italian Romanesque is the Duomo of Pisa, built 1063-1118. See Plate XVII. It is of the basilic type ; and, being constructed on an oblong plan, shows the influence of the Roman basilica. The dome over the baptistery shows the influence of that feature in Romanesque architecture, while the colonnade decoration of the Duomo, Baptistery and Leaning Tower illustrates the use made of the column for decoration, this use having



Cathedral, Baptistery, and Leaning Tower, Pisa.

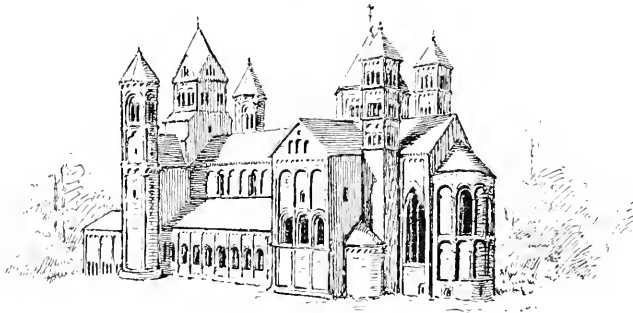
originated with the Romans of early times. Thus we have in these buildings, not a pure Roman type, but a Roman building modified by the usages of the church.

In France we find a systematic development of vaulting in church architecture. Many examples might be cited, but two of the best known are those of St. Etienne, and St. Trinité at Caen, built in the time of William the Conqueror. See Plate XVIII. Here, as in other Romanesque buildings, we find massive construction, thick walls, and vaulted roofs. At the same time, there is evidence of a coming desire for greater lightness of effect. Buttresses are employed to lessen the thickness of the walls and to produce a more pleasing design. Vaulting is well illustrated in the interior view of St. Front, Perigueux, at the right.



ST. FRONT, PERIGUEUX.

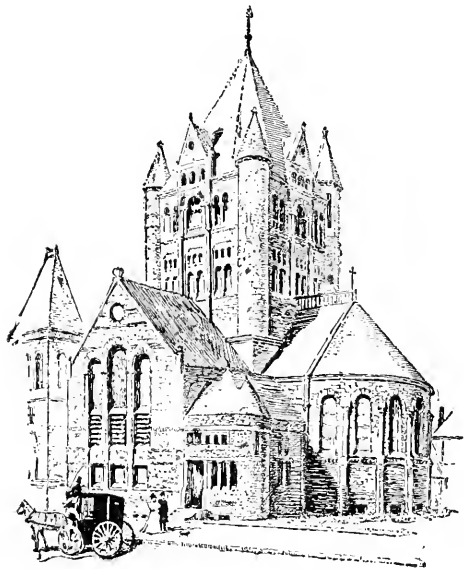
The Romanesque style widely obtained in Germany, although it developed there less rapidly. In many of the churches in the vicinity of the Rhine are found interesting examples, as the Cathedral at Worms, Book 10; Seventh Year Book, page 32, and the abbey church at Laach, page 16. Here the arcade and the low arcaded gallery became very decorative features, as illustrated in the Church of the Apostle, at Cologne. Book 10, page 16; Seventh



ABBEY CHURCH AT LAACH.

Year Book, page 32. The three apses are found in many other churches and add great beauty to the constructive effect. The arcaded galleries, gables and turrets produced a very beautiful type of church architecture.

The Norman Conquest in England was followed by an extraordinary period of activity in building. Churches and abbeys were built in great numbers, based some-



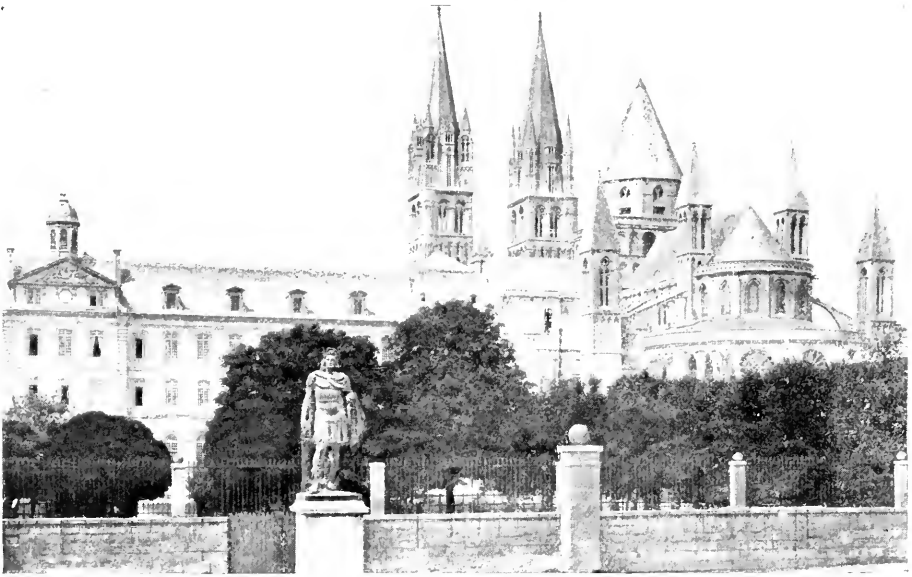
what upon the French style, but differing in many particulars. The cathedral at Durham, see Plate XVIII., is one of the most interesting as well as important examples. The English Romanesque style is often called Norman. Trinity Church, Boston, is a noted modern example of Romanesque architecture. It is very interesting to study the peculiarly Romanesque features in the various examples, and especially to compare them with modern examples. Almost every large city contains one or more fine buildings in the Romanesque style, and in these may be found the round arches, the arcaded galleries, the semicircular apse, the square towers.

Romanesque Capitals. — It

was a common custom in Romanesque

buildings to make round arches rest directly on columns or piers. These arches were often square in section, the lowermost stones being cubic. The columns themselves were cylindrical. In the capitals of the columns lay the opportunity to harmonize these two forms, and the old-time architects managed this by giving the capital the combined characteristics of roundness and squareness; it was rounded below to unite gracefully with the circular top of the column, and squared above to receive the square end of the arch which it had to support.

The refining taste of later ages led to the modification of this fundamental form by carving the surface of the plain stone in various designs of relief. The capitals shown on page 201, from the abbey at Laach, and from the churches of St. Julien, St. Zeno, and St. Magdalen were all evidently modifications of the primitive idea of a capital which should have a circular face below and a square face above. In other cases, the carving of such capitals introduced more or less grotesque figures of men, birds, and beasts. The capital from the Barbarossa palace, Book 10, page 7; Seventh Year Book, page 23, is an especially fine example of this fanciful development out of the simple constructive idea.



St. Trinité. Caen. France.



Durham Cathedral, England.

Many Romanesque capitals were a direct inheritance in general form from the Roman Corinthian capital. The decoration was much less elaborate, but was after the same style.

The base of the typical Romanesque capital was a *cavetto* (concave or hollowed-in moulding) between two tori (*convex* or rounded-out mouldings), as in the column from the abbey church at Laach.

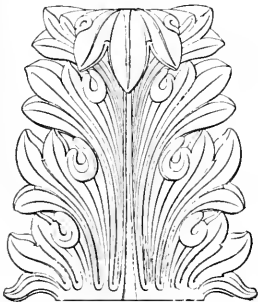
Sometimes the upper torus was omitted, as in the example from St. Benoit-sur-Loire, on page 201. Again, the simple underlying plan was often worked out with the added grace of ornament, as in the bases from the abbey at Laach, and from the Cathedral of Langres on the same page.

The body or shaft of a Romanesque column was sometimes plain and unornamented, sometimes richly decorated over a part or even the whole of its surface. It had usually the same diameter throughout its length, neither increasing nor diminishing from part to part, as was the case with the old Greek columns.

The abbey church at Laach, in Rhenish Prussia, page 197, is considered by critics one of the most admirable examples of German Romanesque in the eleventh and twelfth centuries. The radiating ornament on the upper portion of the capital, page 201, suggests the Greek anthemion, but its heavily rounding curves show the plain, sturdy, mediæval German, while the stability of the Greek form shows the refined and thoughtful Athenian.



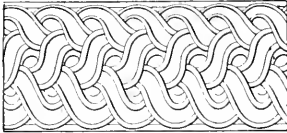
The conventionalized foliage in the capital from St. Julien le Pauvre suggests the more graceful classic form, popularly known as the acanthus. It is interesting to compare the twelfth-century French carving with that of the first century B.C. in Athens. European workmen in the early middle ages were seldom able to copy successfully the ideals of beauty belonging to earlier times. Their best and most interesting work grew out of the effort to deal honestly and naturally with the conditions of their own times.



ACANTHUS LEAF
CAPITAL OF THE TOWER OF THE WINDS.

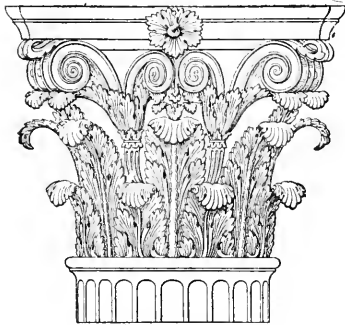
The church of St. Zeno in Verona is famous for its elaborate and beautiful use of pilasters or semi-attached pillars as elements of mural decoration. The braided ornament on this special capital bears some resemblance to certain Greek forms of decoration. It is, of course, easily possible for the decorators of St. Zeno to have been influenced by the knowledge of somewhat similar work from any of these sources; remains of the old classic sculptures were still to be seen in Italy; pilgrims

returning from the Crusades were bringing glowing accounts of the splendors of Saracen wealth; Christian monks from Great Britain and Ireland frequently went to Italy on church business, and so north and south were coming to share each other's ideas and ideals. Yet the conception of braided or interwoven line ornament is one which seems to arise very naturally in the minds of a people familiar with even very simple textile arts, so no elaborate accounting for its origin is actually necessary.



FROM THE TEMPLE OF NEMESIS AT RHAMNUS.

Builders in the Romanesque style frequently included three or four columns in the group crowned by a single capital. The capital from St. Martin's at Segovia shows a characteristic example of this sort. It seems to be a modification of the



classic Corinthian capital; compare with the capital from the Pantheon at Rome, shown here.

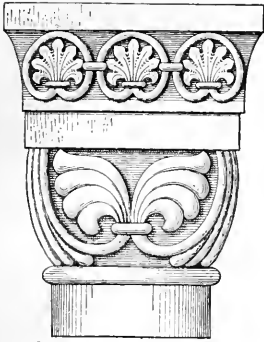
The stone sculpture from Gloucestershire, England, shows still another favorite manner of Romanesque decoration. The body of the column, as the illustration suggests, was deeply fluted and grooved in spiral lines, rows of spherical beading being a prominent detail. Such spiral decoration found many admirers in its time, though the taste of later days has often found it objectionably ornate. Some shafts of this sort appear in Raphael's famous drawing of Peter and

John healing the lame man at the Beautiful Gate. The capital of the English example shows a bell-shape, making a particularly successful transition from the square upper surface to the circular cushion where it meets the top of the fluted shaft.

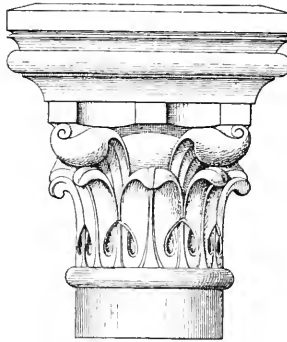
The Bavarian capital (church at Aschaffenburg) is of a more slender, graceful design than the others, the vigorous sweeping lines of the conventional foliage seeming to show more genuine feeling for beauty than appears in the imitation Corinthian work from St. Martin's in Segovia. The so-called "dog-tooth" moulding which appears here, and which is made up of very low square pyramids, became a great favorite with builders in the middle ages.

Notes on the characteristic base-forms of Romanesque columns will be found on page 199.

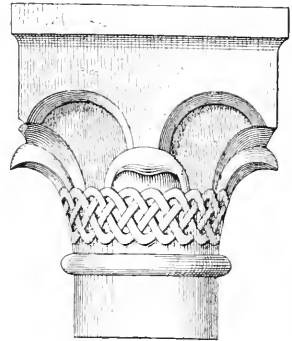
Decoration. — All external details of decoration were of a very simple character, except those over doorways. The doorways were formed of series of recessed



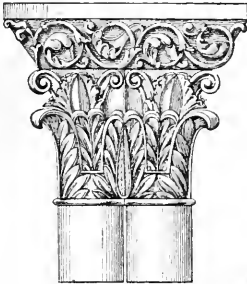
ABBAY AT LAACH, PRUSSIA,
XI. CENT.



ST JULIEN LE PAUVRE, PARIS
XII CENT



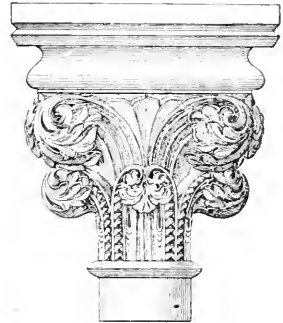
ST ZENO, VERONA, ITALY
XII. CENT.



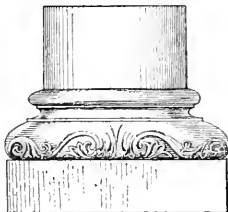
CHURCH OF ST MARTIN AT SEGOVIA, SPAIN,
XII. CENT



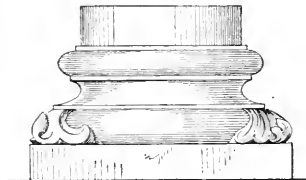
ST MAGDALENS CHURCH GLOUCESTERSHIRE, ENGLAND,
NORMAN XII. CENT



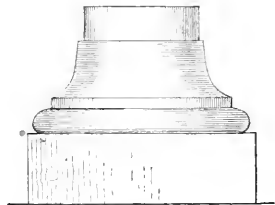
CHURCH AT ASCHAFFENBURG, SOUTHERN GERMANY,
XII CENT



CATHEDRAL OF LANGRES, FRANCE.
XII CENT



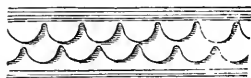
ABBAY AT LAACH, PRUSSIA.
XI. CENT.



ST BENOIT SUR LOIRE, FRANCE,
XII CENT.

ROMANESQUE CAPITALS AND BASES.

arches and mouldings elaborately carved. There was but little variety in design. An ornament known as the zigzag was among the most common; see the Doorway at Calvados, Book 10, page 16; Seventh Year Book, page 16. There was a great deal of repetition of small units, as shown in the illustration.



Early Romanesque ornament was most simple and severe, quite in keeping with the building. As it developed, it embodied much of the Roman style, while using the symbols of the Christian Church, but was also affected by the influence of the Eastern Empire. Material for ornament was borrowed from most of the preceding styles, and these were sometimes rather inconsequently combined; thus frequently some of the æsthetic beauty of the classic styles was lost in a conventional adaptation of these styles and in the prominence given to symbolism.

Christian art developed painting as a decorative medium. Not only were the walls and ceilings of their buildings profusely decorated in colors, but missals and manuscript were also adorned with symbols of their faith in brilliant hues. Some of the borders and rosettes shown are from ancient illuminated manuscript.

Stiffness and grotesqueness, however, gave place to more graceful treatment, which in its fuller development led the way to the Gothic style. In later times, many types of ornament were borrowed from plant form. These were not in exact imitation, but had a stiffness that was almost geometric in character. Grotesque representations of men, animals, and plant forms were often commingled in the same design, especially in the decoration of capitals, as shown in one from the Barbarossa Palace, and in the ornament from the Museum of Angoulême, pages 196, 198.

Most continental churches of any architectural pretensions have been more or less rebuilt since their first construction; different parts of the same building thus often vary by several centuries in age and style. Parts of the church at Fulda from which the first example on page 201 was taken, belong to the eighth century, but the ornament shown here is three hundred years later. Note how spheres and circular curves predominate in this design. They are repeated, entire or in part, in one detail after another. No style of ornament shows so great a use



of spheric forms. Compare this border from Fulda with the Greek anthemion border here given, and see in the one the mediæval German, in the other the polished Greek.

The second example on the page, the carven scroll from Southern Germany, shows a great deal of spirit and vigor, and good feeling for space-composition. The relative proportions of occupied and open space seem distinctly well planned. The main curves offer the eye a pleasant variety; the luxuriance of their long sweep is pleasantly balanced by the heavy horizontal construction lines of the moulding and the crisp accent of the straight diagonals in the "dog-tooth" ornament.

Line-work, woven or interlaced, has been practised in almost all countries and times, and Romanesque ornament includes some of the most beautiful examples. This page gives four in all, taken from stone sculptures. Three of them (those of St. Denis and St. Ambrogio) show characteristic Romanesque love of simple circular curves. The cathedral of St. Denis, the patron saint of France, has been, since the time of Dagobert I. in the middle of the seventh century, the burial place of the kings of France, and is famous for its monuments.

In the straight-line interlacing from Bayeux cathedral, notice how much more beautiful the effect was made by keeping the horizontal and vertical bands different in width as a means of space variation. The interlaced ornament and the example showing overlapping circular disks enclosing trefoils are both taken from the walls of the cathedral nave, above and between certain round-arched window openings. Bayeux Cathedral (Normandy) was built mainly in the twelfth century, though the crypt and possibly some other portions are the remains of an earlier structure. Here was kept, until the time of the Revolution, the famous Bayeux tapestry, wrought by Queen Matilda, wife of the Conqueror. The long strip (213 feet) covered with scenes relating to the Norman conquest of England, was formerly displayed in the nave of the cathedral on great occasions.

The capital from St. Magdalen's, on page 201, gave a hint of the way in which the shafts of Romanesque columns were sometimes covered with ornament. Here, the examples from Heilbronn, Bavaria, and Lincoln Cathedral, England, both show details of the surfaces of decorated shafts. In the Lincoln column the shaft is cylindrical; in the Heilbronn column it is hexagonal, the regular pattern being repeated on each vertical face of the shaft.

The lowest example on the left shows an interesting variation of what may still be regarded as an "anthemion" motive. Here, while some of the lines in the composition are still circular, as in the example from Fulda on the same page, the most conspicuous carved figures are not round, but pointed like the Gothic arch.

The upper example on the right is interesting, both on account of its intrinsic beauty and because of its local origin. It is from an ancient Benedictine monastery in Switzerland, an institution founded before the ninth century, and named in memory of an Irish monk who was canonized as a saint — St. Gall. A drawing of

the plan of its buildings, executed on parchment and still preserved in the abbey, is the oldest architectural working-drawing known to be in existence. The sheet, some two and a half feet in size, is dated A.D. 820. It was an enormous establishment, indeed almost a town in itself, serving as a model for many other religious communities. Besides including buildings for worship, and for the ordinary housing of the brethren, its plan took in a hospital, library, and training school, with gardens, granaries, mills, workshops, stables, in short, every desirable provision for a community of people industrious, thrifty, scholarly, and charitable as well as devout.

In such a community, brothers specially gifted with artistic taste and skill found congenial opportunities for expression through the decoration of the buildings themselves, as well as through the copying and illuminating of manuscripts. This stone-carving from St. Gall is accounted a particularly beautiful example of the best taste of the period. It is not a mere imitation of classic ornament, but shows in its design original thinking, with a fine sense of beauty, both in space relations and in line. The one recurving sharp angle in the foliated scroll adds to the effect of the design by its variation from the other lines — all curves. The more one studies a design like this, the more evident and delightful its beauties become.

Each example has its own features of interest and beauty. That from Denkendorf shows a variation of the favorite Romanesque theme — the round arch.

The relief carving from St. Saviour's Church, Southwark, shows a premonition of the Gothic tendency to the use of natural motives, while in its arrangement it repeats some of the characteristics of the examples from St. Gall and from Denkendorf. The building from which this example is taken, St. Saviour's, Southwark, is an old parish church in London, within whose walls were buried many famous English authors, among others the poet Gower, Massinger, and John Fletcher, one of the collaborateurs in the dramas of Beaumont and Fletcher.

The example from Rheims recalls the old Roman ornament; this strong Roman influence is naturally to be expected, for Rheims was a famous old Roman city in the Augustan age. It has a Roman triumphal arch, dating from the days of Agrippa, with a number of other interesting reminders of its ancient origin and occupancy. The abbey church of St. Remy was itself originally built in the form of the classic basilica and endowed by Clothilde, wife of the emperor Clovis, but was largely remodeled in later centuries.

Letters. — On pages 207 and 209 there will be found examples of illuminated letters from the manuscripts already mentioned. These were carefully drawn and beautiful in color.



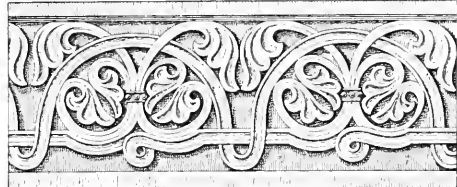
FROM A CHURCH AT FULDA, HESSE CASSEL, XI CENT.



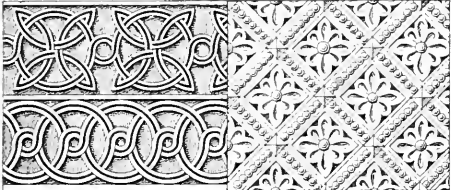
FROM THE MONASTERY OF ST GALL, SWITZERLAND, XII CENT.



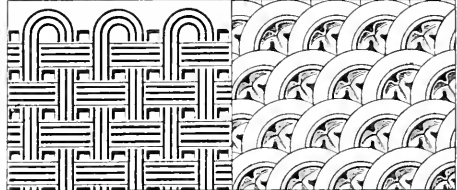
FROM SOUTHERN GERMANY, XI CENT



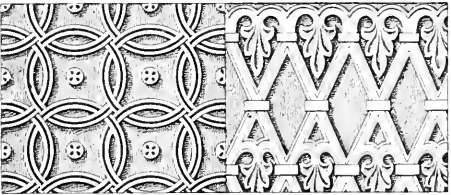
FROM THE CHURCH AT DENKENDORF, WURTEMBERG, XII CENT.



FROM THE CLOISTER OF ST AMBROGIO MILAN, ITALY, XIII CENT. FROM LINCOLN CATHEDRAL, ENGLAND, XII CENT.



FROM THE CATHEDRAL AT BAYEUX, NORMANDY, XII CENT.



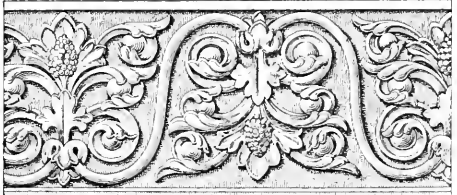
FROM ST DENIS, PARIS, XII CENT. FROM THE CHAPEL AT HEILBRONN, BAVARIA, XIII CENT



FROM ST SAVIOURS CHURCH, SOUTHWARK, ENGLAND, XII CENT.



FROM SOUTHERN GERMANY, XII CENT



FROM THE CHURCH ST REMY AT RHEIMS, FRANCE, XII CENT.

Romanesque Ornament.

They have been selected from various sources. The letters 1, 3, 9, 10, 14, 15, 20, 21, 22, 23, 26, 28, 29, 30, 33, and 35 are from French manuscripts of the twelfth century in the Bibliothèque Royale at Paris; the same general style pervades all these letters. It will be noticed that these letters show the influence of Greek ornament in their elegance and simplicity.

The letters 2, 4, 7, 8 are from English manuscripts of the twelfth century in the British Museum; these letters partake of the Norman style.

The letters 5, 18, 25, 27 are from the famous Golden Psalter from the abbey of St. Gall. This is a very noted manuscript of the tenth century; the text is in letters of gold, and the whole is richly illuminated, a whole page being given sometimes to a single illuminated letter. The letter 6 is also from a tenth century manuscript.

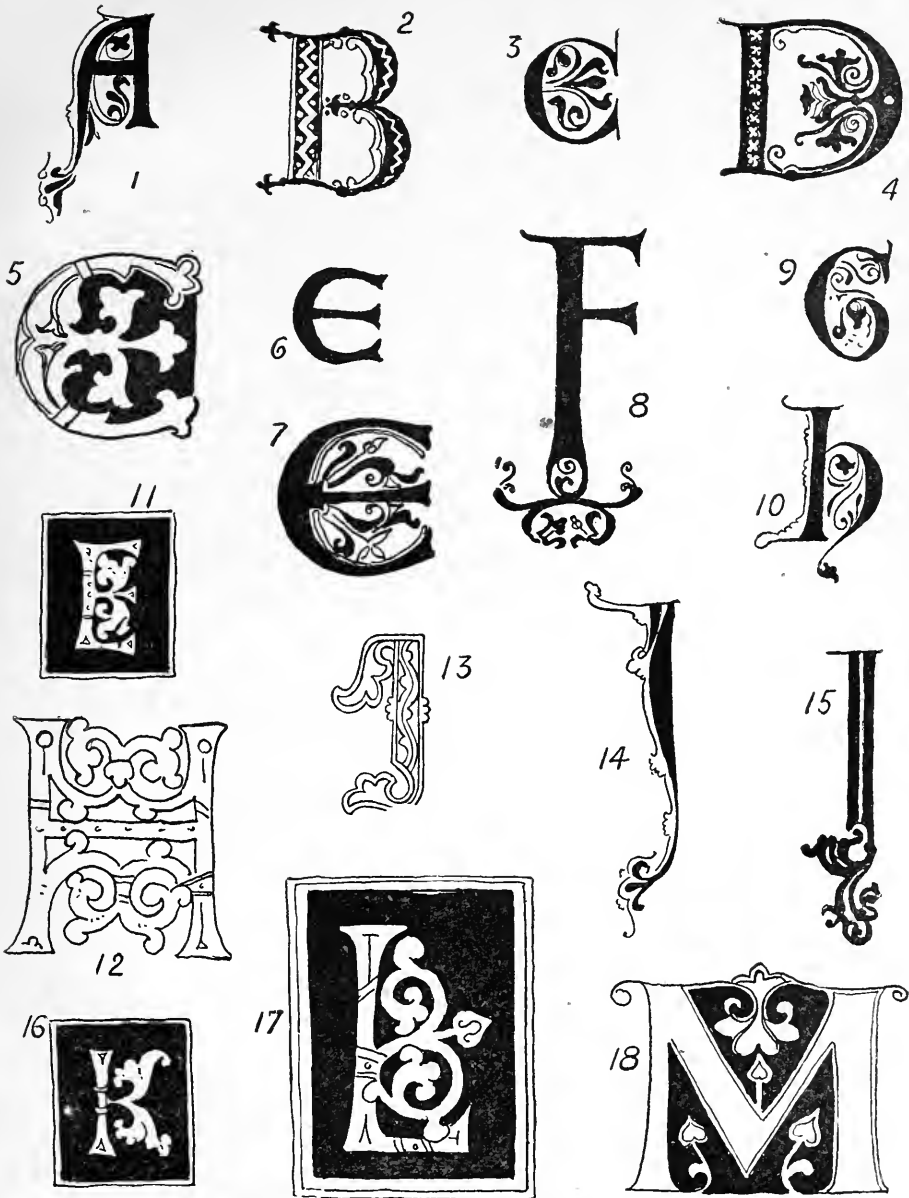
The letters 11, 16, 19, 34 are from German manuscripts of the eleventh century; while 12, 17, 24, 31, 32 are from German manuscripts of the twelfth century. The letter 13 is from the Treves Stadt Bible, a manuscript of the ninth century.

Examples in the Drawing-book.—It will be seen that many of these examples are taken from the manuscripts spoken of above. The making of tiles was one of the important minor developments of architecture and gave increased scope to the imagination of their designers. The tile at the left on the drawing-book page is from St. Omer Cathedral, France; that at the right is from the Palace of Justice, Rouen, France.

The architectural examples on these two pages are taken from Germany wholly. The abbey church of Laach, Prussia, from which the first capital is taken, is illustrated on page 197, and the capital is described on page 199. The church is situated not far from a small lake near Coblenz.

The two rosettes, the lower left and right borders, and the fret are from illuminated manuscripts in which there was so much graceful fancy and over which skillful copyists spent their quiet lives. The design of the second rosette has been often used as a study in beautiful space composition. It would be difficult to make any evident change in the lines without weakening the design. The second rosette, with its elaborately foliated cross, indicates a favorite theme of the mediæval designers. Crosses with their combination of inward symbolism and outward beauty appeared in many decorative variations. The examples of sculptured work from Germany and Bavaria are described on page 203.

The design from Comburg or Komburg on Book 10, page 7; Seventh Year Book, page 22, is taken from a bronze shrine in a Benedictine abbey, a fine example of the goldsmith's art. Christ and his twelve disciples are on the face of the shrine, Christ in an upright panel as the central figure, and the disciples either



A Page of Romanesque Initials.

side of him, each in a separate panel half the height of the central panel. The panels are separated by bands of enamel. The example in the drawing-book is from one of these bands. The large squares are of dark blue, the foliated cross is white with a blue centre; the square on its diagonals is of red bordered with yellow; the smaller squares which form the borders are red, blue, green, and white. The different figures are separated by thin strips of bright metal.

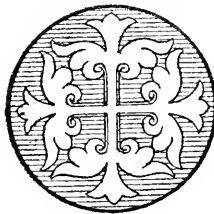
Frederick I., called Barbarossa, was the most noted emperor of the Holy Roman Empire. He was brave and liberal, though also proud and arrogant. He esteemed men of letters and historians especially, obtaining from their works the exalted idea of an emperor that he endeavored to realize. His love for the arts is shown by the memorable ruins of his imperial palace at Gelnhausen, from which the second capital is taken. He reigned from 1152 to 1189.

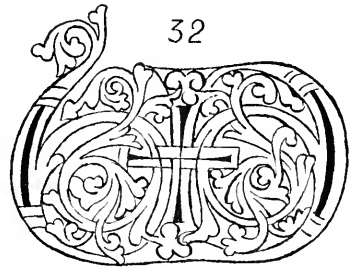
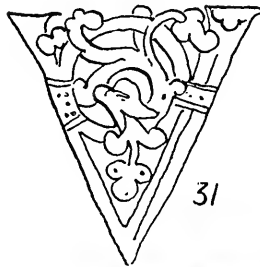
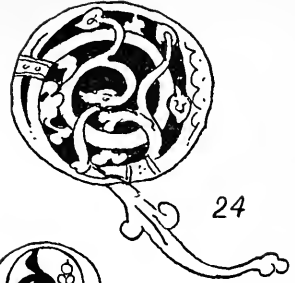
A study of the examples will show the great tendency to a round foliation, instead of the sharper curves in Byzantine ornament. See also how frequently the cross appears!

Pupils' Work. — The examples of historic ornament given on the drawing-book pages should be studied for their beauty. The arrangement of the various units, the relation between the units and the backgrounds, the width of marginal lines in the borders, — all these things, together with beauty of line and proportion, go to make up the beauty of the ornament. As Romanesque ornament is full of Christian symbolism, it will be interesting to the pupils to look for the symbolic ornament. The foliated cross is of most frequent use.

The examples given are varied so that there may be opportunity for choice, not only of an example, but also of the medium with which it is to be produced. For color study in connection with Romanesque ornament, see the Color Manual, pages 135 and 136. See also "The Prang Examples of Ornament."

Or, after studying the examples, pupils may attempt a border, a panel, or a decorative figure or letter for a manuscript, or as an initial letter in printing. Stimulate the creative faculty, for only as it is exercised will it be developed.





A Page of Romanesque Initials.

CONSTRUCTION.

OBJECTS.—Facts of Form. Working-drawings. Conventions.

ART.—Working-drawings. Manner of Drawing.

[The pupil studies the working-drawings on the drawing-book page, reads them, thinking of the facts of form expressed, thinks out and sketches the working-drawings of several simple objects, plans for the placing of one of these on the drawing-book page, and draws it in the book, seeking for accuracy in the work.]

Elements of Building Construction.—Bench Work.—The first example given on page 8 of the drawing-book is a door-joint. The joints given in Figs. 1 and 2 fall under the observation of the pupils.

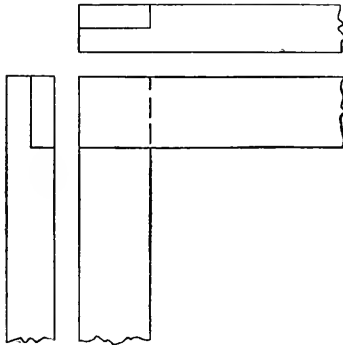


FIG. 1.—Halved joint.

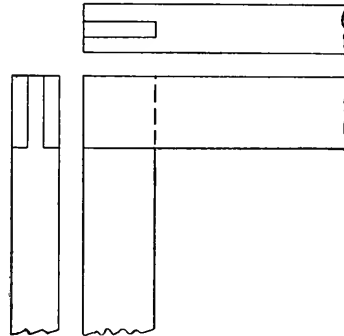


FIG. 2.—End mortise and tenon joint.

The illustrations on the opposite page suggest some joints that may be studied. Fig. 1 is a middle mortise and tenon joint, differing from the end mortise and tenon joint, Fig. 2, above; Fig. 2 is a middle lap joint, another form of the halving seen in the joint, Fig. 1, above; Fig. 3 is a lap dovetail joint. Fig. 4 is a relished mortise and tenon joint; Fig. 5 is a lap mitre joint; Fig. 6 is an end dovetail joint.

There is not only a distinct element of interest in the study of joints, frames, panels, and other details of building construction, but also the fulfilment of the demand for the study of practical things in those grades of school from which many who will enter the great field of the arts and crafts go out into their life work. Leading pupils to feel that their outside interests are vital, through encouraging

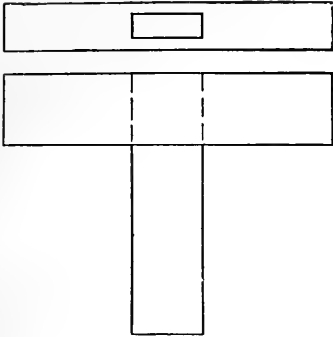


FIG. 1.

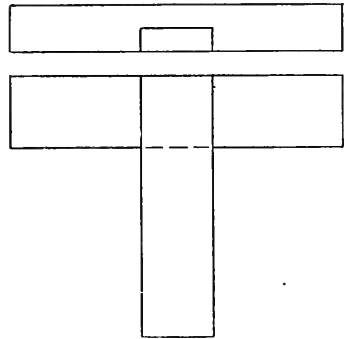


FIG. 2.

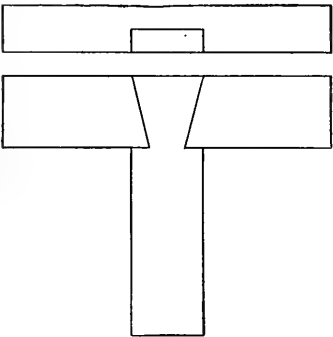


FIG. 3.

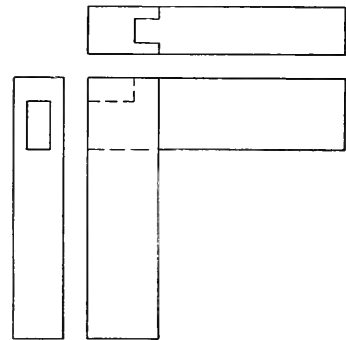


FIG. 4.

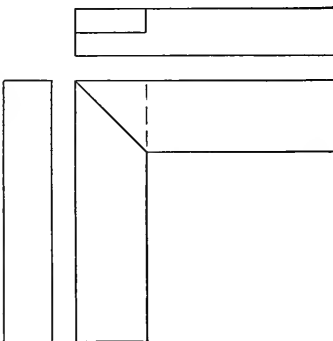


FIG. 5.

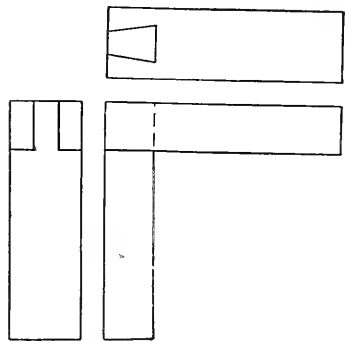


FIG. 6.

them to bring in sketches of such parts of the buildings or other structures as interest them, is in itself a broad training in the appreciation of the importance and beauty of labor. Leading them to feel the possibilities of drawing in connection with these objects of interest is almost bringing them within the realm of practical work in the field of the industrial arts. The development of conscious power in the execution of working-drawings of details of building construction is a practical foundation for many lines of industry. The truest understanding of this subject will fill each mind with this thought, —

“A place in the ranks awaits you,
Each man has some part to play.”

Explanation of Illustrations on the Drawing-book Page.—The door joint shows the joining of the frame at the corner by a mortise and tenon joint. The long dash lines represent the invisible edges of the panel which is set into the frame, or “tongued in.” The section of the frame shown in the front view gives the groove or “rabbet,” which is cut to admit the tongue. Partial sections are frequently given in this way to make details clear. The material is supposed to be cut through at right angles to the face, and the cut surface turned up until it lies in the plane of the face.

Notice the section given in the front view of the pulley, at the bottom of the page. If the draughtsman had thought it necessary to show that the edges of the handle of the wrench were rounded, he could have done so by giving a section of the handle in the front view.

It will be observed that most of the figuring of dimensions is placed outside the views, but occasionally some details are figured in the views.

Preparation for the Lesson.—If well-finished working-drawings or blue-prints can be brought into the classroom, they will help to make the work of more vital interest to the pupils. The teacher may be able to borrow from work-shops or draughting rooms some such working-drawings, and possibly to procure also objects actually made from the drawings.

A review of the subject of working-drawings will probably be necessary. This may be very profitable if the blackboard is freely used by pupils and teacher. See pages 38–45. Pupils can be encouraged to bring simple objects for their own study, as suggested on page 213. Fig. 1 shows a top and a front view of a knife, with a sectional view. Here the sectional view is placed between two external views, as is frequently the custom. Fig. 2 gives the top and front views of a bolt-head, and shows half-tinting at the lower part of the front view to indicate that the bolt is not continued its full length. Fig. 3 gives a front and an end view of an awl;

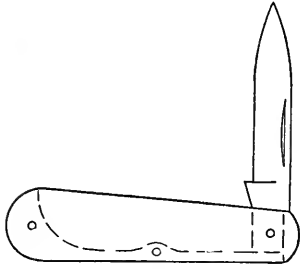
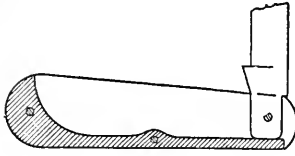
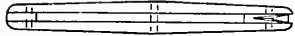


FIG. 1.

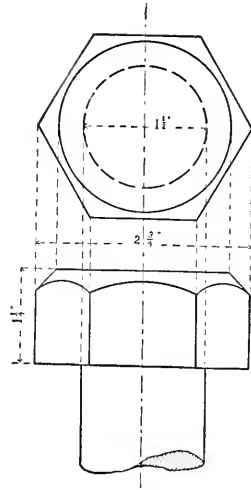


FIG. 2.

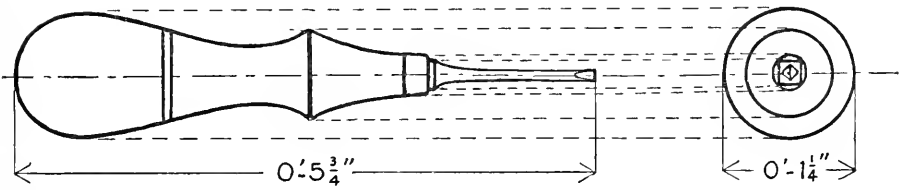


FIG. 3.

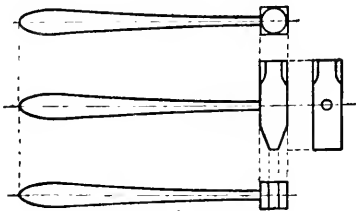


FIG. 4.

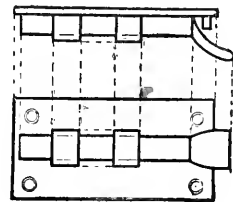


FIG. 5.

Fig. 4 shows four views of a hammer; and Fig. 5 gives two views of a common door-bolt.

Pupils should also be asked to bring in pictorial sketches or working-drawings of frames, joints, simple tools, or machine details, and they should study the illustrations on Drawing-Book page 8, for the meaning of the conventions used.

Elements of Machine Detail. — In the drawing-book, tools and machine detail are both suggested by illustrations. Closely connected with the home life, and with all industrial life, are tools and machinery. The study of even the simplest tool, such as a wrench or a hammer, shows its adaptation to the hand and to the work it has to do. The designing of better forms for common tools and of new implements for some special purpose opens a great field for inventive genius, and pupils should be led to think of the points of excellence or inferiority in the examples chosen for study.

Searching for such bits of machinery as can be brought to the schoolroom will lead to much observation on the part of the pupils. This observation, if properly utilized, will result in a broad and true interest in the work of the world.

Instrumental Drawing. — The work in Construction has been, so far, freehand. Instruments are now introduced, and ways of using them to produce accurate results are studied. As the work in construction grows more complicated, the necessity arises for the use of instruments in order to obtain very accurate work with great readiness. Two instruments — the compasses and the rule — are introduced with this book. The teacher is referred to pages 218–239 of this manual for suggestions as to teaching the proper use of instruments and the experimental solution of geometric problems.

It will be noted, however, that freehand drawing is still continued in construction. This should always be the case. Facility in making freehand sketches for working-drawings is essential for every draughtsman who makes drawings for constructive purposes. It is often necessary to make rapid drawings, freehand, in shops or other places where instruments cannot be made available, — the careful instrumental drawing being made when more time is at command, and in a place where instruments can be profitably used. It is, moreover, most essential that pupils form the habit of sketching rapidly, freehand, the working-drawing of every object studied, not only that they may understand this work in coming days, but also that they may form the habit of *thinking in the language of the conventions of working-drawings* rapidly and effectively. It is also stated that “attention is best secured by action,” and the preliminary study of the facts of an object is best effected by rapid but thoughtful freehand sketching.

Suggestions for Pupils. — Study the illustrations on page 8 of the drawing-book to see if you can understand the meaning of them. Explain the placing of the views, the kind of lines used in drawing them, and the figuring of the dimensions. Make a working-drawing of some similar object, figuring it to show dimensions.

Plan carefully the placing of this drawing in the blank space on the drawing-book page, and draw it neatly and accurately, figuring it correctly.

Respect for Labor. — The spirit of all exercises in Construction should be such as to show the value and the pleasure of labor, and to inspire a respect for all engaged in industrial pursuits.

“For in the work of the man’s hand,
 As in the song of the bird’s heart,
 There was, we all could understand,
 A unison. Each seemed a part
 O’ the other; and still, both, as ’twere,
 Of something higher. — since both praised it.
 The joy of labor, not the care;
 ‘The Poetry of Life,’ some phrased it.”

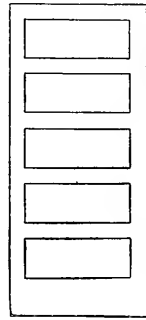
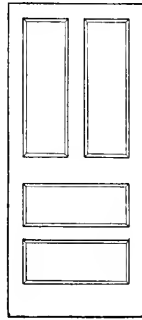
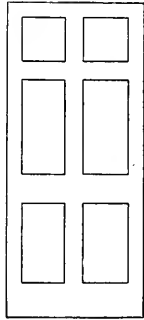
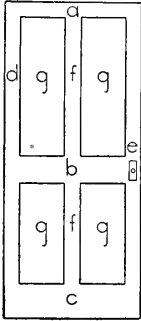
— OWEN MEREDITH.

Additional Exercise. — If a door or window joint has been the subject of the lesson, some pupils may like to carry the work into constructive design by planning a paneled door or a window with the casing.

Doors. — It is surprising to see the interest that can be awakened by calling attention to the structure of our everyday surroundings. Pupils will probably have never noticed doors, but thought can easily be directed to them. Call out, if you can, the reason for panels — to make the doors of less weight, and also to give greater firmness to the whole. Doors made of several pieces of seasoned wood are more reliable than if of one piece. Much interest may be developed by a comparison of the inner and outer doors of the building. Ask the pupils to make sketches of doors seen away from the school, giving special attention to the space relations. There may be some particularly fine door in the vicinity, known to the teacher, which may be suggested to the pupils to study and sketch as a preparation for their work in design. The pupils should plan also the casing of the door, trying to adapt it in width to the size of the door. If it is an outside door, they may give either its exterior or interior view.

The different parts of a door have special names by which they are known to the workmen. That part of the frame by which the door is hinged to the

door-casing is called the hanging-stile ; the opposite parallel section, the lock-stile ; the horizontal sections of the frame are known as rails, — the top rail, the middle rail, or lock-rail, and the bottom rail. The vertical part of the frame between the



a. Top rail.

b. Middle rail.

c. Bottom rail.

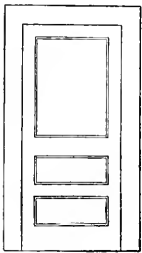
d. Hanging-stile.

e. Lock-stile.

f. Montant.

g. Panel.

top rail and middle rail, and between the middle rail and the bottom rail, is the montant. It is a very interesting study to notice the way in which these parts vary in space — the montant being generally narrower than the hanging and lock-stiles, and the lower panels shorter than the upper, etc. Panels that are higher than they are wide are called standing panels, those that are wider than high are called lying panels. Some doors have all standing panels, some lying panels only, and others have a combination of the two. The panels are usually of thinner material than the rest of the door. In doors to rooms in which it is desirable to increase the light, the spaces for the upper panels may be filled with glass. For instance, the third door in the illustration above might have a glass set into the space occupied by the two upper panels, as shown in the illustration at the right, and the glass might be protected by a grille.



Windows. — It sometimes is desirable to group windows, and a “couplet” or “triplet” window may be attractive, while it has the advantage of admitting a great deal of light.

Strength at the centre of a mass of detail unifies it, and a triplet window is more satisfying if the central opening is a little larger than those at the sides.

The decorative window by La Farge, in Book 10, page 15, Seventh Year Book, page 26, is very beautiful in its division of spaces.



FIG. 1. — "COUPLET."



FIG. 2. — "TRIPLET."

An arched window is more difficult to design, particularly if the exterior view is given. The curve of the arch should be supported and *not* broken by the horizontal division, as in Fig. 5. The arch in Fig. 4 might be decoratively treated with a grille or stained glass. In doorways similar to Fig. 6, both the transom and the sidelights are usually filled with glass, which may be protected by grilles.

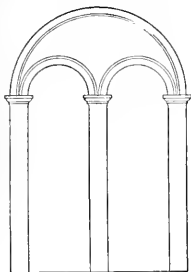


FIG. 3.

COUPLET ARCH.

The arches tangential to each other and supported by columns.

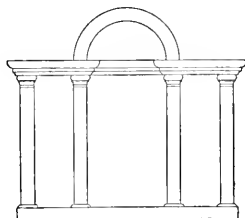


FIG. 4.

PALLADIAN.

The arch rests on a horizontal division.

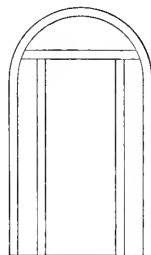


FIG. 5.

POOR DESIGN.

The curve of the arch is broken by a horizontal division.

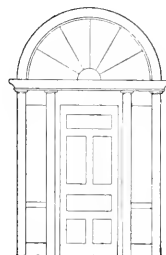


FIG. 6.

COLONIAL DOORWAY.

Arch supported.

THE USE OF INSTRUMENTS.

Instruments. — A knowledge of the use of instruments, and facility in using them, are indispensable to every mechanical draughtsman. As the work in construction grows more complicated, the necessity arises for the use of instruments in order to obtain very accurate work with great readiness. Two instruments — the compasses and the rule — are introduced with this book. This exercise gives pupils an opportunity for obtaining a little facility in handling these instruments before endeavoring to use them in working problems. It will be noted, however, that free-hand drawing is still continued in construction. This should always be the case. Facility in making freehand sketches for working-drawings is essential for every draughtsman who makes drawings for constructive purposes. In many cases a free-hand drawing is all that is needed. In other words, it is frequently necessary to make rapid drawings, freehand, in shops or other places where instruments cannot be made available, — the careful instrument drawing being made when more time is at command, and in a place where instruments can profitably be used. Make these points clear to pupils before beginning the use of instruments.

The use of the instruments — compasses and rule — should be carefully taught and drilled upon at the start. Pencils used in instrumental work should be harder than those used in freehand work. Learning to keep the hard pencil well sharpened, to hold it erect when making points or ruling lines, and to use it either lightly or more firmly, is an important part of the first steps in this work. Learning to handle the rule deftly and noiselessly, to lift it as little as possible, to take as many measures as convenient without moving it, to measure by it with precision, and to avoid using the “end inch,” is important in order to secure rapid, thoughtful, and accurate work.

Before attempting any work with compasses, the class should be made somewhat familiar with their appearance and use in the hand of a teacher. Compasses are used to describe circles and arcs, and to set off distances. They have a head and two legs. In describing a circle or an arc, the compasses are held by the head, the point of one leg is fixed, the compasses are turned, and the point of the other leg describes a circle about the fixed point. It is, of course, essential that the distance between the two points shall remain the same while the circle is being described. A way to hold the compasses without changing the angle between the legs must be found.

Examine the head of the compasses. It is cylindrical, having two plane faces and a curved face. If the head is held by its two plane faces, the grasp will never change the direction of the legs. If the head is held by the curved face, as beginners are very apt to hold it, the pressure of the grasp is likely to close the compasses more or less, and of course spoil the circle or arc.

For describing a circle or arc, the plane faces of the head should be grasped easily with the thumb and second finger, the first finger resting on the curved face of the head. This is the position for beginning (see Fig. 1). Practice pupils in simply taking hold of the compasses properly. Be sure that every pupil has the right grasp. Time spent in this practice, when the compasses are first put into the hands of pupils, will be time saved in the end.

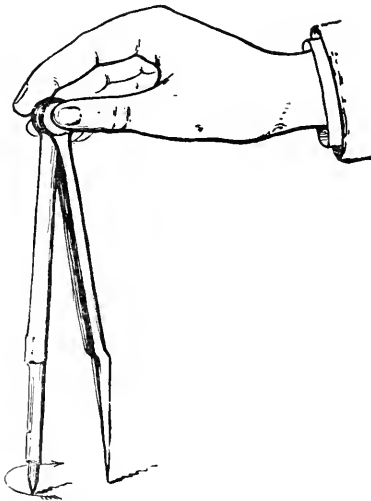


FIG. 1.

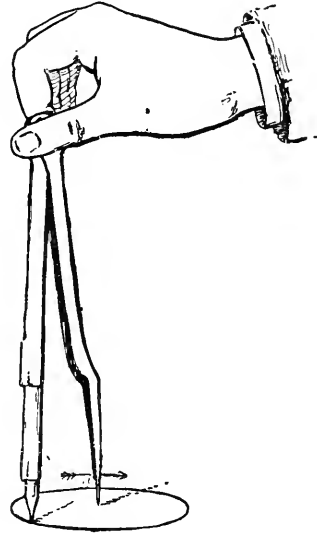


FIG. 2.

In describing the circle, there should be a slight (and but a slight) pressure on the fixed point, to keep it in place. The compasses should be so placed that the pencil point will be at the left of and below the centre; that is, so that a line connecting the points would be at about an angle of 45° to a horizontal line. Then the head is rolled between the thumb and fingers on the ball of the thumb, the first finger gradually taking the place of the second, until finally, when the circle is fully

described, the position is that seen in Fig. 2. This movement should be carefully studied and practised until a circle can be drawn with one sweep of the instrument.

While practising the use of the compasses, geometric terms may be recalled. When the metal point of the compasses is fixed on the paper, for the purpose of describing a circle or an arc, the point where it is fixed is said to be taken as a centre. The distance between the metal point and the pencil point is then called a radius. "Take any radius," means open the compasses more or less. "Take a radius of 1" (one inch), means open the compasses so that the distance between the points is 1". This will give practice in taking measures from the rule with the compasses, which should be held perpendicular to the rule. "Take any point as a centre," means fix the metal point on the paper or board. "Take C as a centre," means fix the metal point at the point marked C. Having explained these phrases, let pupils practice describing single circles and concentric circles on practice paper. Limit them somewhat as to centre and radius.

Exercises. — With a radius equal to the margin desired, and the corner of the sheet of paper as a centre, describe a quadrant, the ends of which shall touch the adjacent edges of the paper. With these points as centres, and the same radius, draw the intersecting arcs which will give the marginal corner. The space within the margin may be divided into six rectangles, for the following exercises: —

1. **Finding the centre** of a rectangle. The intersecting point of the diagonals will be the centre.
2. **Concentric circles**, first finding a centre as above.
3. **Semicircle, Diameter, Chord, Arc, Radius.**

The figure ABDFE is a *circle* — a plane figure bounded by a curved line called a *circumference*, every point of which is equally distant from a point within called the *centre*.

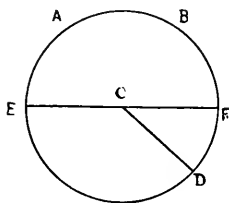


FIG. 1.

Any line, as CD, passing from the centre to the circumference, is called a *radius* — the plural form is *radii*. A line, as EF, passing through the centre of the circle and terminating in the circumference, is called a *diameter*. Half a circle, as GIH, is called a *semicircle*. Any part of a circumference, as JKL, is called an *arc*; a line connecting the extremities of the arc, as JL, is called a *chord*.

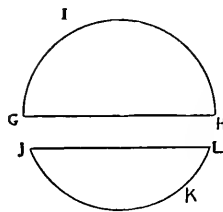
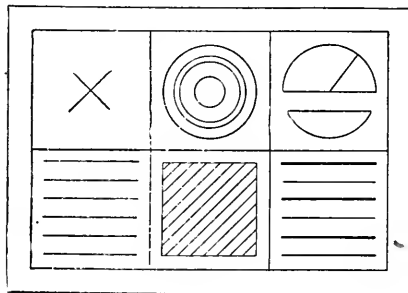


FIG. 2.

4. **Horizontal lines.**
5. **Oblique lines** (used in sections).
6. **Horizontal lines varying in width.**

Caution the pupils against too great pressure on the metal point. The pressure should be so light as to make no hole in the paper at the point taken as centre.

Show also how to use the rule. The rule is to be used for ruling and for measuring. For ruling, it must be placed with great care a slight distance from the points to be connected, so as to allow for the thickness of the pencil lead, and must be held firmly with the thumb and two fingers of the left hand. Question about the divisions on the rule, to be sure that they are understood. The illustration given opposite shows a good arrangement of the exercises for practice in the use of compasses and geometric terms, that are suggested on the opposite page.



Geometric Problems. — Geometry is the basis of accurate instrumental drawing. The drawing-board and T-square, used by mechanical draughtsmen, give a short cut to accuracy, and in many schools they are used by the pupils. An understanding of geometric principles is nevertheless necessary, and the study of geometric problems is of great disciplinary value.

The main effort should be to fix the geometric laws and the relation between problems. For example, the axiom, "two points of a line determine its direction," is at the root of all the relation of parallels. Children do not always see parallels. Indeed, they seldom notice parallels that are out of the more ordinary positions until trained to observe them. In teaching Problem 1, care should be taken that this law shall become general in its application, so that the pupils will be able to use it under all possible conditions.

Another law governs all bisection, whether of line, arc, or angle, and this law should become the possession of the pupils.

As for relations, the equilateral triangle is found in the hexagon, and is easily made in the trisected semicircle, while both the equilateral triangle and the trisected semicircle go into the making of the regular hexagon.

In teaching geometric problems, while dictation must necessarily be used, the work should not stop with dictation, but the pupils should be led to realize the truths worked out under dictation, and to relate these truths.

The following list includes all the problems that will be necessary for the present work in Construction. : —

Problem 1. — *To draw a line parallel to a given line.*

Problem 2. — *To bisect a line, or to draw a line perpendicular to it at its centre.*

Problem 3. — *To bisect an arc.*

Problem 4. — *To bisect an angle.*

Problem 5. — *To construct an equilateral triangle on a given base.*

Problem 6. — *To trisect a semicircle.*

Problem 7. — *To draw a regular hexagon.*

Problem 8. — *To draw a regular hexagon on a given base.*

Problem 9. — *To draw a perpendicular at the end of a given line.*

Problem 10. — *To construct angles of 90° and 45° at a point upon a given line.*

Problem 11. — *To construct angles of 60° and 30° at a point upon a given line.*

Method of Development. — Exercises in the development of some of these problems are given as suggestions to the teacher of good methods, by which pupils can be led to think out their solution.

Problem 1. — Begin the work by giving the following dictation exercise. The questions and answers are merely suggestive ; take your own method of leading the pupils to discover the process.

Dictation. 1. — Draw a horizontal line 5 inches long, marking the ends A and B. With a radius of 1 inch and A as a centre describe an arc intersecting the line at the right of A, and mark that point C. With C as a centre, and radius CA, describe a semicircle on the line AB. With the right end of the curve just drawn, as a centre, and the same radius, describe a second semicircle. In the same way, describe a third and a fourth semicircle successively on the line AB. Rule a line tangential to, or touching, the highest points in the four semicircles. Number this line 1 2. The letters and figures refer to the illustrations on page 223.

Ask pupils now to lay their instruments back on their desks, and study the drawing which they have just made. Ask —

How does the line 1 2 compare in direction with the line AB? — The line 1 2 is parallel to the line AB.

When is one line parallel to another? — When the lines are the same distance apart throughout their entire length.

Prove that 1 2 and AB are the same distance apart throughout their entire length. —
 The same radius was taken for all the semicircles, and the line 1 2 just touches the highest point in each semicircle.

Good. Now, how can you draw a line parallel to DE? — By drawing on DE, as we did on AB, four semicircles with the same radius, and then drawing a line tangential to them.

Now think; cannot a line be drawn parallel to DE with less work? — Yes: with only one semicircle at each end.

Come to the board and do it. Now, can this be done with any less work? — Yes; by drawing just the top of each of the two semicircles.

Right. What is a part of a circumference called? — An arc.

Now I think you can tell me about drawing a line parallel to DE. How many arcs will be necessary? — Two.

Where must their centres be? — On the line DE, near the ends.

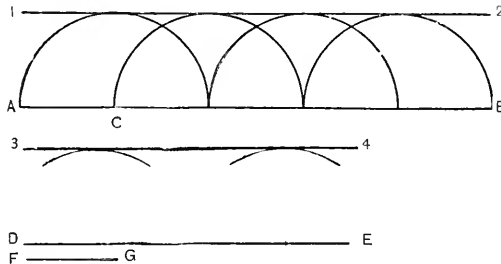
Where must the arcs be drawn? — Above the centres.

How long must the arcs be? — Long enough to show plainly the highest points.

What radius? — A radius equal to the required distance between the lines.

Here is a line, DE, on the board, and here is a shorter line, FG. Come to the board, and draw a line parallel to DE, at a distance FG.

2. Draw a line parallel to DE, at a distance FG. Make the arcs fine and light. The letters refer to the illustration below. The drawing required from pupils in this exercise is here illustrated.

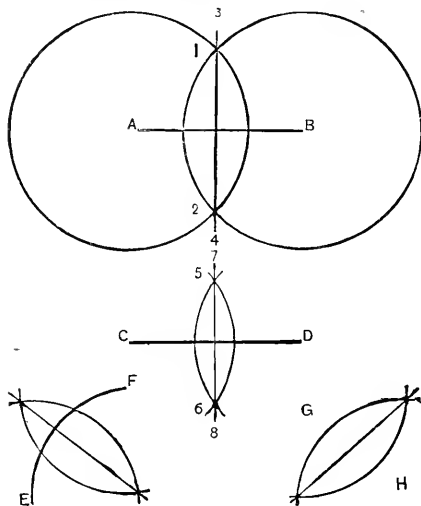


When the work is completed, the pupils should be led to state the problem, and the manner of working it, as follows: —

PROBLEM 1. — *To draw a line parallel to a given line.*

Let DE be the given line. Take any two points in the line DE, near the ends, as centres, and, with a radius equal to the required distance between the lines, describe two arcs above the centres. Draw a line 3 4 tangential to, or touching, the arcs. 3 4 will be the required line.

Problem 2. — Do not state to the pupils the object of this exercise, but give the following dictation.



Dictation. — With A as centre, and a radius greater than half of AB, describe a circle. With B as centre, and the same radius, describe a circle intersecting the first. Mark the points of intersection 1 and 2. Rule a line, 3 4, through 1 and 2.

Ask pupils now to lay their instruments back on the desks, and study their drawing. Ask —

How does the line 3 4 divide the line AB? — In the centre. The line 3 4 bisects the line AB.

How does the line 3 4 compare in direction with the line AB? — The line is perpendicular to AB.

The line 3 4 is perpendicular to AB at what point? — At the centre of AB.

Here is a line, AB, on the board. Come and bisect it. How did you do it? — By drawing two circles and a line to connect the points of intersection.

Who can do it with less work? Come and do it. How have you done it? — Instead of whole circles, I drew arcs long enough to intersect above and below the line. This line, AB, on the board is bisected. Here is another line, CD. Who can draw a line perpendicular to CD at its centre? Come and do it. How many arcs will be necessary? — Two. How long must they be? — Long enough to intersect above and below the line.

What centres must be taken? — The ends of the line.

What radius must be taken for the first arc? — A radius greater than half the line.

What radius for the second arc? — The same as for the first.

When this work is completed, ask the pupils to state the problem and the manner of working it as follows: —

PROBLEM 2. — *To bisect a line, or to draw a line perpendicular to it at its centre.*

Let CD be the given line. With a radius greater than half the line, and the points C and D as centres, describe, with the same radius, arcs intersecting each other above and below the line CD, in points 5 and 6. Draw a line, 7 8, through points 5 and 6. The line 7 8 bisects the line CD, and is also perpendicular to the line CD at its centre.

Problem 3. — In a similar manner, lead to a statement of Problem 3.

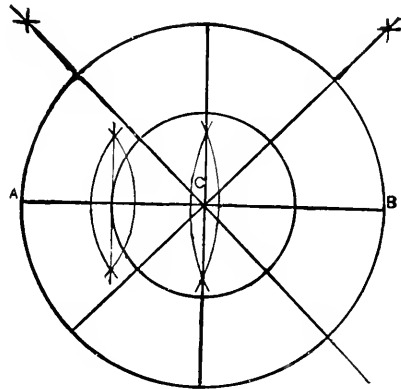
PROBLEM 3. — *To bisect an arc.*

Let EF be the given arc. With a radius greater than half the distance from E to F, and the points E and F as centres, describe arcs intersecting each other above and below the arc EF. A line through these points of intersection bisects the arc.

Problem 4. — The following dictation illustrates the application of preceding problems in the development of Problem 4. The resulting figure should be like the illustration below.

Dictation. — Draw a horizontal line $2\frac{1}{2}$ " in length and mark the ends GH. Bisect GH by Problem 2, and mark the centre I. With I as a centre, and the radius GI, describe a circle.

Draw the vertical diameter of the circle by continuing the line of bisection each way to meet the circumference. Mark this vertical diameter JK. Draw an oblique diameter which shall bisect two diametrically opposite quarter circles or quadrants. How can this be done? By bisecting the arcs GJ and JH. With G and J as centres, and a radius greater than GJ, draw arcs intersecting in L. Draw a line from L through I to the opposite part of the circumference. Bisect GI. With I as a centre, and a radius equal to half of GI, describe a circle.



Study the figure as in the preceding problems: —

What is the angle GIJ? — An angle of 90° , because it is a quarter circle.

How does the line LI divide it? — It bisects it.

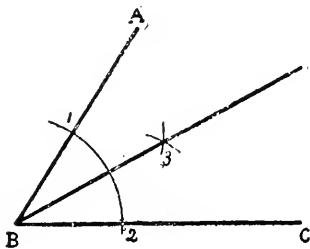
How did we get L? — By taking the ends of the arc GJ as centres and describing intersecting arcs.

What is the angle JIH? — An angle of 90° . (The points where the small circle intersects the lines JI and HI may be marked MN.)

What is the angle MIN? — An angle of 90° . Bisect it as in the case of GIJ and extend the line of bisection through to the circumference so as to give another oblique diameter of the large circle.

How does this line divide the angle HIJ? — It bisects it.

It will be seen that this work leads the pupils directly to the bisection of an angle. In giving this work, try to have pupils discover for themselves the relation between the different problems, and to feel that bisection in all cases rests on the same principles.

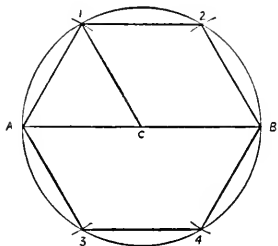


Let the previous work lead to the following statement of—

PROBLEM 4.—*To bisect an angle.*

Let ABC be a given angle to be bisected. With B as centre, and any radius less than BC, draw an arc intersecting AB and BC at 1 2. With 1 and 2 as centres, and the same radius, draw arcs intersecting at 3. Draw B 3. This line will bisect the angle ABC.

Problems 5, 6, 7, 8.—Do not state the object of the exercise, but begin the work by giving the following dictation:—



Dictation.—With any desired radius describe a circle, and mark its centre C. Draw its horizontal diameter, AB. With AC as a radius and A and B as centres, construct arcs intersecting the circumference at 1, 2, 3, and 4. Rule lines connecting the adjacent intersecting points. Connect 1 and C.

Ask pupils now to lay their instruments back on their desks, and study the drawing which they have just made. Ask—

What is the figure A 1 C?—A triangle. An equilateral triangle.

What is a triangle?—A figure having three sides.

What is an equilateral triangle?—An equilateral triangle is a triangle having three equal sides.

What is the base of a triangle?—The base of a triangle is the side on which it seems to rest.

What is the base of the triangle 1 AC?—AC.

Can you draw, with the aid of your compasses, an equilateral triangle on a given line, DE, as a base?—Yes; with DE as radius, and D and E as centres, draw quadrants, and rule lines from the point of intersection to D and E.

Come to the board and show how you would do it. Can it be done with less work?—Yes; with the same radius and centres, describe *short* arcs that will intersect above the centre of the line DE, and then rule lines from the point of intersection to D and E.

How is the semicircle A 1 2 B divided?—The semicircle is divided into three equal parts, that is, trisected.

How could you trisect a semicircumference with your compasses?—With the radius of the semicircle as radius, and with each end of the semicircle as centre, describe short arcs cutting the semicircumference.

Does A 3 4 B look like any figure that you have ever seen?—Does it look like a part of any figure that you have ever seen?—It looks like half a hexagon,—half the base of a hexagonal prism.

What is a hexagon?—A hexagon is a figure having six sides.

Yes; and when the sides are equal, the hexagon is called a regular hexagon. When they are unequal, the hexagon is called an irregular hexagon. Is A 3 4 B half of a regular hexagon, or of an irregular hexagon?—A 3 4 B is half of a regular hexagon.

How do you know that it is half of a *regular* hexagon?—Because A 3, 3 4 and 4 B, are all equal to the radius of the semicircle, and must, therefore, be equal to each other.

How could you complete the hexagon?—By drawing a semicircle above AB, trisecting it by the radius of the semicircle, and connecting the successive points by straight lines.

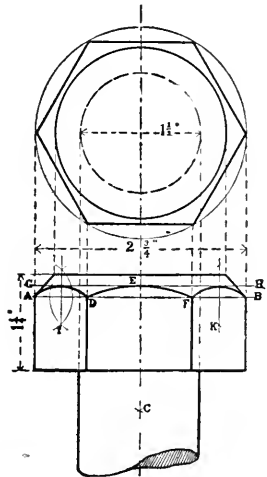
What would AB then be called?—The diameter of the circle.

Right in regard to the circle. What would it be called in relation to the hexagon?—The diameter.

No; a diameter of a rectilinear or straight-line figure connects the centres of opposite sides. What is the line that connects the opposite angles of a square called?—A diagonal.

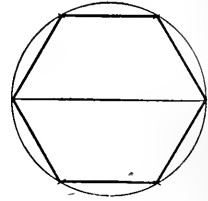
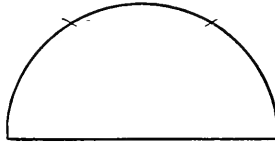
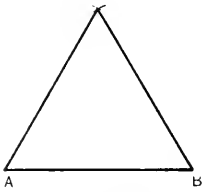
What does AB connect?—The opposite angles of the hexagon.

It is, then, the diagonal of the hexagon. Look now at your figure and think. How would you draw a regular hexagon with compasses?—Take a centre and a radius and draw a circle. Draw a diameter of the circle; with the radius of the circle, and with the ends of the diameter as centres, trisect each semicircle.



From this work there may be deduced the construction of an equilateral triangle, the trisection of a semicircle, and the construction of a hexagon under different conditions. The applications of these problems are frequent—one of these applications in machinery showing the working-drawing of a hexagonal bolt-head is given here.

This work should lead to the following statement of the following problems and the manner of working them:—



PROBLEM 5.— *To draw an equilateral triangle on a given base.*

Let DE be the given base. With DE as radius, and D and E as centres, describe arcs intersecting in point I. Draw DI and EI. $\triangle DEI$ will be the required triangle.

PROBLEM 6.— *To trisect a semicircle.*

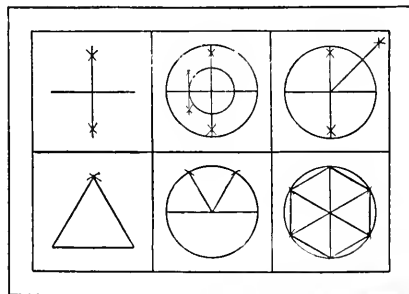
With the radius of the semicircle as a radius, and the ends of the semicircle as centres, describe short arcs intersecting the semicircle. The semicircle will then be trisected.

PROBLEM 7.— *To draw a regular hexagon.*

With any radius and any point as centre, describe a circle. Draw a diameter of the circle. Trisect the two semicircles. Connect the adjacent points by straight lines. The figure thus drawn will be a regular hexagon.

PROBLEM 8.— *To draw a regular hexagon on a given base.*

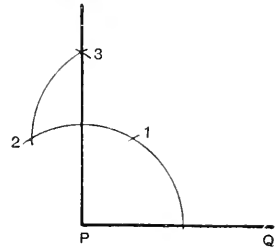
Construct on the given base an equilateral triangle by Problem 5. With the vertex of the triangle as centre, and one of its sides as radius, describe a circle. Complete the hexagon by Problem 5.



The illustration here shows a good arrangement of a page of problems.

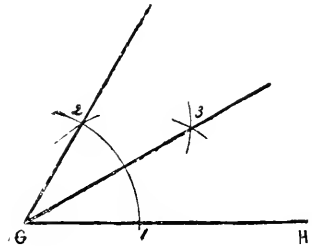
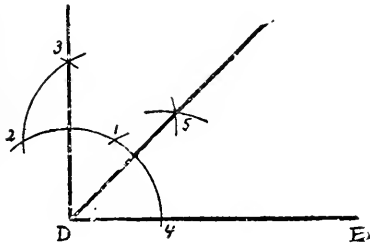
PROBLEM 9. — *To draw a perpendicular at the end of a given line.*

Let PQ be the given line. With P as centre, and any radius, describe about two-thirds of a semicircle, the right end of the arc resting on the line PQ. With the same radius, lay off equal distances on the arc. With 1 and 2 as centres, describe arcs which intersect at 3. Draw 3 P. This will be the required perpendicular.



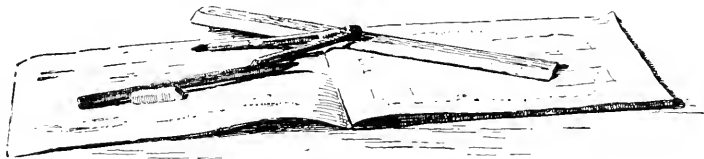
PROBLEM 10. — *To construct angles of 90° and 45° at a point upon a given line.*

Let DE be the given line; it is required to make at D angles of 90° and 45° . At D erect a perpendicular, 3 D, by Problem 9. This gives the right angle or angle of 90° , 3 DE. Bisect this angle by Problem 4, by the line 5 D. The angles 3 D 5 and 5 DE are each angles of 45° as required.



PROBLEM 11. — *To construct angles of 60° and 30° at a given point upon a given line.*

Let GH be the given line. Angles of 60° and 30° are required at the point G. With G as centre, and any radius less than GH, draw an arc upwards from 1 on GH. Lay off on this from 1 the distance 1 2, equal to G 1. Draw G 2. The angle 2 G 1 is the angle of 60° required. Bisect this by Problem 4 by the line G 3. The angles 3 G 1 and 3 G 2 are angles of 30° as required.



Suggestions for the Blank Pages in Book 10.

Each teacher may perhaps have some special use for the blank pages, suited to the special needs of the pupils in pose, animal, landscape, or decoration.

Some may desire to give these pages to the "Additional Exercises" that are suggested throughout the manual text for Construction. Some may make these pages a series of exercises calling for working-drawings of tools.

- | | |
|-------------------|---------------------|
| 1. Cutting tools. | 3. Measuring tools. |
| 2. Driving tools. | 4. Splitting tools. |

Some may lay out the pages as follows:—

- | | |
|--------------------|---------------------------------|
| 1. Tools. | 3. Design of a door with glass. |
| 2. Machine detail. | 4. Grille to protect the glass. |

Or the pages may be used to show the progress of the work in Construction. For instance, the first page may be used for the views of a given model, as the right-angled triangular prism, or the square prism, or both, and may have a small sketch of the appearance of the model at the upper left of the page. The second page may show the pattern of the right-angled triangular prism. The third page may give the views of an object, and may have a small sketch of the object at the upper left. On the fourth page may be drawn the views and pattern of another object. Especial study should be given to the placing of the drawings on these pages; pleasing space relations are just as beautiful in work in Construction as in Representation or Decoration.

Or the pages may be given to exquisite instrumental work with the problems, seeking new applications of them. The following poem suggests a new problem.

“ There dwells mid thorns and viny tangles. In freakish colors dressed, A sage who dotes on curves and angles. And many a curious test, Yet ne'er was found in learned wrangles, And ne'er was known to jest.	“ Pose him with line or conic section! To demonstrate its laws And show their close and fine connection, He sets about and draws, With noiseless care and shrewd inspection, Some shimmering threads of gauze.
--	---

“ To close a circle in triangle,
He thinks no great affair —
Straight out from thorn and viny tangle,
'Tis sketched upon the air,
And floats a flimsy silver spangle,
For bright-eyed Morn to wear!”

— EDITH N. THOMAS.



R. L. Raymond



Sketches — Katherine Raymond



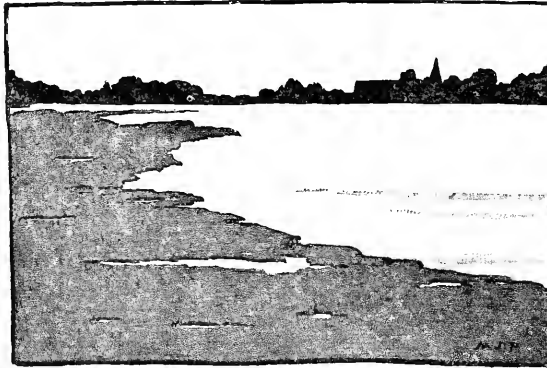
Study. — Lucy Fitch Perkins.

Composition. — Some may like to use these pages entirely for drawing from nature, — trees with their spring foliage, branches, or flowers, — which is always a delight to the child, and the blank pages give space for a number of exercises. They may be used as a series, showing the growth and development of one example, — as a branch of the apple or the pear tree showing leaf buds, the branch with leaves and cluster of blossoms, a branch of fruit, the tree in flowering time, the tree in full fruitage, the trees in a landscape.

“The rigid trees in budding time agree
In whiteness fair. Like silver filigree
Against the tender turquoise of the sky,
Stirless and stiff, and pure the blossoms lie.”

— HANNAH PARKER KIMBALL.

Any of these drawings may be composed in an oblong, making careful study and seeking to produce beautiful space relations. In pictorial work, the spaces should balance, but should not be equal. The space relations will be more agreeable if the principal lines are so placed that the upper and lower parts of the picture differ, and also the left and the right in area.



Here is a very suggestive verse for a composition in black and white : —

“Far off against the solemn sky,
Black lie the city's towers.”

— CELIA THAXTER.

Or, if possible, there may be work from flowers, a flower festival on these pages of the drawing-book.

“Why not adopt from Japan, with her pottery and her more trivial quaintnesses, that poetic simplicity which makes yearly holidays of the ‘flower-viewing’? It is easy, amid the hills, to mark the season with flowers. Nay, we need but lend our eyes, and they themselves will gently lead us on. Unbidden they come. From the arbutus, awakening from her winter-sleeping buds, purer by contrast with the rusted evergreen of her leaves; the apple-blossoms, nature’s bounty, though man’s possession; the mountain laurel, flushing the very highest hill-tops: the gay field-flowers, daisies and buttercups, and nodding spikes of airy purple grasses; the lilies of the field and of the wood, — on to the innumerable clouds of the asters, and the utter lavishness of golden-rod, — there is scarcely a pause. For these are but a few: their name is legion; and scarcely can one choose between them, save that we love the best the one that is here.” — D. H. R. GOODALE.

“There were Daisy and Cornflower and Poppy and Pink,
 And the Iris that stands by the water to drink,
 Marigold, Larkspur, and Tulip, and Rose,
 And the flower of an hour, that just blossoms and goes,
 And Hepaticas pale, faint colored like pearls;
 And Sunflower, and Eyebright, and little Blue-Curls;
 And the great scarlet Balm, and the Thistle so proud,
 And Bluets that stand in a twinkling crowd,
 And Climb-well, and June-sweet, and Honey-sup;
 These are the flowers that always look up;
 Some of them tame, and some of them wild,
 And some only bloom for Titania’s child!

“There were Jonquils, and Snowdrops, and Lilies all pale,
 Violets, Myrtle, and Bluebells so frail;
 And the Hyacinth sweet with its scented bell,
 And the Moccasin-flower in the dewy dell;
 And the Indian-pipe and the Trillium white,
 And the Jewel-weed, and the Columbine bright;
 And the Shadow-flower flitting away from the grass,
 And the Lady-flower sad with her looking-glass,
 And the Lost Flower that somebody dropped in the town;
 These are the flowers that always look down;
 Some of them tame, and some of them wild,
 And some only bloom for Titania’s child!”

— EDITH N. THOMAS.

Other Work. — Additional study may be given to drawing from the pose, or to a repetition of the animal studies, planning for the composition of the drawing in an oblong.

Mahomet said, "Teach your children poetry ; it opens the mind, lends grace to wisdom, and makes the heroic virtues hereditary." It certainly quickens the imagination, and flowing verse does help to clear vision. The following poem gives a series of pictures, just four for the four pages. The sleeping children on Plate XX. are from a sketch-book of Mr. John La Farge.

"Just a little baby, lying in my arms —
Would that I could keep you, with your baby charms ;

"Roguish little damsel, scarcely six years old —
Feet that never weary, hair of deeper gold ;

"Blue eyes learning wonders of the world about
Here you come to tell them — what an eager shout! —

"Sober little schoolgirl, with your strap of books,
And such grave importance in your puzzled looks ;

"Sweet and thoughtful maiden, sitting by my side,
All the world's before you, and the world is wide."

— LOUISE CHANDLER MOULTON.

The verses which follow are suggestive of pleasant pictures : —

"Crown'd with her pail, light rocking as she steps
Along the fresh moist grass, young Lucy trips."

— ANNA SEWARD.

"Within the window's scant recess,
Behind a pink geranium flower,
She sits and sews, and sews and sits,
From patient hour to patient hour."

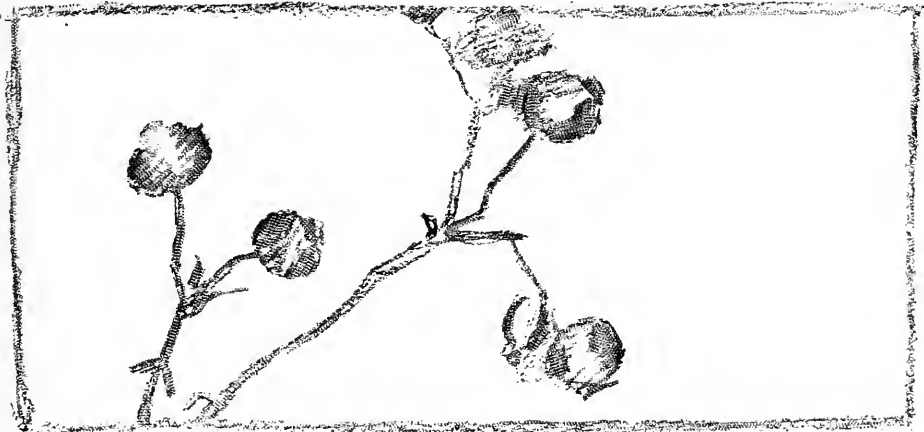
— ELIZABETH STUART PHELPS.

"Where thick the dandelions lie,
Like coins of gold among the grass,
I watch the children flitting by,
Plucking the blossoms as they pass ;
Their hands as full as they can hold,
Yet still on further conquest bent."

— CAROLINE A. MASON.



Pupils may copy some of the work on illustrative pages. Or, composition may be attempted with simple material. The compositions below are by seventh year pupils.



“Dove-haunted roofs and towers and spires,
The friendly faces of the clocks,
The network of electric wires,
The sparrows gossiping in flocks,

“The smoke’s dim ragged phantoms soft
From myriad chimneys lightly curled,
That mingle with the clouds aloft,
Slow sailing with the sailing world.”

— CELIA THAXTER.

Some may desire object work and some may wish to try the study of interiors. A half-open door furnishes a very good subject, as it brings out very directly the apparent difference of direction in lines which are really absolutely horizontal. Very good effects in rendering may also be obtained in such very simple straight line subjects.

Color work with its refining influences and educative bearing may be advantageously presented on these pages, either by means of colored paper or by the use of water-colors.

“ She stood with a long and slender wand,
With a tassel of hair at its pointed tip ;
And fast as the dews from a forest drip,
When a summer shower has bathed the land,
So quick a thousand colors came,
Darting along like shapes of flame,
At every turn of her gliding hand.
She gave a form to the bodiless air,
And clear as a mirrored sheet it lay ;
And phantoms would come and pass away,
As her magical rod was pointed there.”

— JAMES GATES PERCIVAL.

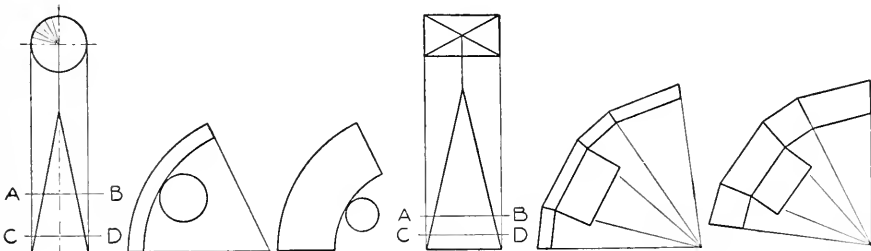


CONSTRUCTION.

TYPE SOLIDS.—Sections. Views and Developments. Plans.
ART.—Manner of Drawing.

[The pupil studies the views and development of the prism and cylinder, observes the application of principles, as shown in the plans given, studies for the views and the development of the surface of one or more of the type forms, or plans a room or building, and makes sketches, chooses one for drawing on the drawing-book page, plans thoughtfully for the placing, and draws it with instruments in the book, using the proper conventions, and seeking for accuracy and neatness in the work.]

Surface Development.—The subject of surface development is one of great interest to the pupils of this age. In preceding books the surfaces of prisms, cylinders, cones, and pyramids have been worked out in order to lay the foundation for the more advanced work in pattern making. Probably the pupils will also have had some experience in developing the frustums of solids, made by a plane parallel to the base, or the intersection of a solid by a plane parallel to the base, as it is technically called. This problem is of very general use in draughting patterns of funnels, basins, tin cups, and other domestic utensils. See the illustrations below.



DEVELOPMENTS OF BASINS AND CUPS.

The views and development of the truncated hexagonal prism shown on the drawing-book page give the opportunity for detailed observation of the relation between the views and surface developments of frustums of prisms made by a plane at any angle to the base, and lead to the still more detailed work of developing the surface of the frustum of the cylinder, also shown on the drawing-book page.

Suggestions for the Teacher.—It is possible to bring into the class-room such a variety of material illustrative of the different lines of work, that reasons for solving the problems presented in the work on the drawing-book page will not need to be given. The application of these problems is to be found in the household utensils which have spouts or cylindric handles, such as tin watering pots, coffee-pots, and oil cans.

There may also be found within the school building sheet metal work in the form of air-shafts or conveyance pipes having numerous turns or "elbows," varying according to the positions in which they are found. The analysis of these elbows will show at least two frustums of a prism or a cylinder made by a plane at an angle to the base, or, more technically speaking, an oblique intersection by a plane.

Cutting out and making up the surface developments will not only add great interest to the work, but it will also prove its correctness, — a satisfaction that most pupils of this age demand.

If blue prints or finished drawings of patterns can be obtained from a sheet metal worker, with some of the objects made from them, they will aid greatly in making the work real to the pupils. The teacher should have also some patterns cut and folded, which she can use in recalling to the memory of the pupils the work which they have previously done.

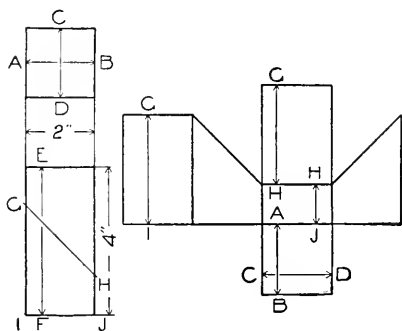


FIG. 1.

ABCD. — Top view and pattern of base.

EF. — Height of model.

GH. — Plane of intersection, and length of top face of the frustum.

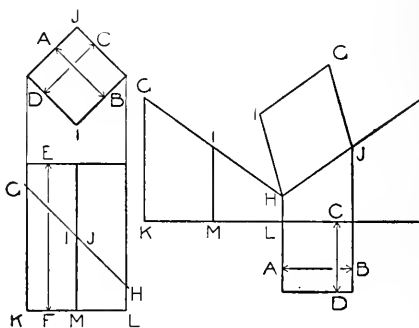


FIG. 2.

GI and HJ. — Length of vertical edges of frustum and of pattern. Fig. 1.

GK, IM, HL. — Length of vertical edges of frustum and of pattern. Fig. 2.

Truncated Square Prism. — It may seem advisable to give the preliminary work illustrated above in the development of the truncated square prism. Look for the corresponding letters in view and pattern.

The surface developments of the frustums of prisms as shown in Figs. 1 and 2, are of practical use in the draughting of patterns of air-shafts and other similar appliances based on the square or oblong prism.

Though they are given here as a possibly necessary preliminary step to the work on the drawing-book page, it may be that the immature age of the pupils in some classes, or other conditions, will preclude the more advanced work shown there, in which case these simpler problems might be chosen for the drawing-book.

From the diagram and explanation of the truncated square prism already given, the hexagonal prism on page 9 of the drawing-book will be readily understood, especially if it is proved by drawing, cutting, and folding.

The Cylinder.—The top view of the cylinder is divided into twelve equal parts. From these points of division vertical lines are dropped to the front view, dividing the curved surface of the cylinder into elements, which are plainly shown in the illustration of the development. From the points where the verticals touch the slanting line, indicating the plane of intersection in the front view, horizontal lines are projected across for the developed surface. The points where these horizontals intersect the verticals of the development determine the curve of the line.

This also is easily proved by cutting and pasting, and the right-angle elbow of a stove-pipe joint may be made by joining two such developments.

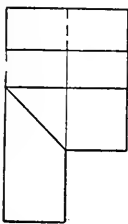


FIG. 3. — Right angle elbow in rectangular air-shaft.

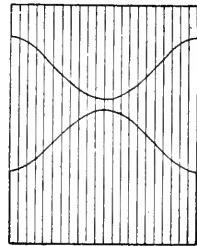
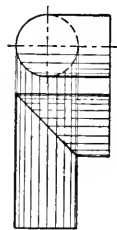
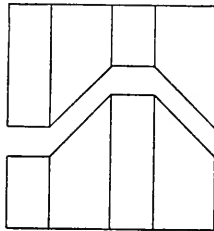


FIG. 4. — Right angle elbow in cylindric pipe.

Suggestions for the Pupils.—Study the drawings of the cylinder on the drawing-book page. What are these drawings? What does the slanting line in the front view mean? What do we call the part of the cylinder left? How is the surface development related to the views? Find the figure 1 in as many drawings as possible. What point does it indicate in each place? Find the figure 2. Find the other figures and tell what points they indicate. Study the drawings of the frustum of the hexagonal prism, and point out the relations of the surface development to the views. What applications of such drawings are made in building or in manufacturing?

Make the working-drawing and develop the surface, freehand, of one of these models or of some object involving the same principle. Study the space on the drawing-book page and plan for the drawings you have made in the space on the page; make the drawings with instruments with great care as to the conventions used and as to the finish.



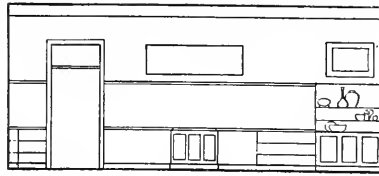
Optional Exercise. — Plans. — If preferred, the space on the page may be reserved for a plan. This is a line of work in which the pupils using this book will have had some previous experience. In Book 8, provision is made for drawing the plan of a small one-room house. In Manual, Part IV., pages 242–246, will be found a brief account of the evolution of the modern house from the simplest form of shelter, as a tent, or the one-room log house of early times. All of the changes and improvements which have been made, have come in answer to a demand for the increased comfort and convenience of the family life of the home, and the modern house is a reflection of the tastes and habits of its occupants.

The schoolroom or the cloakroom would afford the teacher a good means of teaching the pupils the conventional forms and technicalities employed in drawing a plan.

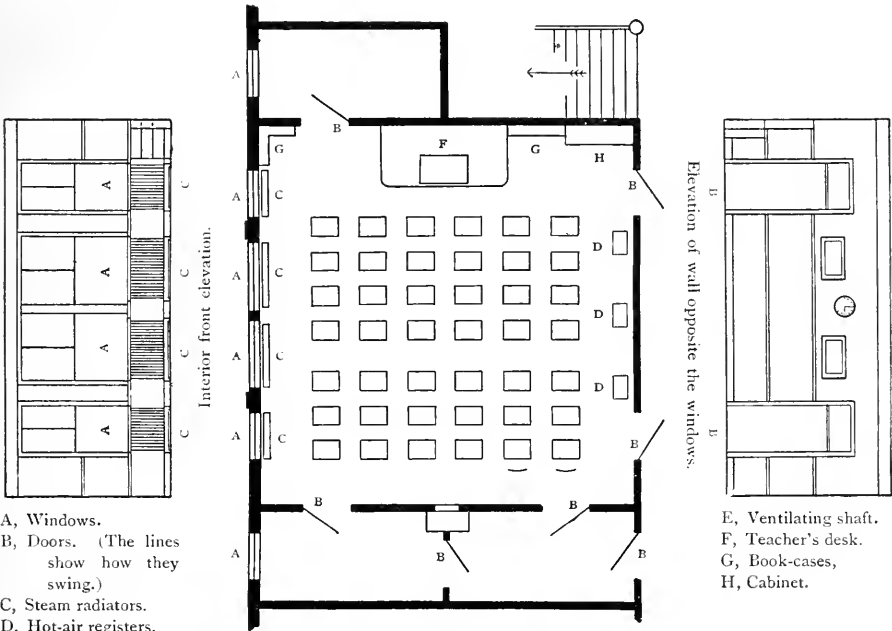
The illustration given on the opposite page of a plan of a schoolroom and the elevations of its walls will show the teacher how windows, doors, chimneys, heating arrangements, etc., may be correctly indicated. The thickness of the walls should be kept in proportion to the scale of the drawing.

If blue-prints or well-finished drawings of plans can be obtained, they will aid greatly in explaining difficult points, and in interesting pupils. Illustrations of plan and elevations may sometimes be found in magazines.

Public Buildings. — While the private dwelling is an indication of the life of the individual, or of the individual family, the broadening out of the family life into community life has expressed itself in public buildings. Railroad stations, factories, stores, and office buildings are designed to facilitate the everyday business and pleasures of a community, while churches, schoolhouses, town halls, public libraries, and theatres are the expression of the higher side of community life. They are built to serve not the primal necessity of the body for shelter, but the higher necessity for mental training and spiritual uplifting.



Elevation of the platform end.



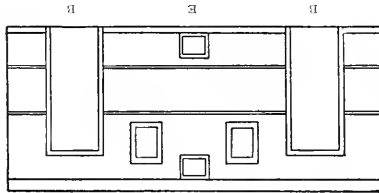
Interior front elevation.

Elevation of wall opposite the windows.

Plan.

- A, Windows.
- B, Doors. (The lines show how they swing.)
- C, Steam radiators.
- D, Hot-air registers.

- E, Ventilating shaft.
- F, Teacher's desk.
- G, Book-cases,
- H, Cabinet.



Elevation of wall opposite the platform.

The Library as a Social Institution.—The public library stands as the expression of the culture of the individuals in a community, and for the fellowship which has made individual culture possible. It is a social institution.



PRATT INSTITUTE FREE LIBRARY, BROOKLYN.

Pratt Institute Library is a fine example of a modern library. The style of the building is more or less free Renaissance, without pilasters or columns, red brick, trimmed with Belleville brown stone, being the material. The broad entrance, with stone steps and balustrades, and mosaic pavement, will hereafter be connected by an enclosed loggia with the other buildings of the group.

The spacious entrance-hall and corridors are also paved in stone mosaic, of pleasing design. The columns and pilasters are of Sienna marble, with yellow shafts and red pedestals. The wide marble stairway, the dark English quartered oak woodwork, and the softly tinted walls, complete a particularly attractive ensemble. The same effect is continued on the floors above, with the woodwork in choice ash.

The entire decoration of the building is by The Tiffany Glass and Decorating Company, and the tints of walls and ceilings in soft yellows, creams, buffs, terracottas, and yellow-greens are a perpetual delight to the eye.

A system of speaking-tubes and house telephones enables the librarian to communicate with every part of the building, and mechanical methods of communication abound throughout all the departments.

Facing the entrance is the door of the children's reading room and library. This room is twenty-five by forty-five feet, with four south windows. Here, with a sympathetic assistant in charge, the small men and women of letters have free access to the shelves, where they may choose for themselves from the volumes comprised in the children's list (for those under fourteen) — some thousand or more titles. Here also they may either read or take out books or periodicals; and miniature tables and chairs of varying heights and sizes await the small occupants.

In the general reading room, facing east on an open street, are the newspapers and current periodicals to the number of over two hundred, with all conveniences in the way of racks and files. The lighting, by day and evening, is admirably provided by almost continuous windows on three sides and by electric lights of latest device.

The arched doorways, with tapestry portières, give a vista from the reading room through the children's domain, and across the delivery room to the stack at the west. The delivery room occupies the whole western end of the building, with the stack opening behind it. The plan on page 247 shows the arrangement.

Mrs. Deland said at the opening of the Pratt Institute Free Library: —

“A public library is no respecter of persons. Any man can come here and enter into the company of the wisest and the greatest and the best. Books are indifferent to our purse, or our persons; the same silent welcome awaits us all.

* * * * *

“It may seem a little thing for a man to appreciate that the privileges of this Library belong to him; but it is a great thing if he learns to feel that they belong to him, only because they belong to all.”

To aid the teacher to develop in the pupils an appreciation of the advantages which our social institutions offer, the study of library plans is suggested.

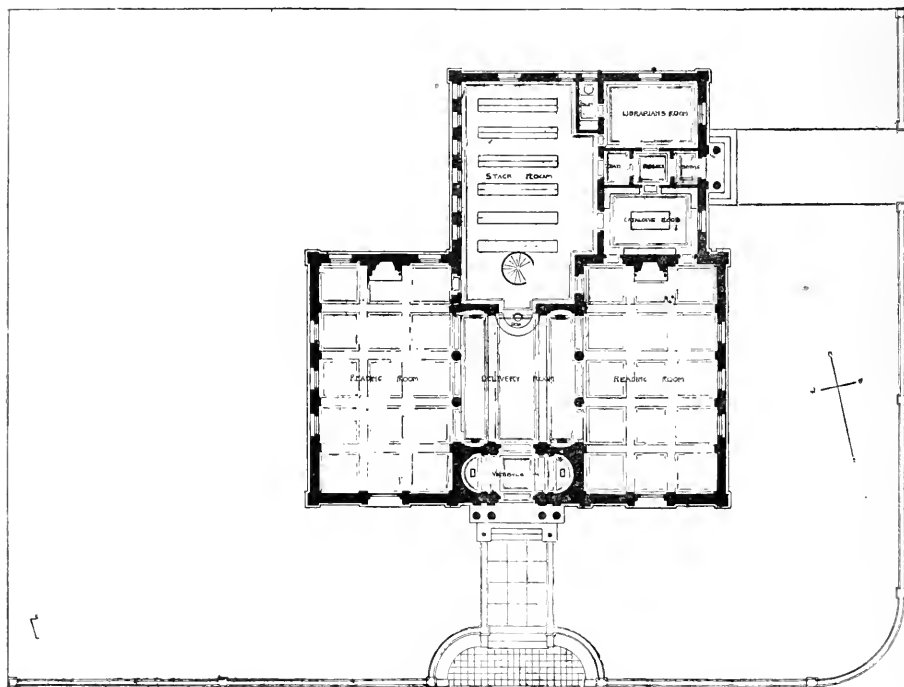
Fitness to Purpose. — The plan of a building is the simplest, most direct way of showing the arrangement of rooms, just as a map shows the topography of a country, and the drawing of plans affords pupils the opportunity to exercise their judgment and creative power in providing for the necessities of the use for which the building is intended.

A public library must, first of all, be a safe repository for books, and the place in which the stacks of shelves are kept is usually called the “stack room.” For book borrowers there is a delivery room or a delivery desk where books are delivered and returned. A reading room is provided for the convenience of those who wish

to read the newspapers or magazines which are a part of the library, or to consult reference books which may not be taken home. Often there is a separate room for reference books, called the reference room.

In a small library, the librarian who delivers and receives the books is expected also to exercise a supervision of the reading room, and to assist readers and borrowers in finding the books they wish. For that reason the reading room is very near the stack room, and the delivery desk so placed as to make supervision easy.

In larger libraries, where a greater number of readers and borrowers must be accommodated, there are several reading rooms, and to secure quiet for the readers these are often remote from the confusion of the delivery room.



FIRST PRIZE DESIGN FOR A SMALL LIBRARY. *The Brochure Series*, March, 1898.

Essentials in a Library.— In 1897, *The Brochure Series of Architectural Illustration* offered prizes for the best plans for small libraries, and published the prize designs in March, 1898. The design which received the first prize is reproduced on page 244. It will be seen that it is compact and well lighted, and that

the reading rooms are easily accessible. The delivery desk is central, the stack room is well placed and of a proper size in relation to the other rooms, while rooms for the librarian and cataloguer are provided. The Brochure says that the best plan for a small library seems to be cruciform, with the stack in the rear, reading and reference rooms at left and right. It lays down as fundamental necessities —

- | | |
|---------------------------------|----------------------------|
| 1. Light. | 4. Convenient arrangement. |
| 2. Compactness. | 5. Chance for growth. |
| 3. Opportunity for supervision. | |

Suggestions for the Lesson. — The plan for a small library, in which the arrangements are simple and easily understood, might be made by pupils living in a small city or town. For pupils who have access to a large library, the plan for the children's reading room would be a very suitable exercise.

This exercise will be more valuable to pupils if the teacher prepares them for it, by asking them to notice the points mentioned when they visit the public library to read or to get books.

Suggestions for Pupils. — In planning a children's reading room consider: —

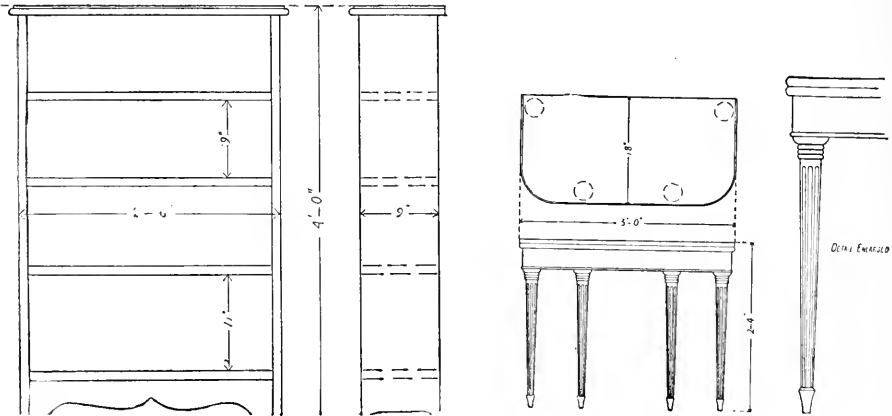
1. *Size of Room.* — How many children would be likely to use it at a time?
2. *Shape of Room.* — What shape would give the most convenient arrangement?
3. *Entrance and Exit.* — Where would be the best place for the doors, so that the readers may not feel drafts of air, nor be disturbed by those who are coming and going? What other rooms are adjoining?
4. *Light.* — On how many sides is the room lighted? How many windows must you have to give plenty of light, and how large must they be? (Note. The best authorities on lighting give one square foot of glass to five square feet of floor space as a desirable proportion.)
5. *Ventilation.* — Where shall the ventilating flues be placed?
6. *Heat.* — Where will you place the steam radiators or the hot air registers? (Note. If hot air registers are placed in the wall, the hot air flue, and not the register would be shown in the plan. If the system of ventilation and heating should seem too complicated for pupils to understand, it need not be represented in the plan.)
7. *Reading Tables.* — How many shall there be? How large shall they be? How shall they be placed to get the best light from the windows?
8. *Book Shelves.* — Where should they be placed for convenient access?
9. *Librarian's Desk.* — Where shall it be so that those who ask advice or assistance in finding books need not disturb the readers?
10. *Catalogues.* — What kind of catalogues do you prefer? Shall they be near the librarian's desk, the book shelves, or the reading tables?

Neatness and accuracy are to be striven for in this work. The drawing should be well placed on the paper or the drawing-book page, drawn with instruments, and carefully finished with ink or pencil.

In the plan of the Free Library of Pratt Institute, given on page 247, it will be seen that the children's reading room is connected with the children's library, so that it is of itself a complete little library within a library.

Suggestions for Teachers. — The talk on libraries and their arrangement will stimulate the interest of the pupils in the books to be found there, and might form the basis of written language lessons on books that they have read, books that they like, or decorations, pictures, etc., that they would like to see in a library, and how they should be placed.

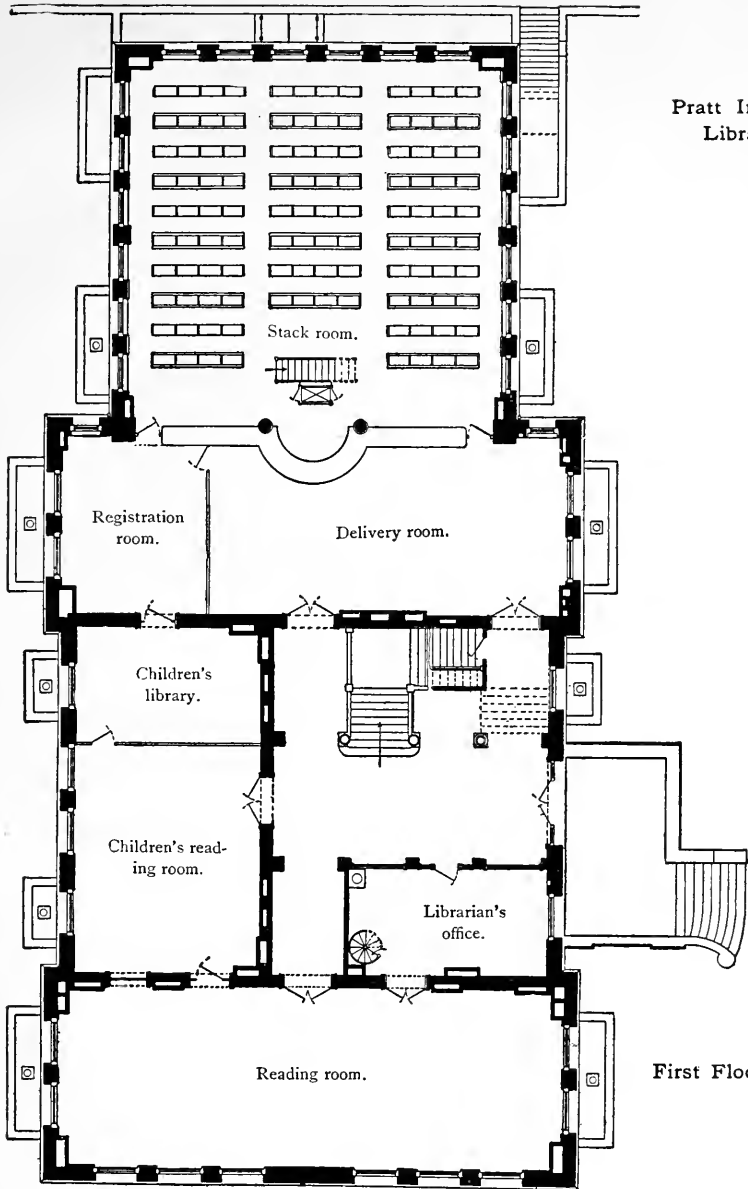
Some of the subsequent exercises in construction might be connected with this thought of the library. For instance, the grille designed for page 10 might be a register grille for the reading room, or a railing for a librarian's desk.



OBJECTS SUGGESTED.

Instead of building or machine detail for page 11, the elevation of one side of the reading room might be drawn, planning the wall spacing, — height of bookshelves and picture moulding, placing of doors or windows and pictures. Designing a reading table or a book-case would be another suitable exercise for page 11.

Historic Buildings. — The effort to plan a room which is adapted to a public need will give pupils a new interest in the study of the plans on page 9 of the drawing-book.



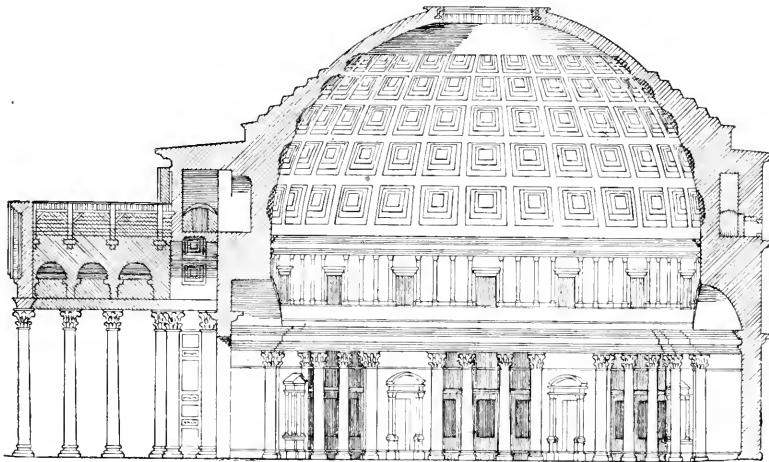
Pratt Institute
Library.

First Floor Plan.

Plan of the Pantheon.—The Pantheon, one of the finest temples of imperial Rome, covered by a magnificent dome, has for thirteen centuries been used as a Christian church, and is now called Santa Maria della Rotonda. The plan given in the drawing-book shows the main portion as circular, with a large circular window in the top which lights the interior. See pages 148, 150, and 166—also illustration Book 9, page 16; Seventh Year Book, page 32.

The plan shows also the front portico with its columns, and the niches in the walls separated from the central portion by pillars. At the height of the springing of the dome, the walls are hollowed out in a series of vaulted chambers, which lighten their weight, and resist the outward thrust of the dome. These apertures are shown in the plan. The section below shows the general inner arrangement.

Plan of a Basilica.—The Roman basilicas were the buildings in which justice was dispensed and the public business of the heathen empire transacted. The plan of these buildings, see page 156, shown also in the drawing-book, was very simple. When the persecuted Christians dared to emerge from their secret places of worship in the Catacombs, there were no buildings so well suited to their use as the basilicas. There the whole congregation could meet for worship. The bishop and the presbytery naturally took the apse or tribune which had been occupied by the Roman prætor and his assessors, and the altar where the heathen had poured out libations was consecrated to Christian ceremonies. The whole of the raised platform or dais was railed off by pillars or a screen, and given up to that part called the choir.



SECTION OF THE PANTHEON.

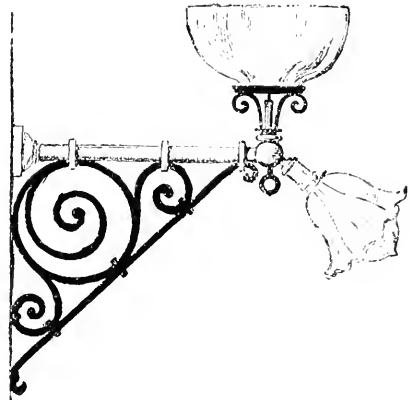
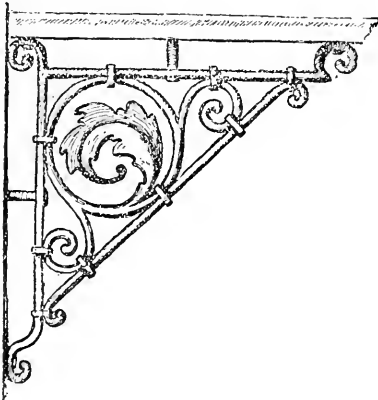
BOOK 10, PAGE 10.

SEVENTH YEAR BOOK, PAGE 10.

CONSTRUCTION.**EXAMPLES.**— Designs for Grilles. Space Relations.**ART.**— Elementary Design. Line and Space Relations.

[The pupil studies the designs for grilles on the drawing-book page, observing the beauty of line and of space relation, plans and sketches one or more original designs, striving for strength, simplicity, and beauty, considers the space on the drawing-book page, chooses one of his designs, and draws it in the book with pencil or brush, seeking for beauty in the completed work.]

Constructive Design.— Every human being possesses creative ability, and its development is one of the highest functions of education. Exercises calling for its use are, therefore, of great import. In undertaking an exercise in constructive design, the purpose of the object to be designed, its highest offices, and the possibilities for beauty in its form should be carefully considered. Beauty in an object adapted to its purpose is the highest end of the creative faculty.



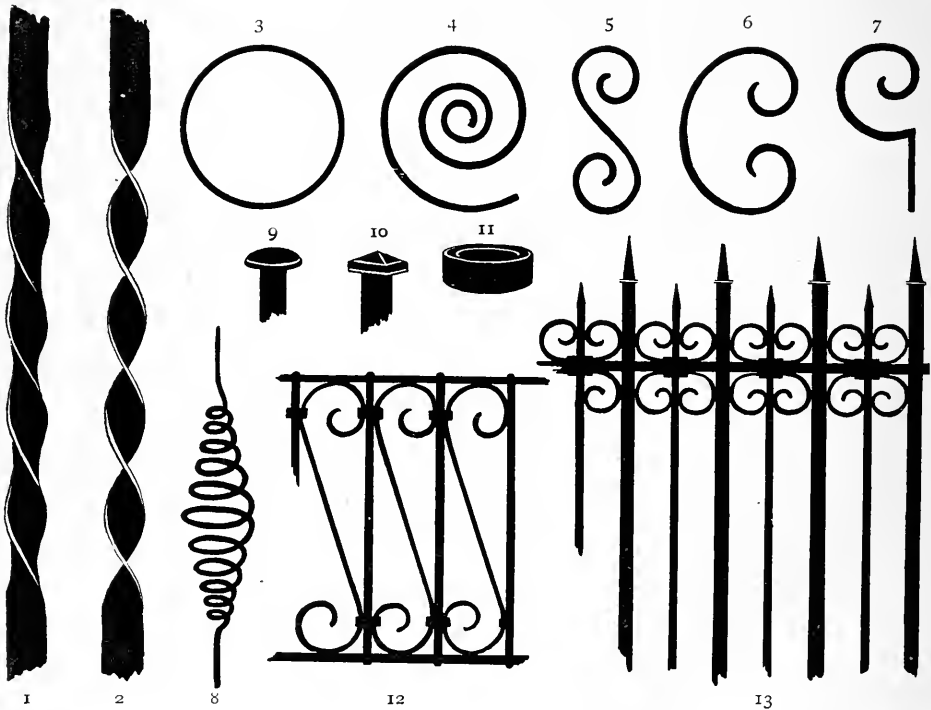
Ornamental Iron Work.— The necessity for making fire-proof buildings has brought forward the use of iron in many forms, and especially in ornamental forms for stair railings, grilles, panels, and elevator cars.

The examples chosen for this drawing-book were taken by permission from the designs of The Winslow Brothers Co., Chicago, and show simple but effective work in wrought iron.

The following quotation is from *Ornamental Iron* for September, 1894, in which many suggestions concerning this work may be found:—

“In considering the part which ornamental iron work is to take in the plans of a building, it should always be borne in mind that iron yields a readier obedience to the touch of the skilled artisan than any other known material. . . . There is no design whether expressed in lines or in washes, which cannot be reproduced in iron. . . . The metal will respond to the demand of the most imaginative, and the most poetic conception susceptible of materialization can be set forth in it.”

In them, and in the illustrations given below, we see the varied forms and uses of the iron bar. Either cylindric or square bars are used for the upright supports, and for firm horizontal lines, which are the elements of strength in railings and window grilles.



The square bars may be twisted so that the straight edges run around the bar like the threads of a screw. Flat ribbon-like bars may also receive this treatment

with good effect. (See Figs. 1 and 2.) Either flat, square, or cylindric bars may be forged into circles (Fig. 3), while the flat bars are particularly well adapted to the spiral and its modifications (Figs. 4-7). The fastening is often accomplished by rivets (Figs. 9 and 10) or ferrules (Fig. 11), which may be important features of the design, as they are in the examples given. A cylindric wire is sometimes made into a spiral spring (Fig. 8) and used to give lightness and grace to a design.

Variation in the size and length of the bars is shown in the portion of a gate (Fig. 13), and the strengthening use of an S brace in the railing (Fig. 12).

A little study of the designs in the drawing-book will show that they are made from the simple elements already mentioned, viz. : the straight line, the circle, the spiral forms, ferrules and rivets, and some ornamentally wrought leaf forms used as finials.

With this material for his design, the artist's problem becomes one of so disposing these elements as to give the most pleasing arrangement of lines and the most beautiful division of spaces. Beauty of line and beauty of space relations will be the final test of the value of the design.

“Haply from them the toiler, bent ,
 Above his forge or plough, may gain
 A manlier spirit of content.
 And feel that life is wiser spent
 Where the strong working hand makes strong the working brain.”

— JOHN G. WHITTIER.

Suggestions for the Teacher. — By studying the examples on the drawing-book page, an idea of the variety of shapes and decorative forms generally used in grilles will be gained. The semicircular grille is light and delicate, suitable for an opening to admit light above a door, and for a place where grace and beauty are more essential than strength. The various oblong grilles differ, according to their purpose, from lightness amounting to delicacy to a sturdy strength which would be desirable for a basement window.

Ask the pupils to seek for examples of ornamental iron in drawings and in buildings. Illustrated catalogues may be obtained from manufacturers of ornamental iron. Modern public buildings generally have very good specimens of grille work either in the stair railings, the fire-escapes, or in the elevator cars.

Grilles are also used for hot air registers, and they serve admirably to screen steam radiators from observation, while they do not obstruct the heat. Lead the pupils to study the ornament in relation to the space it fills, and with regard to the

purpose for which it is used. Ask for designs suitable for different shapes and different uses, hence varying in strength and in the character of the design.

Suggestions for the Pupils.— Study the examples of grilles on the drawing-book page.

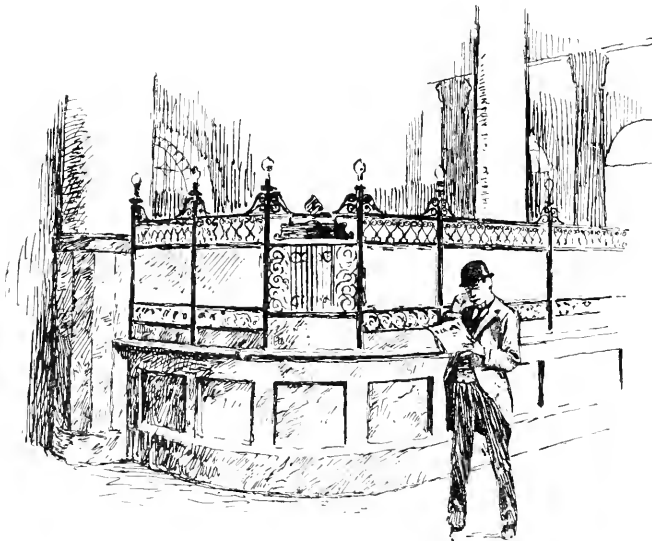
Compare the two vertical oblong grilles. Think of a use for each of these. How does the use differ? What reason is there for thinking so?

Find the straight bars in these grilles which are used for strength or to give variety to the design. Notice the variation in their length and the way in which they divide the space. Look for the ornamental figures, — the circle, the C-shaped scroll, the spiral, and the S. Notice the fastenings — the rivet and the ferrule — and their use as a part of the design. You will find also some ornamental fastenings and finials.

Compare the grilles as to the spacing of the ornament. Where are the main masses of ornament in each? Think of a reason for this. Choose a space for a grille. Think where it is to be placed, and what its surroundings will be. Make some design that will be suitable for wrought iron. Study to adjust the parts of this design within the chosen space so as to produce harmony in all its parts, and so that the design will harmonize with the enclosure.

“Trust me, no mere skill of subtle tracery,
No mere practice of a dexterous hand,
Will suffice, without a hidden spirit,
That we may or may not understand.”

— PROCTER.



BOOK 10, PAGE 11.

SEVENTH YEAR BOOK, PAGE 27.

CONSTRUCTION.

OBJECTS.— Building and Machine Details.**ART.**— Working-drawings. Developments. Sections. Manner of Drawing.

[The pupil studies simple building and machine detail (as joints, bolt-heads, etc.), thinking of the facts of form and construction, and expresses these facts by quick sketches, plans for the working-drawing of one of the objects, and draws it with instruments in the book, using the correct conventions and striving for the beauty of neatness and accuracy. Or, the pupil designs, sketches and draws elevations of a room or a simple piece of furniture.]

The Imagination.— Problems based upon the type forms may be given instead of work directly from objects. No models should be used in these problems, as it is intended that the pupils shall call up the images not only of the models, but also of their arrangement as stated in the problem. This work is considered a legitimate part of a course in mechanical drawing, leading up to and culminating in a course in machine drawing.

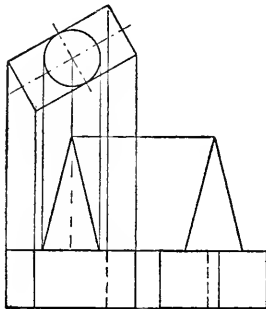


FIG. 1

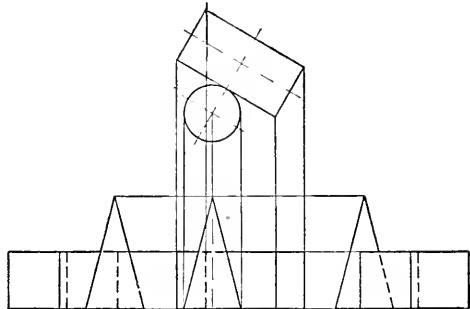


FIG. 2.

Problem.— The square prism is lying on an oblong face, the edges of which are at 30° and 60° . A long edge at 30° is in view at the right of the nearest vertical edge. The cone stands on the centre of the top of the square prism. Draw as many and such views as will best express the form and position of the models. Figure 2 shows another problem with the same models.

Suggestions to the Teacher. — Many objects may be studied in connection with page 8 of the drawing-book, and from them working-drawings may be made. The direction of thought would be the same as in the work on page 212 of the Manual. Many of the sketches which the pupils brought in for the lesson on page 8 will serve admirably as material for the work on this page, thus giving the opportunity for continuing the line of work already begun.

Additional Exercise. Elevations. Furniture. — Pupils who have drawn the plan of a reading room would be interested to draw one or more interior elevations of that room, or to make a working-drawing of a reading table or a book-case, or to draw elevations of some other interior. See pages 241 and 247.



BOOK 10, PAGE 12.

SEVENTH YEAR BOOK, PAGE 28.

REPRESENTATION.

NATURE. — Spring Flowers. Form. Life and Growth.**ART.** — Selection. Composition. Choice of Aspect. Rendering.

[The pupil selects and arranges two or three flowers, studying for good composition, and sketches them, chooses and studies the most beautiful aspect, and draws it in the book, seeking for beauty in relationship and in rendering.]

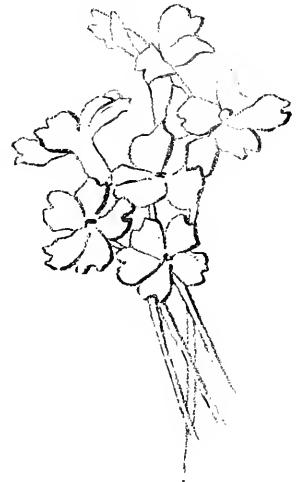
Preparation for the Lesson. — Call the pupil's attention to the fine contrast between the color of the pottery and the color of the tulips, on drawing-book page 12. Have tulips for the class, if possible, several arrangements being made similar to the illustration and placed in different parts of the room. Speak of the character of the plant in a very few words, and let the pupils study carefully the rendering of the flowers upon the page, and then leave them to express their own feeling in drawing the flowers from life. A simple landscape in an upright oblong may be drawn on this page instead of flowers.

Rendering. — If a group of a vase with flowers is rendered with water-color, care should be taken that the vase be simple, good in form, and without decoration. The water-color should be applied with a wet, free touch and as much as possible should be expressed in the first coloring of the paper.

To obtain the deep color of the dark vase, the brush should take the color at once from the paints, letting the colors mix in the brush or on the paper rather than mixing them upon the pan. Only through thoughtful experience can power be gained for feeling by instinct just what combinations will produce certain results.

A high light on such a vase may be left white paper or nearly white. Sometimes glints of half lights on the vase can be rendered by slightly lifting the local color after it is dry, using a moistened brush; such glints are seen above the high light, on the vase holding the tulips, on page 12.

Jonquils, fleur-de-lis, and other similar flowers are all good for treatment in water-color, as well as in pencil.



If any of the smaller flowers are attempted, such as the crocus, dandelion, or buttercup, they must be viewed far away from the eye to lose small details. The part of a flower away from the light, whether one petal or many, can often be rendered most effectively by one sweep of the brush. We enjoy most those works of art which leave something to the imagination. Art is suggestion, not literal imitation.

“Look first for the big things: —

“First, Values — or masses of light and shade.

“Second, Proportion.

“Third, Details that will not spoil the beginnings.

“Keep things in their right places. When things come together so that they look alike, make them alike.” — W. M. HUNT.

If many petals are seen together, by half closing the eyes they will seem of one tone or value, and they should be so painted or drawn. By leaving out a light here and putting in a touch of dark there, one large plane of one color tone may be made to seem like many petals, and the effect will be suggestive rather than realistic.

Development of Taste. — In Japan, artistic taste is not only inherited but cultivated; even children are given lessons in arranging flowers, grasses, orchids, ferns, water-plants, etc. The individual freedom of selection is not impeded, but they are led to see what combinations are suitable or unsuitable, and therefore they have something definite to start from. The power of judicious selection must be the result of study, and study, to be successful, must, as Sir Joshua Reynolds says, “be well directed.”

One writer says of Japanese flower arrangement: —

“Seasonableness in the choice of material is one of the leading principles guiding the Japanese designer; flowers are chosen suitable to the time of year and locality, and a certain harmony is sought between the vessel used and the flower arrangement. As a general rule, utensils having other household functions, such as jars or drinking vessels, should not be used for arranging flowers in, though famous masters have violated this rule. The more massive and showy the flowers, the more sparing in quantity are they used in one arrangement. Superfluous flowers are thinned out, and those retained are carefully arranged to best advantage, some front view, some sideways, some curled or bent so as to show partly their under surface; and in no case are they allowed to hang or drop in a lifeless manner. In the quaint phraseology of Japanese art, they must be able ‘to carry the dewdrop.’

“The Japanese, like the Chinese artist, is an ardent student of nature; with keen perception he watches her silent operations, and with loving eye he notes her changes of mood and costume. In the representation of flowers, foliage, and birds for ornamentation, he has no rival, — so true in form, so tender in feeling, and yet so bold and graphic in

drawing. The little sketches of trifling blades of grass express so much beyond themselves.

“In Japan the poorest peasant has his tastefully decorated rice bowl of porcelain or lacquer, and common cotton towels are decorated with devices sufficiently artistic to repay careful study.”—FRANCES HOPKINS HOOKER.

Cultivation of the Æsthetic.—The artistic environment of the Japanese is not only their chief source of enjoyment but it also keeps them alive to new beauties in nature and in art. The western mind has been so occupied in meeting the practical problems of life in a new country that there has been little time for anything else. How much we as a people need repose, need to pause awhile and enjoy the beautiful, is well demonstrated in the rush and bustle of everyday life.

“It has often been said that the American people are without any reasonable sense of the artistic; that they do not, as a people, understand or know what art is.

“How, and by what manner of means, shall we reach the larger portion of our whole population to show them that there is such a thing as a real vital principle in this world known as art ?

“If in the education of our children we strive to improve the whole and not a part of the child, have we a right to ignore the part of a child’s nature which is artistic, imaginative, and poetic ? Shall the ever ‘practical’ and materialistic side of education be developed to the exclusion of the spiritual and poetic ?

“We have just as much reason to say that a child shall not study, say, geometry or chemistry, and shall not know anything about the best literature, as to deny it the right to be brought up with an artistic and healthful environment. It will not be necessary to build art museums, or to add to the number of our schools for art instruction, to enable our children to be educated in art so far as to have at least some practical knowledge of the subject.”—ROSS TURNER.

Added Interest.—The rhythm of verse always adds to a fine thought, and beautiful things are made doubly beautiful when enshrined in poetic form; for it reveals beauties not always perceptible otherwise. Flowers, through their delicacy and beauty, have always appealed to poets, who give the man added charm by a setting of rhyme and melody.

“Bring orchis, bring the fox-glove’s spire,
 The little speedwell’s darling blue,
 Deep tulips dashed with fiery dew,
 Laburnums, dropping-wells of fire.”

—ALFRED TENNYSON

“The purple iris hangs his head
 On his lean stalk and so declines;
 The spider spills his silver thread
 Between the bells of columbines.”

— OWEN MEREDITH.

“With thyme that loves the brown hill's breast;
 The cowslip's sweet, reclining head,
 The violet of sky-woven vest,
 With all the fairy ground bespread.”

— JOHN LANGHORNE.

“Blue-eyed May
 Shall soon behold this border thickly set
 With bright jonquils, their odors lavishing
 On the soft West-wind and his frolic peers;
 Nor will I then thy modest grace forget,
 Chaste snow-drop, venturous harbinger of Spring,
 And pensive monitor of fleeting years !”

— WORDSWORTH.

“When daisies pied, and violets blue,
 And lady-smocks all silver-white,
 And cuckoo-buds of yellow hue,
 Do paint the meadows with delight ”

— SHAKESPEARE.

“Heigh ho ! daisies and buttercups,
 Fair yellow daffodils, stately and tall ;
 A sunshiny world full of laughter and leisure,
 And fresh hearts unconscious of sorrow and thrall ;
 Send down on their pleasure smiles passing its measure —
 God that is over us all.”

— JEAN INGELOW.



BOOK 10, PAGE 13.

SEVENTH YEAR BOOK, PAGE 29.

DECORATION.**EXAMPLES.**—Decorative Design. Nature. Flowers.**ART.**—Selection. Composition. Choice of Aspect. Rendering.

[The pupil studies the examples of decorative design shown on the drawing-book page, thinking of the flower used as a motive, and observes the manner in which it is used, and the relations of line and space, studies and arranges a flower form, thinking of it as a motive for an original decorative design, and makes sketches, planning for a surface covering, a border, or a decorative panel as shown on the drawing-book page, considers the space on the page, and draws the design with pencil or brush, seeking for beauty of line and of space relations.]

Preparation for Lesson.—Have the pupils study the examples on pages 12 and 13. Ask them to tell you the difference in treatment, — one being in pencil, the other in brush work with ink. Lead them to tell you that one is representative and the other decorative. The four examples on page 13 might be studied in relation to each other, taking special notice of the variety of treatment. Ask the pupils to select the one that pleases them best, and if possible to tell why. Do not, however, lay too much stress on this, for all are good in different ways. Note the balance of light and dark and the division of the space.

If the flower the pupils have drawn on page 12 is suitable, have the children adapt this to the design for page 13. Or the design may be made from a real flower, taking care to keep the treatment flat.

Harmony in Space Composition.—Try to have the pupils aim at beautiful effects of space division. They may grasp the idea more readily if they are asked to produce something which shall be pleasant to the eye when placed so far away that they cannot tell what the motive was, — flowers, or animals, or landscape, or drifting clouds, or anything else. They are to use flowers as a motive in this case, simply because it is pleasant to be able to identify the origin of the design when one does look at it closely, and because flowers, with their stems and leaves, are so full of suggestions for bold, vigorous masses and exquisite curvature of lines. The aim in this particular exercise is to produce an effect on flat paper which is:—

First, pleasant to look at in itself;

Second, incidentally, a reminder of pleasant observations about some flowers.

It will be evident that, while a "picture" is not what is wanted, it will not do to actually violate the facts of a plant's growth, as, for instance, to make tulips appear to grow on a vine; such liberties with nature would inevitably be annoying to one's sense of fitness, and would lessen the pleasure otherwise to be had from a given design. Whatever is shown regarding the life and growth of the flower should be true, but only those characteristics should be noted which are decoratively effective.

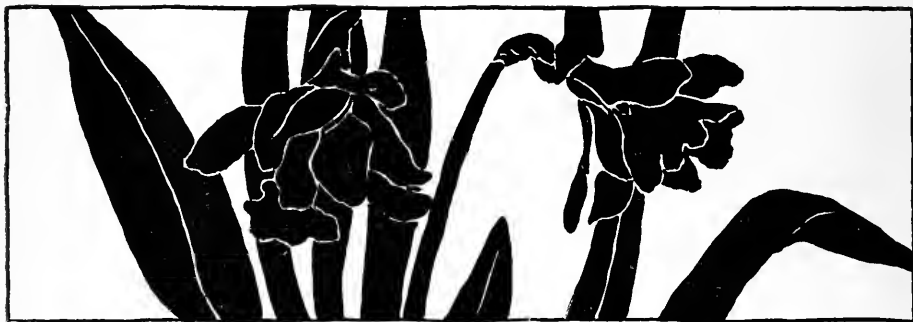
Pupils of this grade will see the beauty of the main lines and principal masses of a flower, and will see how these may be used with the addition of unobtrusive geometric details to make a beautiful design, as shown in the design from the fleur-de-lis on Plate XXI. by a pupil in the seventh year.

Suggestions to Pupils. — First study the space to be covered and choose an oblong suitable. Think out the composition carefully. Do not use too small a flower. A spray of leaves might answer if the right flower cannot be obtained.

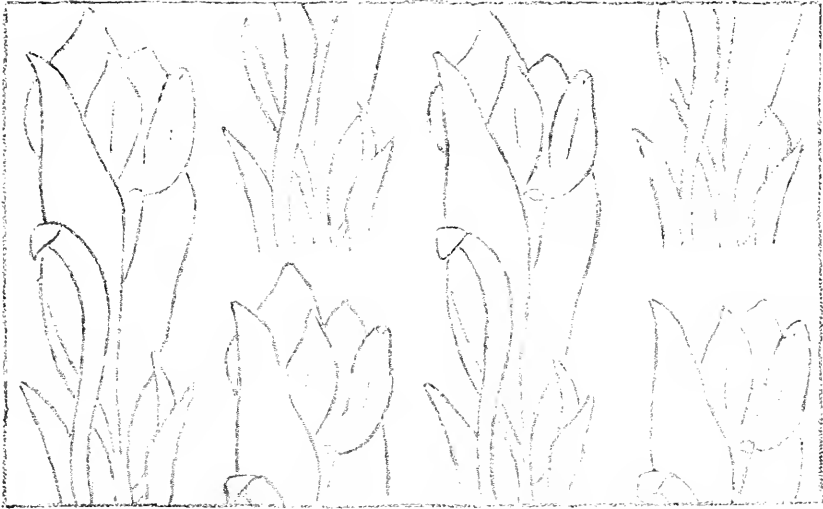
If you like, think of your drawing as being an ornamental head-piece or tail-piece for a page in a book or a magazine. In such a case, consider the size of your imaginary book page or magazine page as a whole, and plan your oblong space with proportions suitable for the definite purpose.

Draw the design with good free lines, giving the strength and beauty of the growth. The lines should be strong and firm, but not too wide. Remember that the inking, however black, will not make a strong drawing if the lines are weak in direction.

The round-pointed Japanese brush is the best for this work. Hold the brush vertical and keep it full of ink.



Suggestions to the Teacher. — In criticising this work, consider first of all the line, its delicacy and strength, as well as its truthfulness in direction, representing the character of the flower. The result cannot be good if the line is weak.



Designs by Pupils of the Seventh Year.





Panels from Spring Flowers.—Hannah Johnson Carter.

Next consider the spacing and originality of treatment ; where the ink wash is used, the balance of light and dark is also an element in the composition.

Mr. Arthur W. Dow's book on Composition, if accessible, would help pupils greatly in connection with a lesson of this character. It is profusely illustrated and has valuable explanatory and critical text.

If drawing-books of the Elementary Course can be borrowed from other classrooms or from the principal's office, pupils will find help in studying illustrations as follows : Book 1 or Third Year Book, pages 2 and 15 ; Book 3 or Fourth Year Book, pages 3 and 15 ; Book 7 or Sixth Year Book, page 15 ; Book 8, page 13 ; Sixth Year Book, page 29.

Surface Coverings.—Flowers may also be used as motives for other designs. An exercise has been given calling for a picture of the flower, its arrangement in a panel, and its use as a motive in surface covering.



BOOK 10, PAGE 14.

SEVENTH YEAR BOOK, PAGE 30.

COMPOSITION.

LANDSCAPE. — Nature. Pictures.

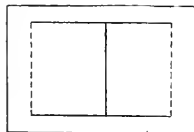
ART. — Elementary Composition. Rendering.

[The pupil studies landscape in nature and in simple pictures, observing the relation of space and of line, plans for and sketches a simple original composition, expressing the essential features, omitting detail, considers the space on the drawing-book page, and draws in the book, seeking for beauty in relationship, in masses, and in rendering.]

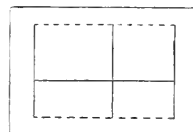
Preparation for Lesson. — If the class could have an opportunity for outdoor sketching as a preparation for this lesson, it would help them very much, especially in the elimination of detail. Take them where the landscape is simple and help them to a good selection. An outdoor landscape as a whole is usually harmonious and beautiful; but, in selecting a little bit, care must be taken to get good composition that the result may be restful, something at which it will be pleasant to look.



In outdoor sketching a “frame” or “finder” is a great help. Cut from the centre of a sheet of drawing paper an oblong, — perhaps $1\frac{1}{2}$ by 3 inches, — leaving the opening entire, and through this try to select a good composition, holding it about a foot away from the eyes. The separation of a part of a landscape from the rest, by means of such a device, is a great aid, enabling one to see great possibilities of beauty in selected parts of a scene, and to judge of the effect of their lines and masses in a given space, without being distracted by the impossibility of sketching



the entire panorama. It is a good plan to have several “finders,” differing in their size and proportions, some wider, some narrower, — and to hold them with their openings horizontal or vertical according



to circumstances. The illustrations above show how more than one opening may be obtained. Cut on the inner full lines and fold back on the dotted lines.

The illustrations on Plate XXII. show results of the use of "finders." The upper illustration well shows a large, inclusive view. The smaller illustrations show charming bits discovered in the large view—bits not too difficult to be attempted with pencil or brush. Pupils become greatly interested in this way of searching for available themes, and are often delighted by the discovery of a charming subject where at first there seemed to be nothing sufficiently simple and effective.

If out-of-door sketching is not practicable, photographs or good half-tone prints of natural scenery can almost always be obtained. Illustrated books and magazines abound in pictures of this sort, and the hand-books and circulars published by railroad and tourist companies include admirable material for the same use. The illustrations on Plate XXII., already referred to, were reproduced from a photograph studied with the help of "finders." It is excellent practice in seeing, in composing, and in rendering to select a promising bit of such a photograph and work up from it a composition in outline, in light and dark (see page 266), or in color. The small panels show simply portions of the original photograph, isolated for study as themes; they are not re-drawn or composed.

Mr. Arthur W. Dow's book on Composition is exceedingly helpful for reference in connection with such lessons. See also pages in the various drawing-books of the Prang Elementary Course, as follows: Book 2, pages 2, 16—Third Year Book, pages 18, 32; Book 3, or Fourth Year Book, page 16; Book 4, page 2—Fourth Year Book, page 18; Book 5, or Fifth Year Book, page 16; Book 8, pages, 2, 15—Sixth Year Book, pages 18, 31; Book 9, or Seventh Year Book, page 2; Book 10, page 2—Seventh Year Book, page 18.

Suggestions to Students.—After making the selection of your subject, draw the oblong and carefully adapt your landscape to the space chosen. Although it might be possible for a great master to paint a great picture with the horizon line in the centre of the space, it would not usually be good composition, and in the average case the result of such an attempt would be poor composition. There can be no definite rule in this matter, but it must come as a matter of practice and study. Sketch in your outline, and finish with ink or brush or in water-color.

Added Interest.—There are many simple landscape pictures in the works of our best American poets and prose writers that would make good suggestions for a landscape composition.

"How pleasing to the beauty-loving eye
That long, low line where land and ocean meet."



A Landscape and Its Possibilities.

The teacher will find it an interesting experiment to give the children a quotation and ask each to carry it out in his own way as an original landscape composition.

The following would bring out a variety of examples : —

“Southward stretched a plain
Of salt grass, with a river winding down,
Sail whitened, and beyond, the steeples of the town.” — WHITTIER.

In this case, however, it would be necessary to caution them not to make too much of the sails.



Another, from Bryant, might be carried out in ink, perhaps in two or three tones : —

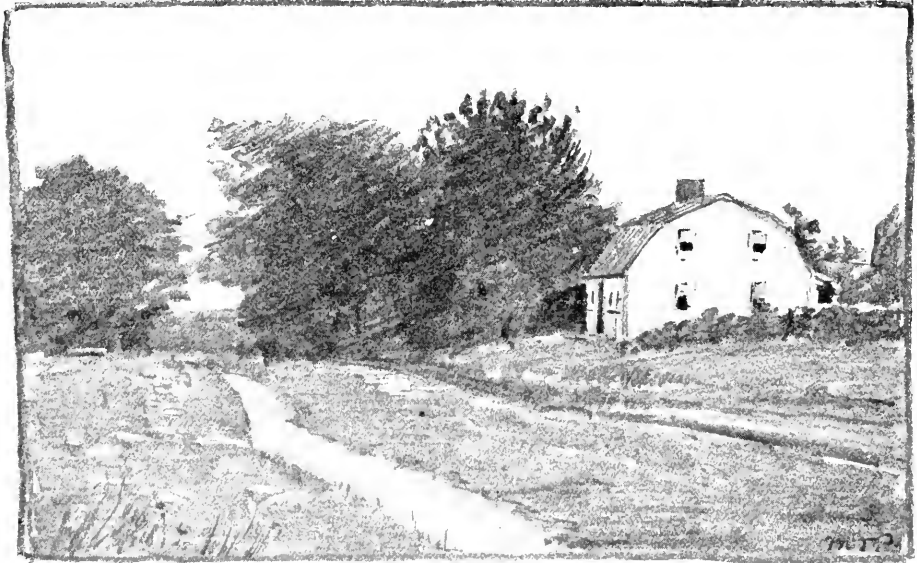
“’Twas evening, and before my eyes
There lay a landscape gray and dim,
Fields faintly seen and twilight skies,
And clouds that hid the horizon’s brim.”

Or, this from the same author could be rendered in water-color :—

“’Twas evening still, and in the west
A flush of glowing crimson lay ;
I saw the morrow there, and blest
That promise of a glorious day.

“The waters in their glassy sleep
Shone with the hues that tinged the sky,
And rugged cliffs and barren steep
Gleamed with the brightness from on high.”

The pupils will also enjoy looking up their own quotations and illustrating them as outside work.



1697 - Margarette Barf -

BOOK 10, PAGE 15.

SEVENTH YEAR BOOK, PAGE 31.

ILLUSTRATIVE PAGES.

COMPOSITION. — John La Farge.

Decorative Window. — The window illustrated is in a college at Aurora, N. Y. The illustration shows the arrangement of spaces, and of light and dark and color, in a given area to create a harmonious effect, with a dominant motive, — Aurora, — to lead the thought. This beautiful figure, bearing the torch of coming day and emerging herself from the darkness, fills the central space, while that on either side is so filled with harmonious subordinate motives as to become parts of one whole as to space, line, and light and dark.

It will be remembered also that color enters into this composition, although it is represented only by dark and light. Mr. La Farge himself says, in his "Considerations on Painting": —

"The composition of color in painting is a matter so important — I mean that scheme of affecting the eye and the mind which has been so beautifully used by great and little artists — that I dare only to refer to it. One side of the question, however, has always struck me as unexplained, and that is that the succession, the inheritance of such means has been with us in the West always broken; while in the East the tradition of the balances and adjustments of color seems to remain uninterrupted."

The problem of filling this window space was a difficult one. It is interesting to see how Mr. La Farge has met it. The general massing of light and dark in the three panels in itself would be suggestive of the dawn were there no symbolic figure. The Renaissance columns, smaller windows, and garlands may also have their significance as the renaissance or rebirth of the day.

A study of the general spacing will show how carefully it has been studied to avoid monotony and to secure agreeable relations. In his "Artist's Letters from Japan," Mr. La Farge says: —

"And perhaps it is needless to repeat again how we have lost the sense of natural decoration and expression of meaning by general arrangement of lines and spaces, so that again in France we are astonished at M. Puvis de Chavannes, who uses powers that have once been common to almost all our race."

Mr. La Farge produces his minor decorations with very simple means, as a study of the lower horizontal panels will show. They are composed simply of horizontal oblongs, with squares as central figures in the side panels, and a slight ornamental treatment at the sides of the panel bearing the name.

ILLUSTRATIVE PAGES.

BYZANTINE AND ROMANESQUE ART. — Architecture and Sculpture.

Byzantine Art. — A description of the church of St. Mark and details is given on pages 157-160 and 167. The view shown in the illustration was taken from the corner so as to give an idea of the side as well as the front of the church.

“Fair as the palace builded for Aladdin,
Yonder St. Mark uplifts its sculptured splendor —
Intricate fretwork, Byzantine mosaic,
Color on color, column upon column,
Barbaric, wonderful, a thing to kneel to !
Over the portal stand the four gilt horses,
Gilt hoof in air, and wide distended nostril,
Fiery, untamed, as in the days of Nero.
Skyward, a cloud of domes and spires and crosses ;
Earthward, black shadows flung from jutting stonework.
High over all the slender Campanile
Quivers, and seems a falling shaft of silver ! ”

— T. B. ALDRICH.

The lion of St. Mark is from one of the columns of the Piazzetta, which are said to have been raised in the close of the twelfth century. Ruskin calls it “that noble winged lion, one of the grandest things produced by mediæval art.” He speaks of the capital of the pillar on which the lion stands as “the most important capital of the whole transitional period. Its profile is curiously subtle ; in this subtlety of curvature, as well as in the simple cross showing the influence of early times.”

“To me it is the most simple and sublime thing in the world. Seen in the night, high over the sea and the circle of gaslights, the broken clouds blowing over the large moon, it is worth a journey round the world to behold it !

“Napoleon had the lion taken down from the column where it had stood for nearly five hundred years : and in the open book, on which the foot is planted, he caused to be written ‘The Rights of Man.’

“When the lion was restored, the Venetians said, ‘It is indeed our dear old lion, only he has turned over a new leaf.’” — JOAQUIN MILLER.

“For a King among Kings
Is the Lion with wings,
The strong lion of St. Mark.”

— OWEN MEREDITH.

Romanesque Art. — Chief among the churches of Worms, an ancient town upon the Rhine, is its cathedral, founded in the eighth and completed in the twelfth century. The vaulting is treated simply and with good effect, while the alternate clustered piers and large windows give a variety and lightness not usual in churches at this date. The four circular towers and the two domes break the sky-line pleasingly, and the ornamentation throughout is good and appropriate.

The church has three naves recalling the basilic arrangement, which end in a transept, thus giving to the building the form of a Latin cross. The church has two choirs: one at the east terminates in a semicircle on the interior, having a square face on the exterior; the other at the west forms a polygonal recess. A cupola crowns the transept.

The church of the Apostles is in Cologne. It was begun in 1200 and completed in the middle of the century. The main building of the nave is crowned by a wide octagonal cupola flanked by slender spires. There is a paneled balustrade crowned with a low-ribbed roof of lead which resembles some of the older Greek churches in the remote parts of Asia Minor.

Noble doorways of the twelfth-century work have frequently been preserved. The arches are semicircular, and great richness of effect is produced by successive bands of moulding. These bands of mouldings are entirely independent of each other, so that the greater or less richness of the doorways depends upon the number of bands. In the doorway at Calvados (France) there are three semicircular arches resting upon capitals and pillars. Their ornamentation suggests the Egyptian zigzag and the Greek fret or meander, but of a distinctly Norman character.

“The narrowing arch is deep and wide;
 Nched in its jambs on either side,
 Shaft beyond shaft in ordered state
 Stand on their solid stylobate,
 Their leafy capitals upholding
 Archivolt and fretted moulding;
 Arch within arch, with lessening leap,
 From shaft to shaft concentric sweep,
 Echoing inward o'er and o'er,
 Inward to the vaulted door,
 Every arch by subtle hand,
 Wrought with fillet or with fret,
 Dentil, billet, or rosette.”

—HENRY VAN BRUNT.

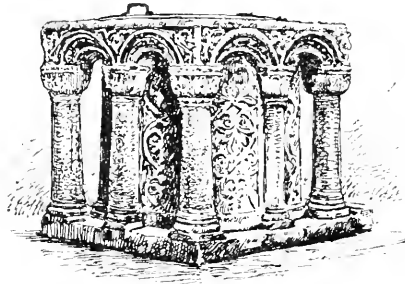
The griffin from the Museum of Angoulême is extremely interesting. The griffin arises from the union of a lion's body with the head and wings of an eagle.

The fore extremities may belong either to the lion or the eagle. The figure of the griffin is seen on ancient coins, and it is found in various periods of architecture, notably Romanesque and early Gothic. In its early use it was supposed to guard over hidden treasure, and was consecrated to the sun.

Such a page of illustrations awakens the feeling that "art endures" and tells of the highest thoughts and aspirations of those who produced it.

"Our bodies go,
But not our temples, statues, and the glow
Of glorious canvases."

— R. W. GILDER.



APPENDIX.

THEORETIC PERSPECTIVE.

FORMERLY object drawing was taught by first giving a course in theoretic perspective. This was done that the student might have certain fixed principles and diagrammatic formulæ by which he might be guided in object drawing, and by which he might correct his errors. It became apparent, however, as this method was continued, that a student might be admirably grounded in theoretic principles, diagrams, and problems, and yet be quite unable to see or to draw the appearance of an object. This is only another example of the educational contest, words *versus* things.

Therefore, methods in object drawing have been changed. Object drawing now begins first by memory or imagination drawing, then by a study of the appearance of the

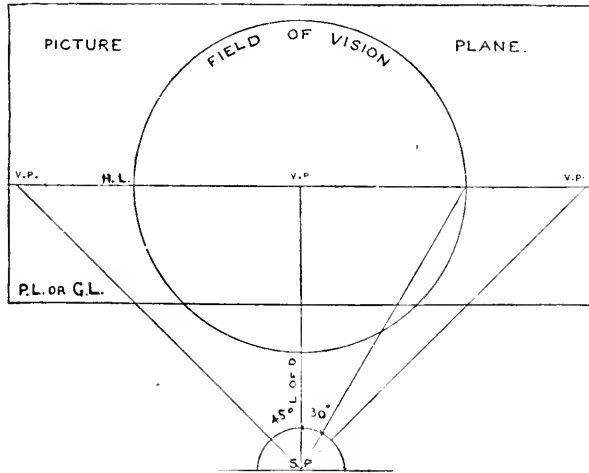


FIG. 1. — PERSPECTIVE DIAGRAM.

object. From that study, pupils are led to deduce certain general principles which govern the appearance of objects in different positions.

It is well, however, that teachers should know something of theoretic perspective so

APPENDIX.

as to meet any questions that may be raised by the advocates of the old method of teaching, as well as to understand something of what is a very interesting science.

A drawing made according to theoretic perspective is the representation of an object or scene as if seen through, and therefore upon, a pane of glass. It is necessary, then, to imagine a plane (which takes the place of a pane of glass) called the Transparent Plane, the Plane of Delineation, the Vertical Plane, or most generally the Picture Plane (P. P.). The flat surface of paper upon which a perspective drawing is made represents this plane.

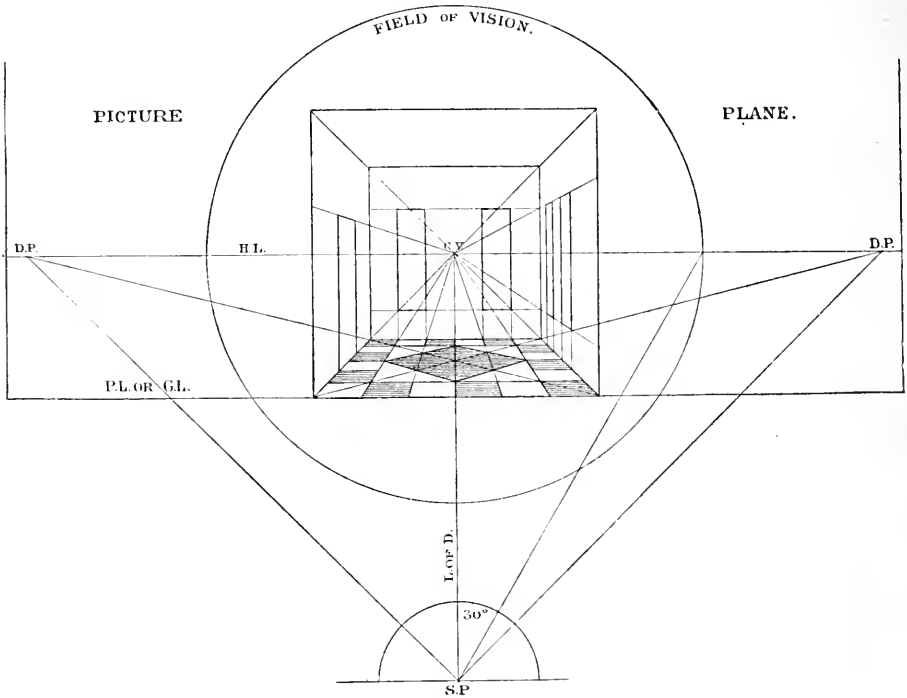


FIG. 2.

The eye of the observer is supposed to be fixed and immovable at a point called the station point (S. P.), looking along an imaginary straight line called the Line of Direction (L. of D.) to a point called the Centre of Vision (C. V.), which is directly opposite and on a level with the eye, and the Vanishing Point (V. P.) of all lines at right angles to the Picture Plane. The line at the level of the eye is sometimes called the Line of the Horizon (L. H. or H. L.).

The L. of D. indicates the direction in which the spectator is looking. Its proportionate length is according to the distance of the spectator from the P. P. The Picture

APPENDIX.

Line (P. L.), or Ground Line (G. L.), is the lower edge of the P. P. The Field of Vision embraces what the eye, when fixed in one position, sees within a visual angle of about 60° . Vanishing Points are points to which parallel lines or edges, retreating from the eye, appear to converge.

All lines which, in the object or scene to be represented in perspective, are at right angles to the P. P., vanish in the C. of V. All lines parallel in the object and at angles other than 90° to the P. P. converge to or vanish in Vanishing Points at the left and right of the C. V. Measuring Points (M. P.) are points upon the P. P. by use of which apparent or perspective distances are measured. See Fig. 5.

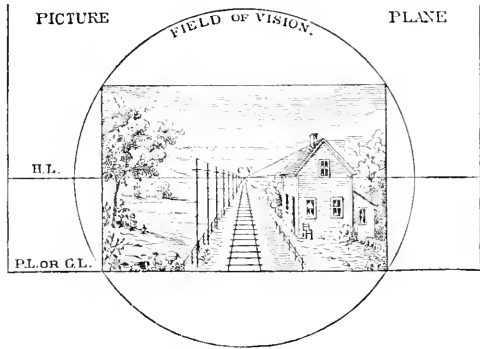


FIG. 3.

Convergence of lines, the apparent decrease in length of equal lines according to distance, and the increased foreshortening of distances as they retreat or recede from the eye, can be readily illustrated by a railroad track.

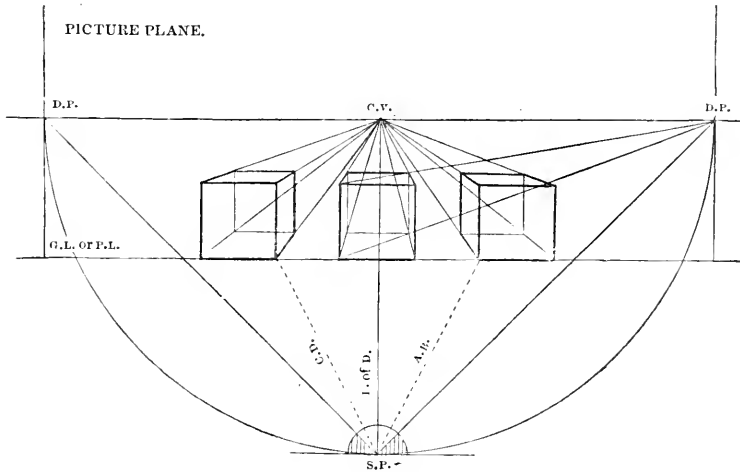


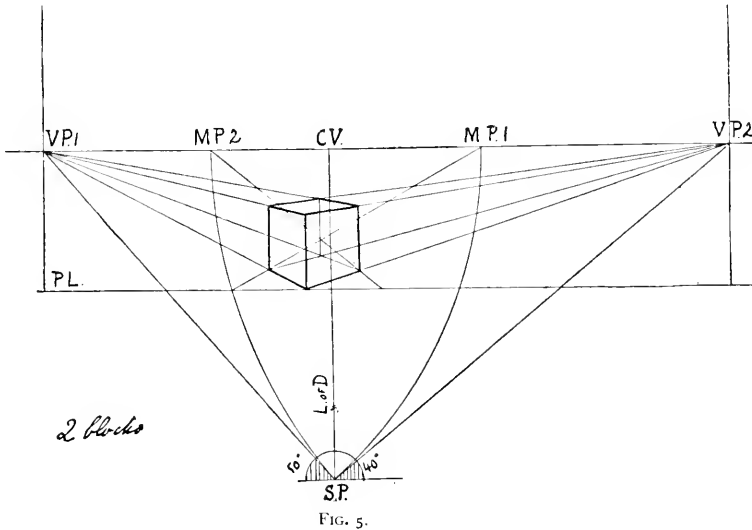
FIG. 4.

Theoretic perspective embraces parallel perspective, angular perspective, and oblique perspective. In parallel perspective, the object *stands* parallel to the Picture Plane, Figs. 2, 3, 4; in angular perspective, the object *stands* at an angle (other than 90°) to

APPENDIX.

the Picture Plane, Fig. 5; in oblique perspective, the object rests on one of its edges or corners, so that in the case of a rectangular object all of its faces are oblique to the picture plane.

Parallel perspective is little used in present construction, as it gives so many distorted effects. It is not countenanced by good artists, except under special conditions of relationship of objects. The illustration, Fig. 4, shows a row of three cubes in parallel perspective; the one in the middle is a representation of the appearance of a cube in front of and below the eye; those at either side can be called approximately correct, only when considered in relationship to the middle cube or to each other. If a cube should be placed *alone* at the left or right of the eye, it would, according to *parallel perspective*, be drawn as in the illustration. Theoretically this is correct, because based on the supposition that the picture plane is fixed; but in model and object drawing, this is



wrong. For in model and object drawing, the conditions of theoretic perspective, that the eye and the Picture Plane are arbitrarily fixed when a single object or several unrelated objects are to be drawn, cannot be accepted. In model drawing, when a cube or other object is observed *alone, at the left or right of the eye*, it becomes the direct object of observation; and the eye is directed toward it along a Line of Direction, AB or CD, decidedly different from the L. of D. shown in Fig. 4. The imaginary Picture Plane must always be at right angles to the Line of Direction; hence, whenever the Line of Direction is changed, the Picture Plane is also changed. Consequently, when a cube at the left or right of the eye is observed alone, the Picture Plane is in quite a different

APPENDIX.

position with relation to the cube from that assumed in the first instance, as shown in Fig. 4. The cube observed alone appears in angular perspective; the drawing will follow the general rules of angular perspective, as illustrated in Fig. 5.

From a lack of understanding of this change of the Picture Plane, many mistakes are made in illustrations in books and newspapers, by draughtsmen, who know only the rules and diagrams of parallel perspective. A *facsimile* of such an illustration is given in Fig. 6. These illustrations are, of course, broadcast, and the people have become familiarized with the error and accept it as truth. Unfortunately it has crept into school text-books also, and the pupils are constantly receiving false impressions. It is especially necessary, therefore, that teachers should have the truth clearly in mind and should confirm the statements in the preceding paragraph by their own observations of the appearance of single objects.

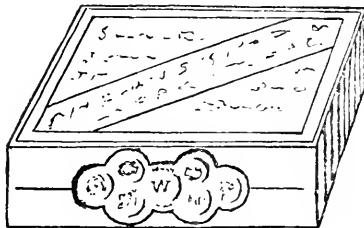


FIG. 6. — INCORRECT DRAWING.

Those teachers who are interested to look farther into the matter of theoretic perspective will find general statements, explanation of terms, illustrations, illustrative diagrams, and exercises in Drawing-Books Nos. 13 and 14 of *The American Text-Books of Art Education*, published by The Prang Educational Company, 1879.

The most exhaustive modern book on the subject is *Modern Perspective*, by Professor William R. Ware, of Columbia College, published by Ticknor & Co., Boston.

There is an interesting book called *The Essentials of Perspective*, by L. W. Miller, principal of the School of Industrial Art of the Pennsylvania Museum, Philadelphia, in which the subject is treated in a familiar, conversational way, with attractive pictorial illustrations, published by Charles Scribner's Sons, New York, 1887.

A thoughtful contribution to the consideration of this subject will be found in *Free-Hand Drawing, Light and Shade*, and *Free-Hand Perspective*, by Anson K. Cross, Instructor in the Massachusetts Normal Art School, and in the School of Drawing and Painting, Museum of Fine Arts, Boston, published by the author, 1892.

This book is DUE on the last date stamped below

31

University of California
SOUTHERN REGIONAL LIBRARY FACILITY
405 Hilgard Avenue, Los Angeles, CA 90024-1388
Return this material to the library
from which it was borrowed.

NON-RENEWABLE

APR 18 1998

ill/mul

DUE 2 WKS FROM DATE RECEIVED

MAY 09 1998

University of California Los Angeles
L 006 358 716 6

12
234 567 890

UC SOUTHERN REGIONAL LIBRARY FACILITY
AA 000 178 384 4

N357

3
3

CALIFORNIA

ANGELES
BOARD

Un