NYPL RESEARCH LIBRARIES
3 3433 08211550 6

Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

# THE TEACHING OF ORNAMENT

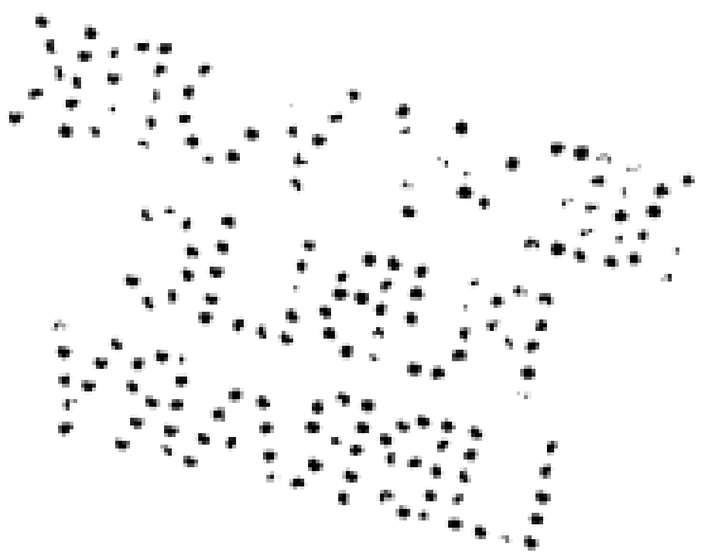
*By* FRED H. DANIELS, Director of Art Education, Public Schools, *Buffalo, New York*

THE J. C. WITTER COMPANY
123 Fifth Avenue, New York City

F.H.
[1900]
Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

...YORK
...PARY
148353

Copyrighted, 1900
BY
J. C. WITTER CO.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

# CONTENTS.


| | | |
|---|---|---|
| I. | Art Education | 11 |
| II. | Primary Grades | 15 |
| III. | General Plan of Work in Higher Grades | 20 |
| IV. | Elements of Beauty in Nature and Ornament | 25 |
| V. | The Teaching and Drawing of Ornament | 37 |
| VI. | Egyptian Ornament | 42 |
| VII. | Greek " | 70 |
| VIII. | Roman " | 101 |
| IX. | Byzantine " | 120 |
| X. | Saracenic " | 137 |
| XI. | Gothic " | 160 |
| XII. | Original Design | 188 |
| XIII. | Color | 203 |


Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

# PREFACE.

IN preparing a lesson on Historic Ornament, I have frequently found it necessary to consult many different books in order to gain such information as would appeal to the pupils. In some the subject was treated so technically that an architectural training was a necessary preliminary on the part of the reader if he would understand the author; in others there appeared to be an abundance of dates and difficult names, or the subject was treated from a philosophical ground. It was generally possible, however, to obtain some help from each of these books, but this process necessitated the expenditure of a considerable amount of time and energy, in fact far more than could be expected from any grade teacher, for whose particular purpose there seems to have been almost nothing written.

A large part of the material in this book first appeared in a series of articles in *Art Education*. No attempt is made to present a complete history of art, indeed it is but an introduction to the subject. I have endeavored to collect subject-matter, including text and illustrations, that experience has proved suited to young people, and it is offered in the hope that it may be of some assistance to teachers in graded and high schools.

The third chapter contains suggestions for several general plans of work, which may be somewhat helpful to those supervisors who have not yet decided upon a definite method of procedure.

Chapters IV. and V. present some details which teachers may profitably read as a preparation for the teaching of any historic style of ornament.

In order to teach successfully any one school of ornament it is necessary to have a general idea of the six styles which



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

are herein described; but as the teacher will naturally study most carefully that style which she is to teach, it has seemed best to repeat in several chapters some general principles and suggestions.

The following books are recommended to those who have time for additional reading:

HISTORIC ARCHITECTURE AND ORNAMENT:

"Grammar of Ornament," *Owen Jones.*
"A History of Art," *Goodyear.*
"History of Architecture," *Hamlin.*
"Architecture," in *Encyclopædia Britannica.*
"History of Art," *Lübke.*
"A History of Art in all Countries," *Ferguson.*
"The Fine Arts," *G. Baldwin Brown.*
"Prang's Teachers' Manual, Part IV."

DESIGN:

"Principles and Practice of Design," *Jackson.*
"Studies in Plant Form and Design," *Midgley* and *Lilley.*
"Nature in Ornament," *Day.*
"The Anatomy of Pattern," *Day.*
"With Brush and Pen," *Hall.*

COLOR:

"Elementary Color," *Bradley.*

FRED H. DANIELS.

BUFFALO, *April 1st, 1900.*



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER 1.

## ART EDUCATION

"The useful, in so far as opposed to the agreeable and the beautiful, is enjoyed merely in common with the lower animals; and if we love and prize what is useful to us in this sense, we do nothing more than what the ox and the ass would do. . . . . For among all animals, man alone is gifted with a perception of order, beauty, and grace. . . . . Therefore it is also that the perception of the beautiful, in art as well as manners and morals, distinguishes the social, developed and civilized man from the savage and the barbarian. . . . . Beauty and grace are undoubtedly united by nature itself with the useful; but they are not, therefore, desirable because they are useful; but because from the nature of man, he enjoys a pure pleasure in their contemplation."

—*Wieland.*

MOST essential is it that we understand at the outset that art is not confined to the painting of pictures and the carving of statues. From earliest times its scope has been universal. A study of the household furnishings of the caves of prehistoric races, or of the modern residences and their contents, will result in the conclusion that nothing made by man is satisfactory until it is so fashioned as to conform with the maker's notion of beauty—until it expresses an art idea. We are conscious of a certain joy in the mere contemplation of anything in which we recognize an understanding of beauty. To a greater or lesser degree an ideal has been realized. "Art consists in the doing of each right thing well."

Art, then, has its organ in the every-day demands of mankind. It cannot be disassociated from life, hence its importance in any complete scheme of education. The business of the school is to prepare for complete living; in other words, to present to the pupils the highest aspect of each study that they "may do each right thing well."



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

A course in drawing which is planned with this end in view necessarily includes the best that has ever been presented under the three headings, Pictorial, Decorative and Constructive. It does not in any particular lessen the emphasis which the manufacturer and workman demand for mechanical skill; it does add the thoughtful, the creative, the art element which makes the artist-artisan rather than the drudge, which transforms the imitator into the creator. Undoubtedly the home environment of the average American child tends to develop the mechanical rather than the artistic nature, hence the especial need—for complete living—of such art work in our schools as will encourage thoughtful, original productions. Any curriculum which provides only for the obtaining of a meagre livelihood neglects to furnish occupation for a large part of each day's routine. It is necessary to provide means for the enrichment of life through a judicious employment of the leisure hours. To this end culture studies were introduced into the schools. Literature and music are not taught primarily to make writers and musicians, but to educate toward a love for the best in these two departments. The course in drawing should aim to cultivate, refine and elevate æsthetic ideals. A study of theories and facts will never accomplish this end. We must do more than teach drawing. We must make our course so broad that the beautiful creations of God and man will be an eternal source of enjoyment.

In a well-known high school, where drawing is optional, the question was asked, "Why do you study drawing?" One girl wrote this: "The chief reason I study drawing is because I enjoy it so much. Instead of seeming like a lesson it is almost the same as a recreation. It helps me in a great many ways, too. The more I study it the more beauty I see in things I had never thought especially beautiful before, and the more I can enjoy and appreciate nature. I can not help thinking it makes *us* beautiful inwardly, and, as the poet says, 'Inward beauty makes outward grace,' for there is no hurry, or worry, but just a kind of peaceful pleasure." Drawing is rightly taught in that high school.

Nature drawing cultivates an appreciation of the beauties of nature. Emerson has said, "We are immersed in beau-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

ty but our eyes have no clear vision." And again: "Let us approach and admire beauty, whose revelation to man we now celebrate,—beauty, welcome as the sun wherever it pleases to shine, which pleases everybody with it and with themselves." The world of nature is our environment; if we would enjoy it we

"Must be musical,
Tremulous, impressional,
Alive to gentle influence
Of landscape and of sky."

Art is enjoyed according to the understanding and the impressionability of the spectator. The story is beautiful to us in proportion to the degree that it arouses our thought activities. The greatest actors are recorded as saying that they but suggest and the imagination of the audience supplies the details. A musical composition often appeals to us because of the thought or sentiment which it excites. To the general public in this country the pictures of native hills and of home life are more interesting than those representing foreign scenes. Art is used to express ideas. If we do not comprehend in any degree the thought which the artist would present, then the theme or object is not artistic *to us*. If it be a real work of art, it is our misfortune not to be able to enjoy it.

What is true of the drama, of literature, music and painting is equally true of architecture and ornament. In the architecture of our towns and cities we find scarcely anything which is not interesting because of its relation to the great historic styles. We know the stories of the origin and early uses of the arches in this church; yonder columns reminds us of the culture of the Greeks, of their Athens; here is an acanthus scroll which surely is borrowed from Roman ornament, and the very character of Roman art starts another train of thought regarding ancient Rome and her people. Thus through the study of historic ornament and design our modern architecture is revealed to us anew. What was formerly but a mass of stone becomes alive with meaning. Every column and window and dome and bit of ornament challenge our attention because in them we recognize old friends. They have a suggestive message of the good and true historically—they are beautiful to us.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

We have briefly considered what we may call an intellectual pleasure which may be added to our enjoyment of life through a study of historic ornament. Such pleasure may be acquired by any one, whether or not he may claim to be "artistic."

"The useful, in so far as opposed to the agreeable and the beautiful, is enjoyed merely in common with the lower animals; and if we love and prize what is useful to us in this sense, we do nothing more than what the ox and the ass would do." This has to do with what is generally termed the æsthetic side of art—the beauty of line, mass and color. Undoubtedly there is a great difference in the natural ability of individuals to appreciate and enjoy art because of its æsthetic qualities. It is admitted, however, that æsthetic enjoyment can be cultivated, just as intellectual understanding may be increased. The educational process is similar. The writer best appreciates the master production in literature. The musician delights in his art; the artist, sculptor or architect in his specialty. Study along these specific lines will tend to cultivate an appreciation, not only on the part of the specialist, but of anybody in normal mental condition. Thus the intelligent copying of historic ornament and the correlated work in original design should lead to an intellectual and æsthetic appreciation of ancient and modern architecture and design. This should be the dual aim in every lesson. "Beauty, which is the natural food of a healthy imagination, should be sought after by every one who wishes to achieve the great end of existence—to make the most of himself. It is true . . . that man liveth not by books alone; it is equally true that he liveth not by knowledge alone. . . . Cultivate admiration. It is by admiration only of what is beautiful and sublime that we can mount up a few steps toward the likeness of what we admire."

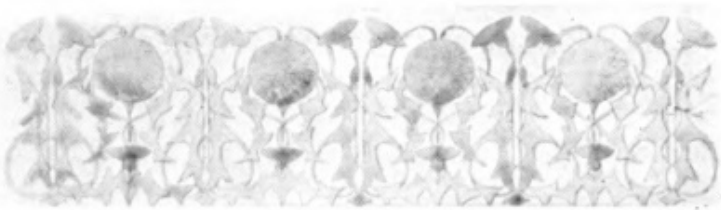


Fig. 1. Design from the Dandelion



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER II.

## PRIMARY GRADES

"Come forth into the light of things,
Let nature be your teacher."

—*Wordsworth.*

ONLY a few exceptions can be made to the statement that most drawing-teachers have at some time attempted to teach design in the primary grades by having the children arrange sticks or tablets in borders, rosettes and surface patterns to show repetition and alternation. It is indeed strange that this scheme has had such wide-spread popularity. "Ideal beauty can be hatched from no geometric eggs." It is diametrically opposed to acquainting the child with nature. It encourages repetition instead of originality. Children understand mechanical repetition, there is no need to emphasize that point. It is noticeable in all their games as well as in their drawings. (See Figs. 2 and 3.) Besides being mechanical in the extreme, it is very fatiguing as it calls for the use of the small muscles. With the thought in mind that we are first to familiarize the child with natural forms, a better plan would be to have him draw border lines on a sheet of drawing paper and between them arrange several grasses or simple flowers in the manner in which they grow, and copy what he has arranged on a second piece of paper. (See Figs. 4 and 5.) But why not take one flower and repeat it as in Fig. 6? This will give him a "type-form" of the flower, and not a knowledge of the flower itself, in a variety of positions. After the first flower unit is made the rest of the design teaches him nothing new, he is merely doing muscle work. The first unit is as faithful a copy of the flower as the child can make; generally, the second is a copy of the first unit; the third is



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

an attempt to reproduce the second, etc. (Fig. 6). By working in this way the spirit of the flower has woefully degenerated in the last units. "Keep this in mind, that it is the definite individual character of an object which makes beauty."

Talk with the class about the manner in which plants grow. We do not see flowers growing in the fields each isolated from all others, but rather in groups springing from a common root. Flowers seem to like the companionship of congenial friends, as do the children in the school-yard.

> "And 'tis my faith, that every flower
> Enjoys the air it breathes."

Look out of the window at the play-ground: Here is a group of boys discussing some scheme for the future, there another smaller gathering, and away in the distance are to to be seen one or two who appear to be coming to join the merry parties. We can not always see the root of the flower but all the lines of the plant point to it. All flowers are not of the same height, some lift their heads higher than others. Some boys and girls are taller than their neighbors; it would not be very interesting to watch a passing throng on the street if all were exactly of the same build. Again, as with people, some stand up straight and stiff, while others seem to say, "I'll hold my head up as high as any, but I can do so a little more gracefully." These plants curve gently in the stem. While the child is considering these few interesting phases of nature he is in reality learning the laws of beauty as expressed in good design; the principles of growing plants, of radiation, of strength, of rhythm, of curvature. *These* are the elements of beauty which are conspicuous by their absence in the designs of the older boys and girls. In the placing and veining of the leaves and the arrangement of sepals and petals, he sees beautiful illustrations of repetition and alternation. (See Chapter IV.)

The arrangements in Figs. 4 and 5 seem to conform with the first step toward the making of a designer. This method will not, perhaps, produce as pleasing "result sheets" as can be obtained in other ways, but *growth* is the work of the lower grades, results will follow later.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

For surface designs, let the pupils arrange flowers in groups in a frame and copy the same upon another sheet. (Figs. 7, 8 and 9.) Here is opportunity for original thought in grouping and the work is a continued study of nature. The stem of each flower ought to be entirely removed before placing the flowers in the oblong. A surface pattern made with the stems of flowers floating out in all directions is very unsatisfactory because it is untrue to natural growths, it suggests movement—sometimes such drawings are very like an aquarium of pollywogs—and we are perhaps disappointed that these long-tailed things do not move, whereas a design should give the impression of being still, of repose. Figs. 7, 8 and 9 are pictures of flowers similar to the views we should obtain, omitting details below the flowers, in a walk through the fields or woods.

And now, what school of ornament shall we study to illustrate this kind of design? The Japanese prints give us the best examples of non-conventional decorative arrangements. They are artistic and—they are cheap. (Fig. 10.)

By all means use the brush and color or colored crayons in the lower grades. The painted form is far more interesting, more like the original and therefore easier to criticize, and the brush and crayon furnish the best mediums to train the child in direct free expression. There are many who think that the colored crayons are preferable to water-colors in the first year or two of school life. The pencil is the most uninteresting medium to children. If crayons are used, chalk can be given out to draw flowers having white petals. After the flowers in the border or surface pattern are drawn, a background may be added even by children in the first grade. Show the class how to put on a background by making parallel strokes with the crayon (Figs. 7–9), or by putting on a wash with the water-colors. (If water-colors are used the background should be put on first.) Primary children can understand, through class criticisms, that if the background is stronger in color than the flowers, it becomes of more importance than the latter, and they know that the flowers ought to be the more prominent. Each child may decide what color he will use. At the close of the lesson pin up some of the drawings and have a class criticism with a



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

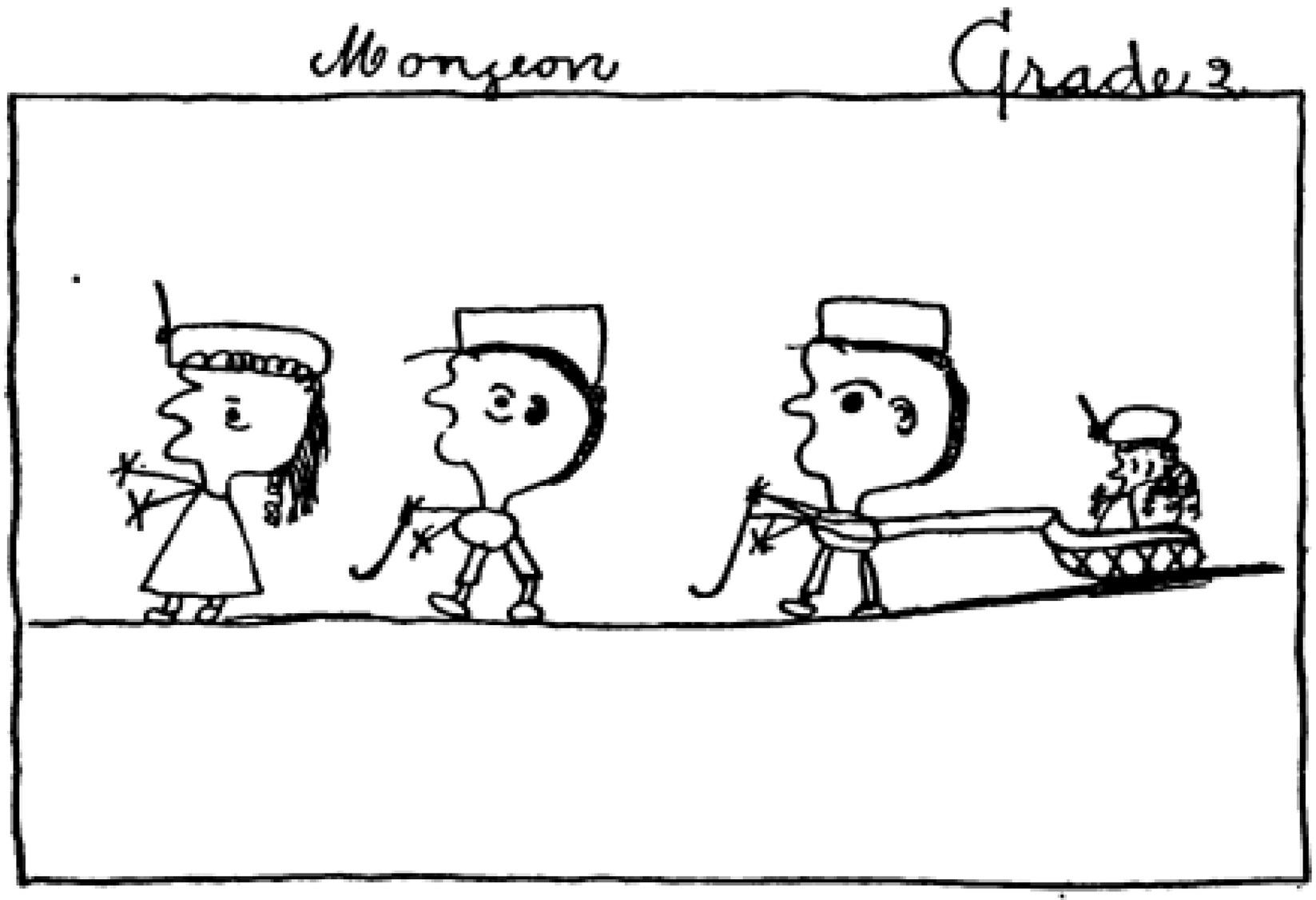



Fig. 2.

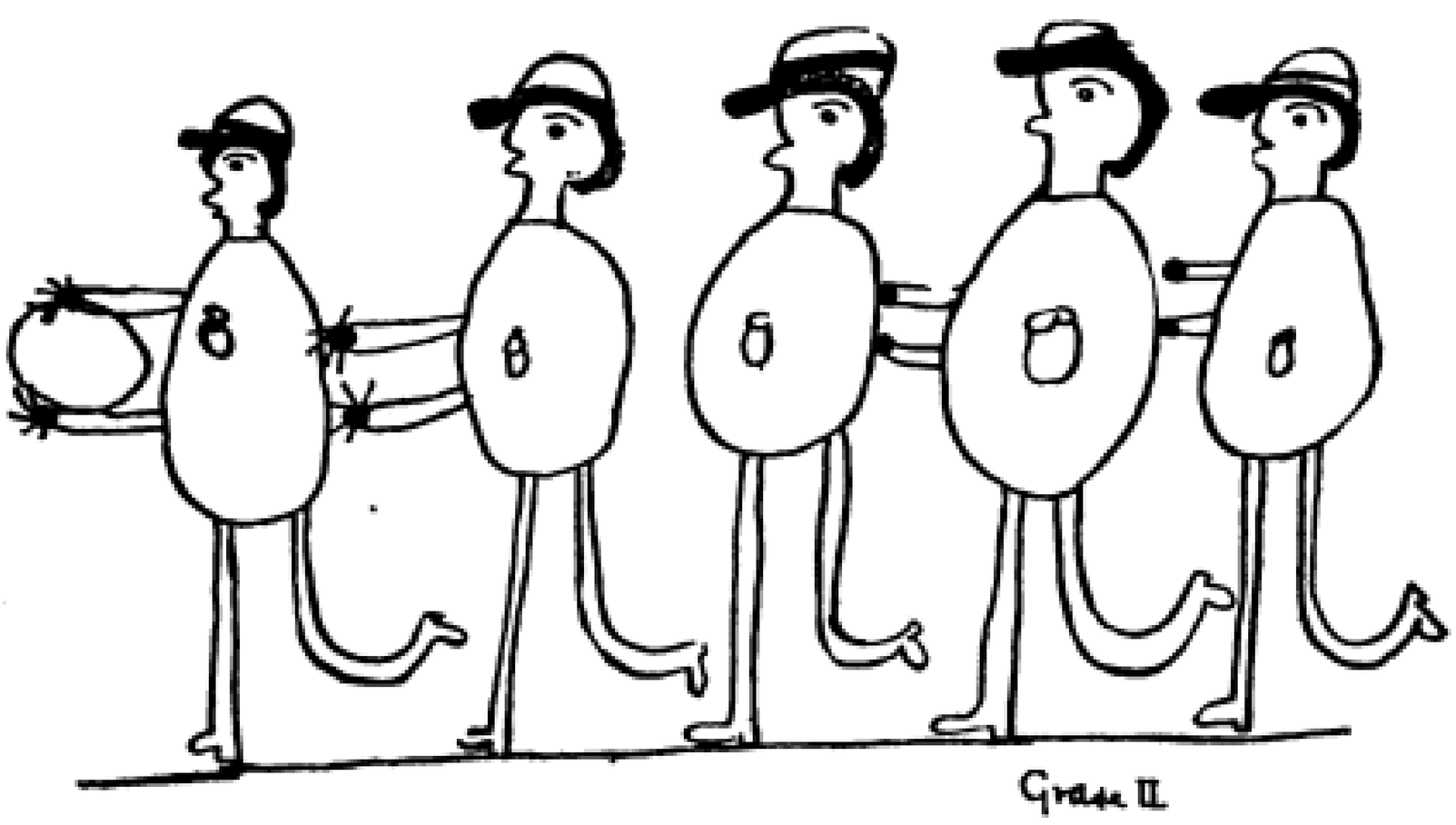



Fig. 3.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 4

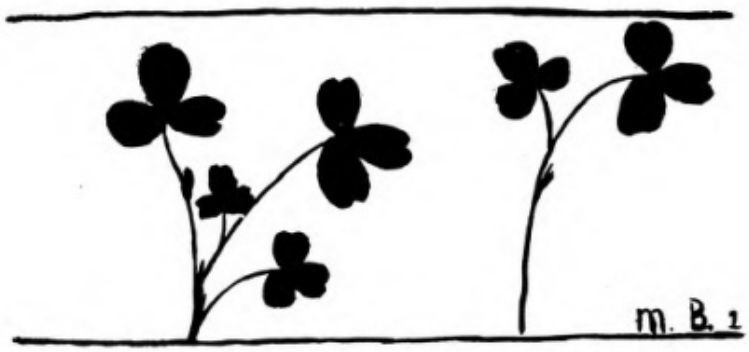



Fig. 5

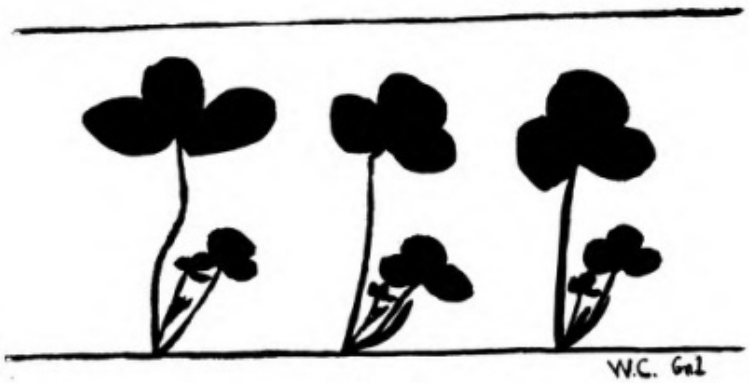



Fig. 6



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Fig. 7.

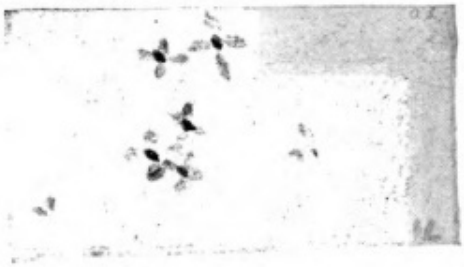


Fig. 9.

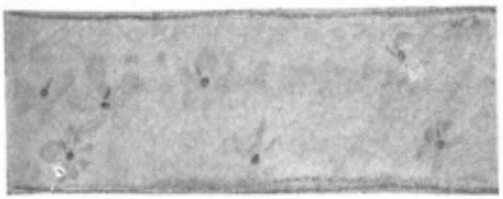


Fig. 8.

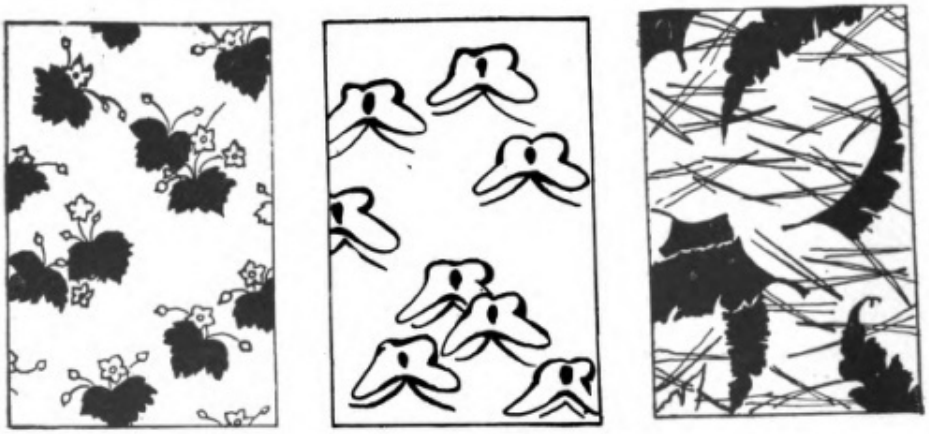


Fig. 10—Japanese Surface Patterns.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

view to finding out what colors seem best for a background for the particular flower drawn that day. Refer to nature's backgrounds, the sky, distant hills, etc. Are they brilliant or quiet in color? The child loves brilliant coloring, and he should use strong colors *until he sees for himself* that at times the quiet tones serve to increase the beauty and strength of the pure color.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

## CHAPTER III.

### GENERAL PLAN OF WORK IN HIGHER GRADES

"To much learning stifles the soul. We toil only to stuff the memory but leave the conscience and understanding empty."—*Montaigne.*

HE director of art education should consider four factors in planning a course in historic ornament and design: the pupil; the amount of time that can be devoted each year to the subject; the relative importance of the various schools; and the correlation of the ornament with the work in original design. Each of the following plans has its advantages and objections.

One method of teaching historic ornament involves the study of elements from any and all schools without regard to the history of art until the sixth or eighth year of school life, when there comes a general summary of all the historic styles.

Another method begins with Egyptian art in the fourth year and continues in a chronological order, taking Greek in the fifth year, etc. Child-study has shown us that some subjects can best be taught to children at certain periods of their school career. Certainly the ideas of time, space, religion and symbolism, which permeate Egyptian art are not wisely presented to the child in his fourth year in school. Nor can any comprehension of the beauty of Greek art be secured in the fifth. It would be most interesting to know how many of the children, who have been told that the Parthenon was a very beautiful building, could honestly say: "I think it is beautiful." Undoubtedly, the large majority of learners accept the fact that it is so called, try to remember the name of the architect, the date and where it was built—and this is called "art education." Our time



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

is wasted in the copying of meaningless forms and names. Some one will say that a child cannot appreciate the subtle beauty of such a creation as a Greek temple. Then let us leave the subject for consideration in a higher grade. The world's legacy of art provides enough that will appeal to him.

The fact that many pupils leave school at the end of the grammar course is a strong argument in favor of one of the above plans. Very few classes spend more than a month each year upon the subject of historic ornament; this means from four to eight hours. If eight hours can be had, probably the plan of commencing to classify the schools in the sixth year is preferable.

The relative importance of the different schools and their correlation with original work ought now to be thought of, particularly by those directors of drawing who cannot allow eight hours a year for the study of ornament.

The term "historic ornament" is applied to the art of the past ages, which has withstood the criticism of man for centuries. It forms, therefore, a reliable source from which to draw inspiration for original work It should be so taught as to lead to and correlate with our work in design.

"In the study of nature, without which the architect as well as every other artist can do nothing,—absolutely nothing—he must study the commentaries on her, *i. e.*, all previous productions of his art. All these are so many annotations on nature's great and most difficult book; and he who attempts to read her without their assistance, simply sets up his wisdom against that of all mankind; and, however satisfactory his discoveries may be to himself, he may be assured that they are as old as Adam; and that should he have at once the greatest genius and the longest life ever granted, he will have advanced no further than the first efforts of art, which, pursued on this principle would, unlike all other human pursuits, be never beyond its beginning. It is impossible for the designer to produce anything *true* but by the study of nature, and it is impossible to produce anything *new* but by a knowledge of what has been done by his predecessors. The most original artists of any kind are the most extensive imitators."



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

As we look back at our training in historic ornament and design, it seems now like a new topic for our consideration, inasmuch as the ornament we talked about and copied had very little or no relation to the designs we were expected to produce. We were shown pictures of pyramids, temples, mosques, capitals, acanthus foliage, scrolls, etc., etc., but what had all this to do with the design for a border which we were to make? Therefore, the *practical application* of historic ornament to design is to many a new subject.

A better method would be based upon the requirements necessary for the production of original work. All ornament and design, all art, is a result of the careful study of *nature*—and of geometry, of which nature is the embodiment. The pupil can not indulge in abstract idealizations until he has concrete concepts.

> "You beat your pate, and fancy wit will come;
> Knock as you please, there's nobody at home."
>
> —*Pope.*

In his "Grammar of the Lotus," Goodyear says: "For before the days of decorative art theories, and South Kensington instruction, the evolution of the conventional pattern was a natural and a gradual one. . . . In the case of the lotus we can point to myriad forms where the flower was carefully detailed, and to innumerable transitions to the more highly conventional forms, all descended from a time (for there was a first time) when the naturalistic pattern was the only one. If the cave dwellers of the stone age began with realistic art, we cannot doubt that the Egyptians did the same, and the history of their sculpture and painting, as far as we can trace it back, is proof that they did." In arranging a course in design we should, then, commence with nature, and lead toward the abstract and ideal. This would involve three steps: (1) Familiarity with natural forms. (Primary grades.) (2) Study of naturalistic or slightly conventionalized units arranged conventionally. (3) Study of highly conventionalized and idealized designs. (Intermediate and grammar grades.)

A careful study of Owen Jones's "Grammar of Ornament" has aided in choosing the following order:



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Grades 4 and 5.—Gothic. Reasons: First, slightly conventionalized designs may be found in which the arrangement of the units is simple and decorative. Second, the class will be more interested in this school at this age than later. Gothic ornament presents an abundance of easily comprehended symbols. This period in the child's life is the age of symbolism, the time of dolls, of finger languages, of those mysterious "hog-latin" notes which are written backwards. The child at this age is more openly interested in religion than when he becomes self-conscious, and the story of the crusades has a definite charm for him. Third, Gothic architecture is found everywhere.

Grades 6 and 7.—Egyptian. Reasons: First, it is the most interesting of all schools of art. It has a wonderful symbolism, but more difficult to interpret than the Gothic. Second, the pupils at this time in life can understand something of the immense size and age of the old Egyptian art products, and of the peculiarities of the religion which led to this symbolic style.

Grades 8 and 9.—Greek. Reasons: First, if we could send our pupils from the public schools with a love for any one style of ornament, would we not choose the Greek? Greek ornament has never been surpassed; it forms a fitting climax to our work. Second, pupils are now somewhat familiar with history and good literature. They have heard of many of the Greek scholars, and know some of the Greek myths. Many of the high grammar grades have debating societies, and the stories of the old orators will be interesting. Their next work will be in the high school, and an interest in the ancient Greeks may serve as an incentive to the study of their language. Third, the boys are beginning to be interested in athletics, and the Pan-Athenian games will at once arrest their attention. Fourth, the class knows something of perspective and will appreciate the laws which governed the building of the Parthenon. An analysis of the anthemion is not too difficult to be undertaken. The work in Grade 9 may include a review of the Gothic and Egyptian styles.

Gothic and Greek architecture and ornament can be found in numerous buildings in any city. Pictures of buildings, details and designs of all three schools can be brought in by



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

the pupils. These may be cut from magazines, wall paper, dress goods, etc., etc. On the other hand, the Roman, Byzantine and Saracenic styles are not so much in vogue in this country, and the *characteristic* ornament of these epochs presents very difficult problems in drawing. The Assyrian, Romanesque, Renaissance and other styles are not generally considered in public-school work.

This latter order of teaching historic ornament in the grades is offered as a suggestion to supervisors of drawing who are having difficulty in getting satisfactory results from other methods. It has been given several years' trial and has proved a satisfactory arrangement. If it is followed students entering the high school ought to have a sufficient knowledge of the Gothic, Egyptian and Greek schools of ornament to enable them to recognize and catalogue an example of architecture or of ornament belonging to one of these styles. The high-school student is of an age to comprehend history, hence our high-school work will follow the chronological order. Such studies as ancient history, Latin and Greek, are essential to a realization of the fact that the historic schools of architecture and ornament were the products of people who actually lived on this earth. The reverse is true, only a mediocre conception of ancient history can be obtained without correlation with the art of the world's great epochs.

An interesting correlation of color, ornament and design can be had if some such arrangement be followed as teaching color (practice work in color harmony) in March, historic ornament in April and original design in May or June.

Fig. 11



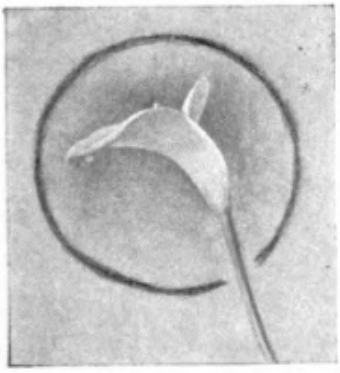
Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER IV.

## ELEMENTS OF BEAUTY IN NATURE AND ORNAMENT

"If I could put my woods in song
And tell what's there enjoyed,
All men would to my gardens throng,
And leave the cities void."

—*Emerson.*



OUR individual ideas of beauty may vary, yet there are certain lines, forms and principles of composition which have for centuries been regarded as elements of beauty. As all our ideals are the outgrowth of sensual impressions, so these ideals of beauty in design were derived from natural growths. (Some may add, and from geometry, but every geometric figure can be found duplicated in nature,—geometry was evolved from nature.)

The pupils ought to know the meaning of and be able to illustrate by sketches the following principles and terms:

FITNESS TO PURPOSE.—Suited or adapted to the particular end or design to which it is applied. Every natural form or element of form seems to be adapted to its most perfect use. A few common illustrations are found in the evolution of the frog, the feet of a duck, the bill of the stork, the trunk of an elephant, the joints in plant growths and the various methods plants use in distributing their seeds. We should strive for the same fitness in our designs. For example, a unit which appears to the best advantage when in a vertical position only, will not do to use in a design for a carpet, nor will a book-cover designed from the water lily be suitable for a book on Arctic explorations. Again, every element in a design must be adapted to its surroundings. See Figs. 43, 45, 73–76, 90, etc.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

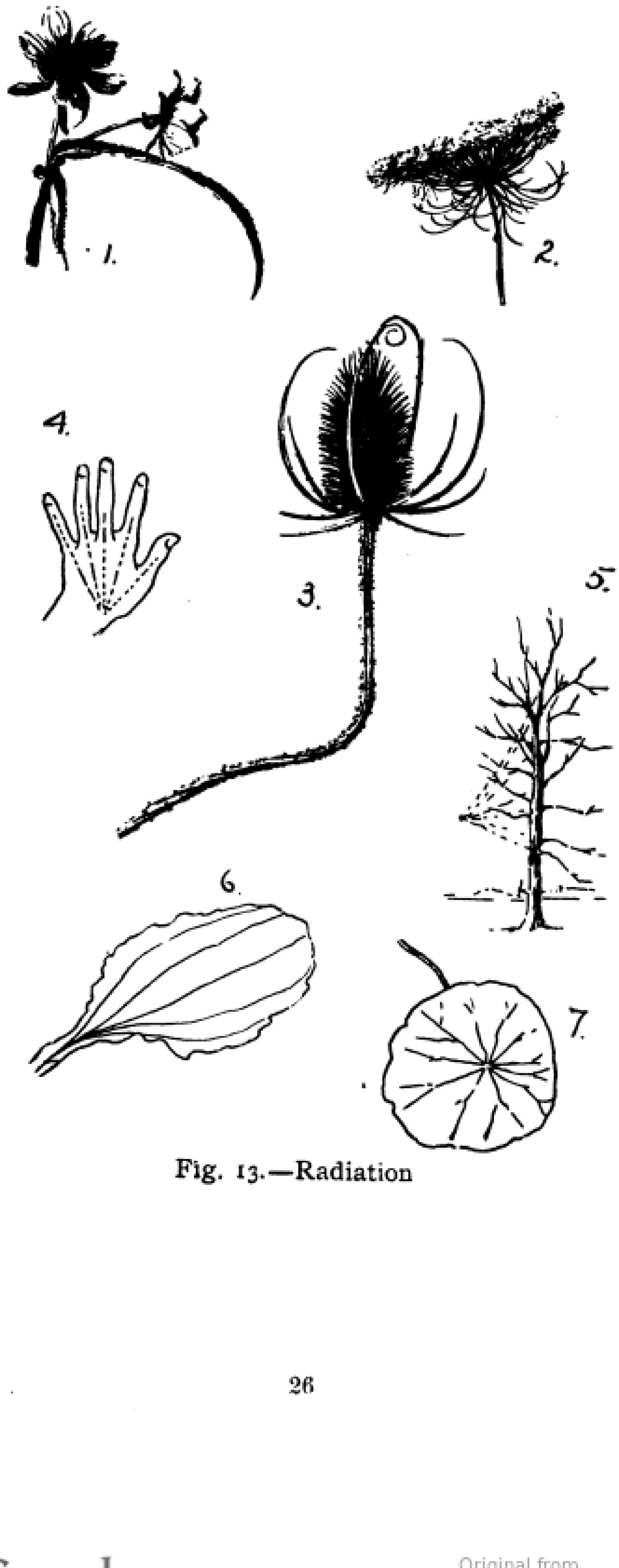



Fig. 13.—Radiation



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

UNIT.—A form which may be repeated in design to cover a surface. Figs. 44–46, 148–152, etc.

REPETITION is expressed in the repeating of the same form. (Rhythm is the highest form of repetition.) See Figs. 41, 76, 149, 150, 152, etc.

ALTERNATION.—Two or more forms or parts, different in size, or shape, or both, repeated in regular order, first one then the other. Figs. 39, 40, 44, 74, 151, etc.

CONTRAST.—The effect due to the placing together of forms or colors quite different in character. Leaves contrast in shape size and color with flowers and both with the stalk. See Figs. 14*a*; 16; 21 [3] and [5]; 13 [1], etc. In ornament, see Figs. 44, 90, 118, 151, etc.

GROWING POINT.—That part of unit or design from which its elements seem to issue. It is analogous to the root in plant forms. The use of a growing point generally involves radiation. Find the growing points in Figs. 12, 15 [5], 17, 157, 45, 69, 70, 90, etc.

SYMMETRY.—The adaptation of the several parts of a form to each other. *Bilateral symmetry*, or *bilateral* is a term applied to a form which has two sides alike in shape and size and which bear the same relation to the central axis. *Radial symmetry* is that in which like parts are arranged symmetrically around a centre.

All natural forms are symmetrical—except through accident—for evolution has eradicated all weak, unnecessary or cumbersome parts. Nearly all plant and animal forms are bilaterally symmetrical or have parts which exhibit this arrangement. Figs. 14, 15, 16, 38, 71, 126, etc. *Radial symmetry* is found in flowers and top views of many plant growths. Figs. 12; 13 [1], [2] and [7]; 17, 45, 93, etc. We understand that nature never produces two forms exactly alike or two halves of one form in which the one is the exact counterpart of the other; therefore when speaking of a natural object as showing bilateral or radial symmetry, we do not mean a mechanical repetition but nature's ever-varied rhythmic repeat.

RADIATION means the diverging of lines or elements from a common point. See Figs. 12, 13, 14, 42, 67, etc.

RHYTHM is an accented repetition. The fingers on the hand



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 15.—Rhythm



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

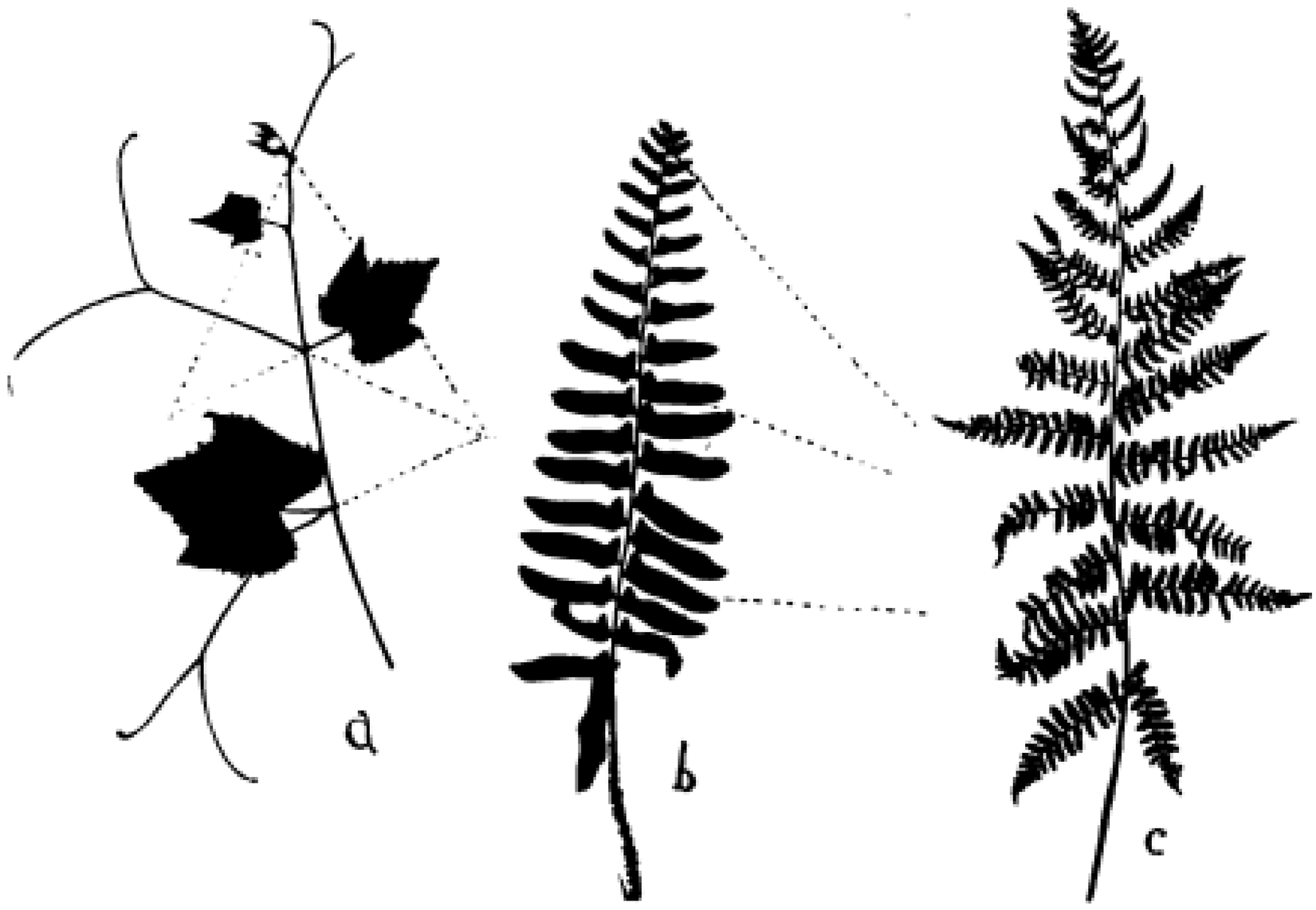



Fig. 14, Rythm

show rhythm, the accent being in the middle finger. (Fig. 13[4].) The trees in the woods show rhythm in their varied size, a large tree making the accent here and there: When all trees are practically of the the same size, the more distant ones appear smaller as shown in Fig. 15 [2], where the accent is in the nearest tree. Other illustrations are given in the seed-pods in Fig. 15 [1], the leaflets in 15 [3], and Fig. 19 [1], and a double rhythm in 14 *c*, the scallops in 15 [5], the veins in 15 [4], the branches in Fig. 13 [6], the leaves in Fig. 14 *a*, and Fig. 16, the spiral elevations in Fig. 19[2] etc., etc. In ornament see Figs. 67, 69, 70, 90, 150, etc.

Composition of Line (tangential union).—The beautiful flow of one line into or from another. Nature always uses this flow of line in joining two parts of an object; notice it in the contour of the human figure, in the features of the face or the fingers of the hand (Fig. 13 [4]); in the joining of limbs to tree trunks (Fig. 15 [6]), or the meeting of small branches; in the veining of leaves (Fig. 15 [4] and Fig. 13 [6]); where the stem and blade of the leaf join (Fig. 13 [6] and Fig. 15 [8], etc., etc ) The elements of a natural form never collide, one always flows into or from the other. Equally numerous are the illustrations in ornament. (Figs. 36 *j*, 69, 91, 126, etc.)



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

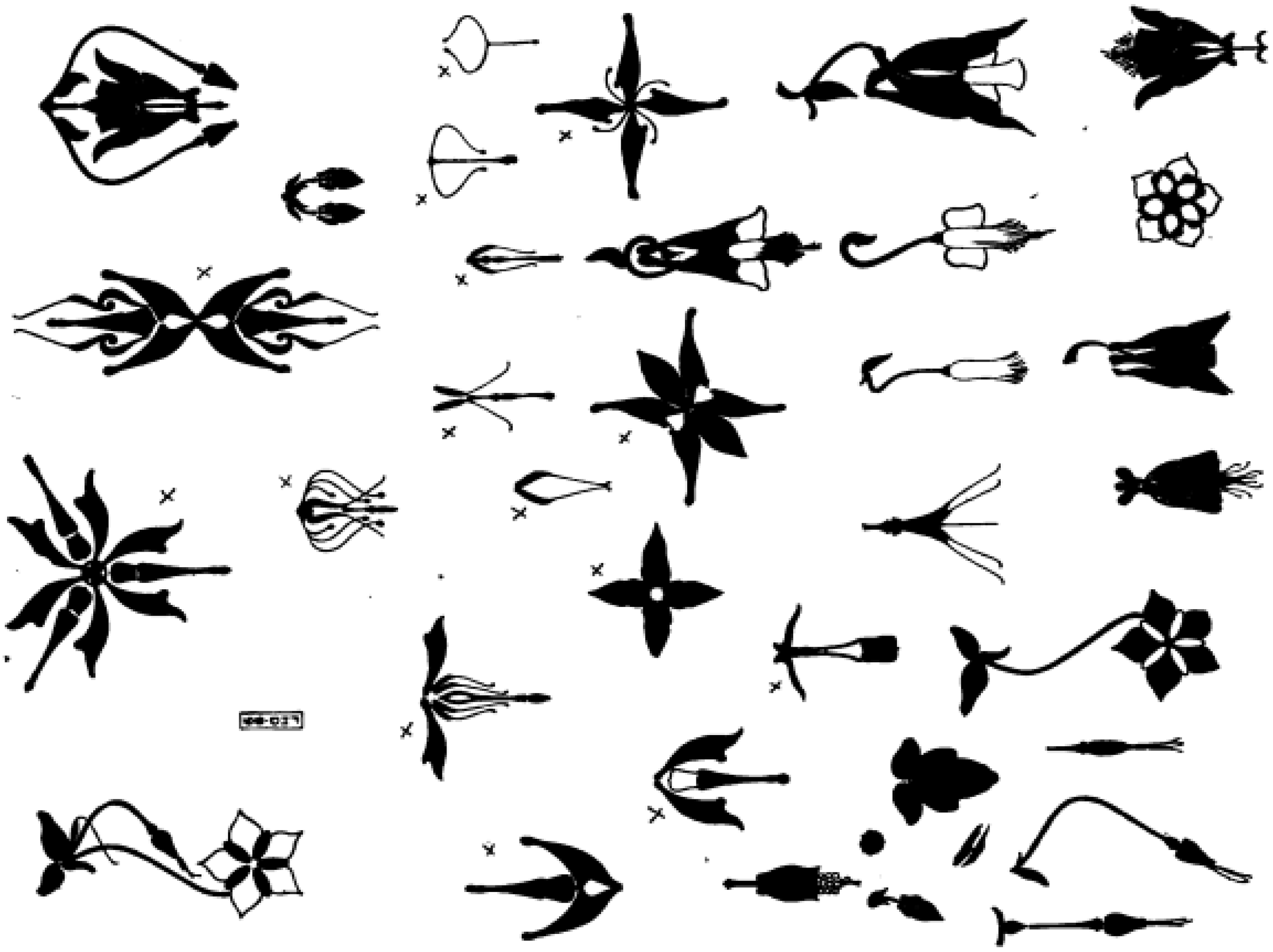


Fig. 17—Units from the Columbine.

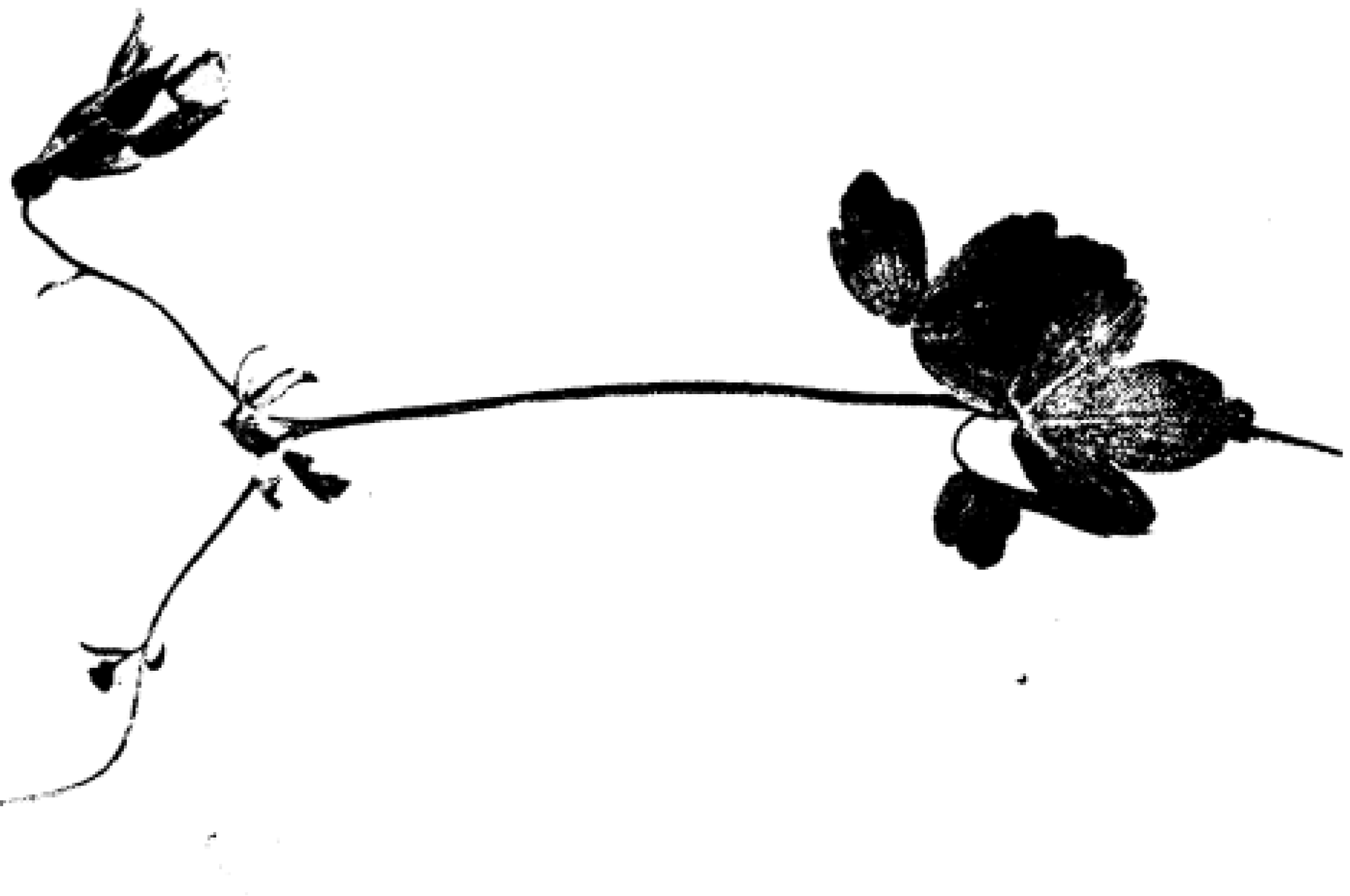


Fig. 16—Columbine.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

BALANCE.—The effect produced when the parts of a design are so distributed as to cause the whole to appear at rest: a well-balanced design does not seem to be in danger of falling over. Illustrated in Figs. 13 [6], 14, 15 [6], 16, 17, 21, 149, etc.

REPOSE.—"That harmony or moderation which affords rest for the eye; opposed to the scattering and division of a subject into too many unconnected parts, and also to anything which is overstrained."—*Webster's Dictionary*. Repose necessarily involves balance. (Figs. 14. 20, 44, 71, 74, 92, etc.)

NATURALISTIC.—Realistic or closely resembling nature. Figs. 12–16; 145, right-hand design; 157 upper row; etc.

CONVENTIONALIZE. IDEALIZE. — These two terms are placed together for each involves the other. *Conventionalize:* To draw from a natural form, omitting details and accidents of growth in order to obtain a beautiful, perfect and type representation, rather than of one individual specimen. *Idealize:* To introduce into the drawing of a natural form any foreign elements which may, in the opinion of the designer, add to the beauty of the whole; or, to combine elements from various sources, the end being beauty. Conventionalized forms: Figs. 17 (those not marked X), 38, 42, 150, etc. Idealized designs: Figs. 17 (marked X), 57, 116–123, 126, etc.

## CURVATURE.

SPIRAL.—In brief, Ruskin explains the beauty of the spiral as follows:* Take any number of lines, 12, 23, etc., Fig. 18, having these lines increase in length in a certain fixed proportion. In this case 23 is one-third longer than 21, 34 is one-third longer than 32, etc. Arrange these lines as illustrated, keeping the angle which each makes with the preceding always the same. Then a curve drawn through the extremities of the lines will be a beautiful curve, for it is governed by consistent laws; every part of it is connected by those laws with every other, and the mode of its construction implies the possibility of its continuance to infinity; it would never return upon itself though prolonged forever.

* "Modern Painters," Vol. IV.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

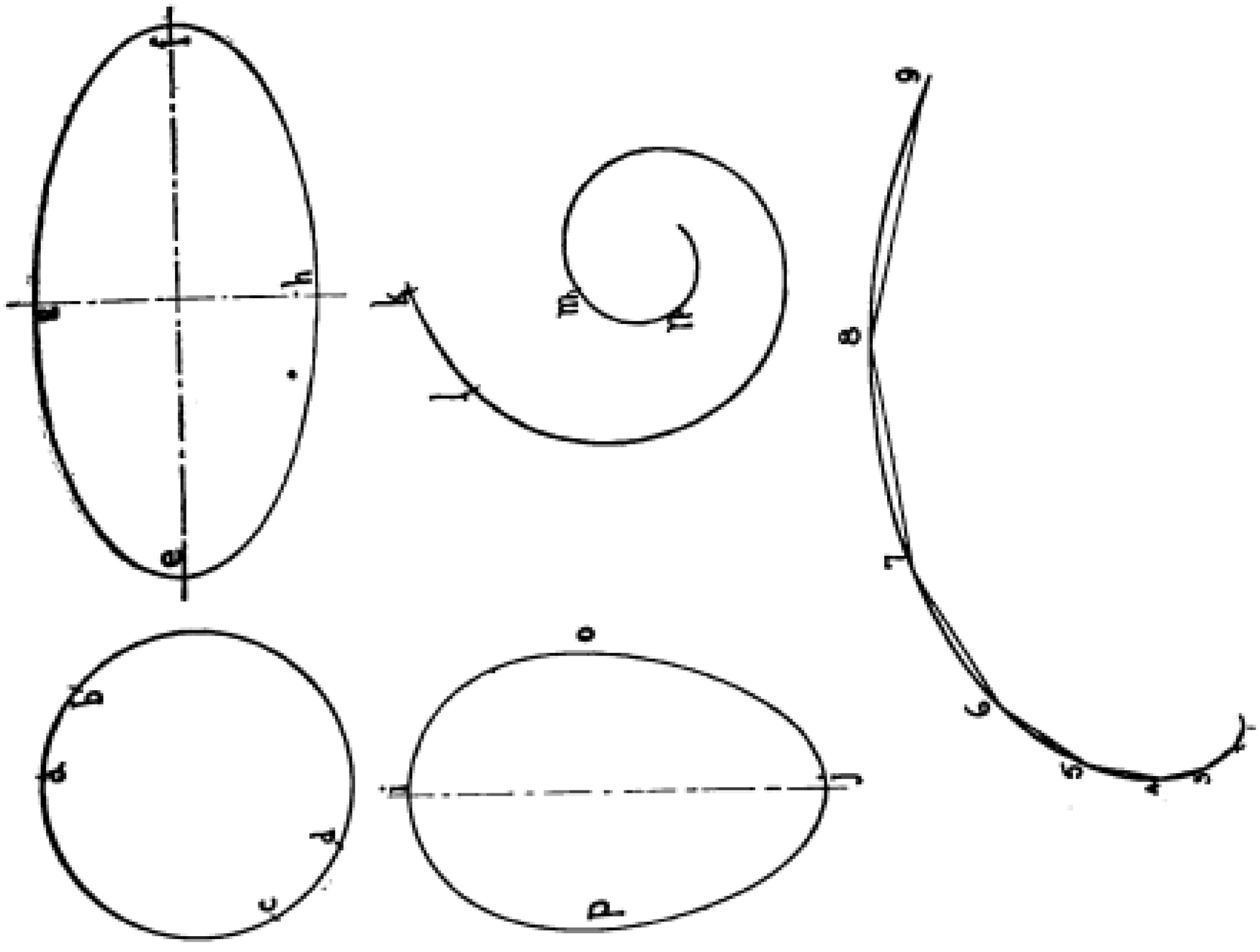



Fig. 18.

Fig. 19.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 20. Curves of Force

Fig. 21. Reverse Curves

Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

These characteristics must be possessed by every perfectly beautiful curve. It is not essential that the increase in length should be one-third, it may be one-half or one-fifth or any other fixed proportion.

If we take two equal arcs from the circle, for instance *a b* and *c d* Fig. 18, the two curves are exactly alike. In the spiral the line *l k* is of the same length as *m n*, but *m n* is a more violent curve than *l k;* the spiral is continually changing in the degree of its curvature. Again, any one of the curves sub-tended from the straight lines, as 12 or 56, is an exact reproduction *in miniature* of the next larger or of the largest, 89; in other words 89 is echoed again and again according to a constant law, just as a loud noise may be repeated in a constantly diminishing echo.

The spiral is designated as an "infinite" or "immortal" curve, often in school it is called the "curve of elegance." It may be studied on shells, in tendrils, curled leaves, the growth of vines, etc. (Fig. 19.)

See how it is employed in ornament in Figs. 43, 57, 60, 71, 90–92, etc.

THE CURVE OF FORCE is a vigorous line, showing a law of continued variation as it leaves a straight path. It expresses life and force and strength and it is much more interesting than the monotonous curve of the circle. It may be seen in the sky-rocket, the elm-tree, the goldenrod, the fountain, the midrib of flowers, etc. (Fig. 20.) This curve is more beautiful because of the *gradation* in its thickness, noticeable in every natural illustration. We may find this curve in the ornament shown in Figs. 39, 54, 70, 83, etc.

THE REVERSED CURVE OR CURVE OF GRACE is found in the outline and veining of leaves, in flowers, fruits and animals: Figs. 14, 15, 19–21, etc. In ornament: Figs. 38, 69, 126, etc.

Ruskin calls such curves as the *Circle*, *Ellipse* and *Oval* "finite" or "mortal" curves, because if a part of one be given the whole figure may be completed by continuing the line until it returns to the starting point: If we have the arc *ab*, *eg*, or *iof* in Fig. 18, we can complete the circle, ellipse, or oval. The circle is considered the most commonplace of the three, because the curve is alike throughout its entire extent. The ellipse is perhaps less interesting than



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

**Fig. 12—Radiation**

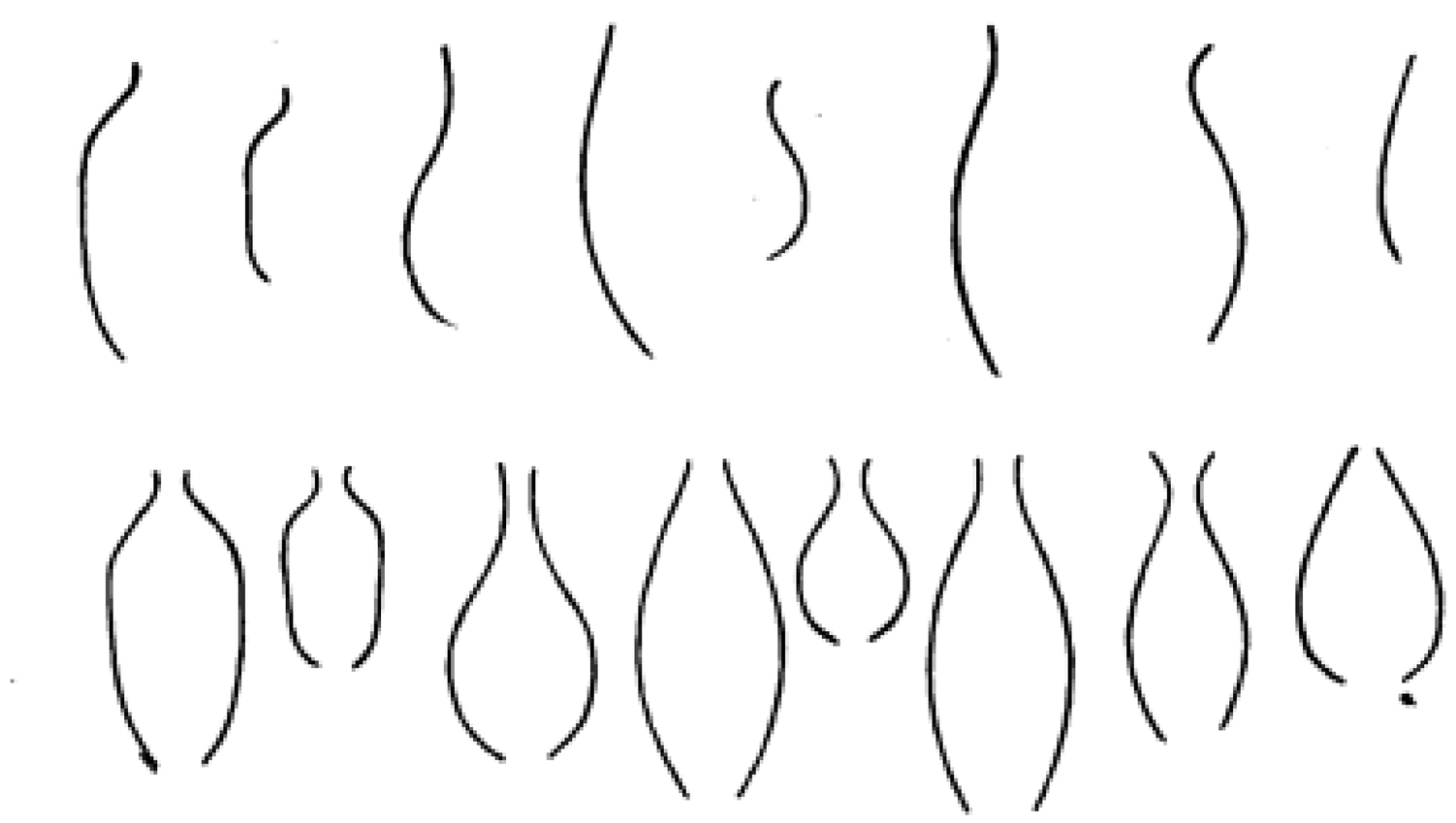


**Fig. 25.**



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

the oval, for while, no two portions of the line *e g* are alike in curvature, the whole line *e g* may be found repeated in *g f*, *f h* and *h e*; in the oval, which can be bisected by but line *i j*, no two parts in the curve *i o j* are alike, and the whole curve is repeated but once, in *i p j*, making a bilateral, symmetrical whole. The oval is the geometric figure most abundant in vegetable and animal growths, and the best art productions.

At the top of Fig. 25 are reproduced sketches of seaweed as it appeared floating in the water. If we place reversed drawings beside the originals we shall have a series of beautiful vase forms.

> "'Tis not in the high stars alone,
> Nor in the cups of budding flowers,
> Nor in the redbreast's mellow tone,
> Nor in the bow that smiles in showers,
> But in the mud and scum of things
> There alway, alway something sings."

The teacher who habitually looks for the beauty in all things, will find that this attitude of mind will be noticeable in her pupils. Moreover, unless the pupil does recognize beauty in material things his drawings will proclaim this lack of perception, for he can express no more than he sees. All beauty is in the perception or imagination of the individual. "True wisdom in all things consists in discovering law, and obeying it."

It is not necessary that the definitions of the various curves be taught, but it is of prime importance that the pupils know how to draw them, for, being beautiful in themselves, they are continually met with in beautiful objects. The grammar grade and high-school classes can comprehend such an analysis of the curves as given above. Much practice should be given in drawing them free-hand on paper and at the board. No diameters or construction lines of any kind should be used in this drill work, but the whole curve should be made with a free (not reckless) continuous arm (not hand or finger) movement, using a very light line. Where the line seems faulty, correct by a stronger stroke and so on until it is right. "Art consists in the doing of each right thing well." This drill will lead to an appreciation of good curvature.

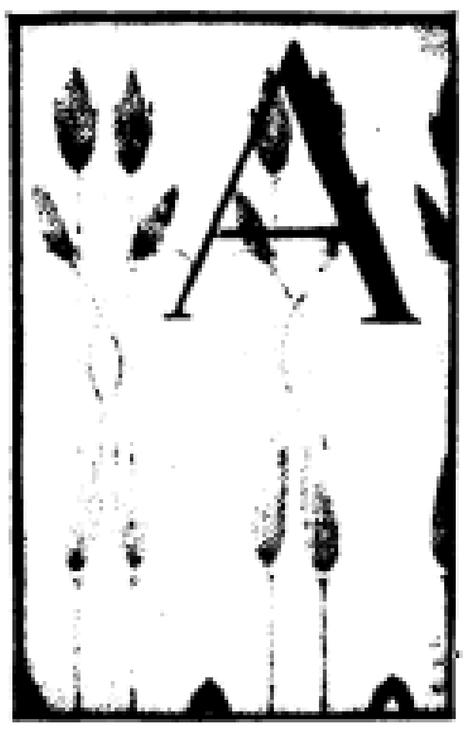


Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER V.

## THE TEACHING AND DRAWING OF ORNAMENT

"Though we travel the world over to find the beautiful, we must carry it with us or we find it not."



LL teachers know that historic ornament, in common with other subjects, can not be successfully taught unless we *interest* the class. A half-hour's talk should do this. In selecting material for a talk upon each school, various authorities have been consulted, and the more interesting statements of each, if comprehensible to young students, are recorded in following chapters. Wherever two writers have differed (and this is not an infrequent occurrence) the statements which are most suggestive have been selected. We are not teaching the facts of history as an end, but as a means to interest the class in ornament.

Every nation has certain peculiarities of customs, language and art, just as every individual has marked characteristics of manner, dress and handwriting. The illustrations in this book were chosen primarily because they are *characteristic* of the various schools, and whenever posssible under this condition, examples are given which the pupils can draw.

Casts, photographs, prints, the penny pictures, and the geographies or a wall map can be effectively used during these lessons. A series of charts of uniform size (about twelve by eighteen inches is convenient for carrying and large enough to be studied from any part of the room) illustrating the symbols, units and designs, may be prepared by many teachers. These charts will serve to concentrate the attention of the class more effectively than will individual illustrations. They may be left hanging upon the walls of the room throughout the time given to historic ornament,



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

and even for a longer period. It is very important that the pictures of the world's architectural masterpieces be placed before the pupils for a considerable length of time if they are to find permanent lodging places in their respective memories. Having these pictures constantly before them unconsciously creates ideals.*

If there is an art museum in the city the teacher is indeed fortunate, and she should arrange to visit it with her class to supplement the lessons in school.

Have the pupils search for buildings in the neighborhood, which possess some elements of the historic style under consideration.

There have been many styles of ornament, the six most important are explained in later chapters. These are the Egyptian, Greek and Roman, the three ancient styles, and the Byzantine, Saracenic and Gothic, dating from A.D. 328 to 1500. The subject-matter relating to each school has been arranged so as to present an introduction which can be made interesting to the class, followed by the important data, including essential illustrations,—the aim being to present the whole in a teachable order.

Exact measurements or dates mean little and are soon forgotten unless they are associated with familiar objects or events. (See pages 42 and 43.) Hence the teacher should make it a rule, when, for example, something is said to be one hundred and fifty feet wide, to find some well-known object, having the same dimensions, to which she may refer. The pyramids were built six thousand years ago, that is three times as many years as have elapsed since the birth of Christ, or forty-eight times as far back in history as our Revolutionary war.

In class talks and criticisms try to develop an understanding of the beauty of line and mass. Supposing that we are considering some particular design, say Fig. 74, a few questions like the following will be helpful:

Can any one in the class suggest a better arrangement of

---

*Excellent half-tone reproductions can be obtained for one cent each of the J. C. Witter Co., 123 Fifth Avenue, New York City; from the Perry Picture Co., Malden, Mass., or the Prang Educational Co., New York City. Small blue-prints can be purchased from Francis Hendricks, Syracuse, N. Y., at the same price.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

the two units? Try it. (A few attempts at arrangement will convince the pupils that the Greek designer tried many plans and selected this as an excellent manner of combining these elements.)

Why is the oval used here instead of the circle? (It is a more beautiful figure. See page 31.)

In general, can you tell me which is the most beautiful, the circle, ellipse or oval? How about the spiral? (See page 34.)

How would it do to make this form a little longer, or wider? (Probably the designer tried both of these suggestions and decided that if made longer it would be too slender; if wider, too much like a circle, that is, its height and width would be nearly alike and therefore less varied and more monotonous than in Fig. 74.)

Why is the outline of the oval varied at the bottom? (To add to the beauty of the form through the use of the spiral and to form a growing point for the anthemion.)

What do you mean by a "growing point?" (Page 27.)

Why is a growing point used? (Our ideals in design are obtained from a study of nature, and all natural forms have growing points, *e. g.*, roots. This involves the law of radiation.)

Is there another growing point in the design? (Yes, under the small form, the so-called Greek lily.)

Here, where two units are employed, one is larger than the other; is that a general rule? (Yes, as in a picture or drama or book, there should be one dominant element, which may have several subordinate associates. The larger the unit, the more beautiful it should be.)

Why are the side lobes of the lily made to spread out as they do? (To conform to and fill out the space between the ovals.)

Suppose we change the lobes of the anthemion and draw them straight; is that better? (No, such a drawing lacks grace. In general, straight lines [or lines of very slight curvature] are used where strength is demanded, and curves where beauty is desired.)

What principles of natural growths and design are found in this border? (See next question.)



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

What do you mean by radiation, rhythm, symmetry, balance, etc.? Illustrate by sketches. (See Chapter IV.)

Is the anthemion a picture of one plant or a composite photograph, a generalized representation of the growth of many? (Probably the latter.)

Which kind of design, naturalistic or conventionalized (idealized) expresses a better understanding of beauty? (The conventionalized or idealized design, for this gives us the designer's ideal of what a perfect example of ornament should be, in so far as he can produce his ideal. This ideal has been obtained through a long study of beautiful forms; the naturalistic design is a more or less slavish imitation of one natural growth. It is easier and requires less ability to copy or imitate beautiful forms than to create them.)

In all these designs, from what source did the artists get their ideas? (Originally from nature, or from other ornament, which if traced back would show nature as a basis. Geometry is based on nature.)

Similar questions may be asked of any example of ornament, and will serve to bring out the principles and ideas of beauty which have been employed.

After the talk, the pupils may make a sheet of sketches of the characteristic elements of the style of ornament studied. (See Figs. 47 and 78.) These elements should be drawn freehand repeatedly, from copies and from memory, until the pupils *know* them. Historic ornament is studied to gain an appreciation of form. The brush, with common writing-ink, is one of the best mediums to emphasize form, unless, as in Roman ornament, it is important to show the relief. Compare a pencil outline with an ink silhouette, and see which is the stronger.

The pupils may now bring in and mount their collected illustrations. (See Figs. 49, 79 and 155.) These may be obtained from magazines, wall-papers, cloths, etc., often showing the influence of this particular style of ornament on modern productions.

It is an excellent idea for the class to make note-books containing notes, collected illustrations and sketches.

And, last, we must have a careful drawing of some illustration chosen for its relation to the proposed work in origi-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

nal design. It will be noted that nearly all the border and surface designs herein shown contain units repeated in simple geometric forms such as the square, circle, triangle or rhombus.

In this final drawing of one large surface design or border, in which certain units are repeated, all mechanical aids such as compasses, rulers and tracing paper may be employed; the pupil ought to know how to use these tools to produce a design in which *accuracy* is one of the elements of beauty. Each pupil should space off his paper to receive the units; draw (not trace) one unit carefully in one of the spaces and then trace and transfer his drawing of the unit to the remaining divisions in the design.

If time permits, it is well to precede this manner of repeating a unit by making a drawing of the same border or surface pattern, doing the entire work free-hand. In this way a thorough understanding of the unit involved will be gained.

As a last lesson on any style of ornament a short examination may be given or each pupil may be requested to write a composition, illustrated by drawings. Either of these exercises will cause the class to carefully think over the whole subject, and will make evident to the teacher the weak points in the teaching,—if there be any.

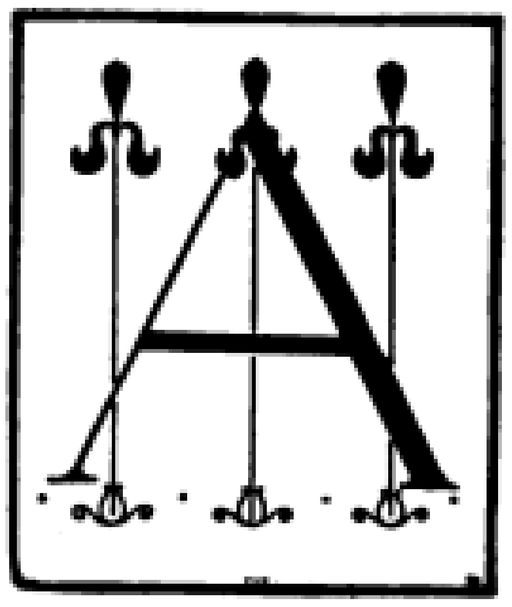


Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER VI.

## EGYPTIAN.—4000–1000 B. C.

"Well building hath three conditions: Commodity, Firmness and Delight."—*Sir Henry Wotten.*



BRIEF mention of the story of Moses, the children of Israel, or Joseph, will turn the attention to Egypt and the Nile. What can the pupils tell you about this interesting river? Do they know that "all Egypt is the gift of the Nile?" But for this river the Nile valley would be as much of a desert as the adjacent Sahara. Near the middle of June the river begins to rise and in September has a high-water mark twenty-five feet above June water, resulting in the overflow and consequent fertilizing of a strip of land from one to five miles wide on either side.

Here is a picture of a part of the Nile with two triangular-shaped mounds in the distance (Fig. 23). How high are those pyramids? If we were to have a church with a spire as high as that of ——— church (naming a neighboring church with a spire a little over 100 feet high) and place another of the same size upon it, a third on that, and on the third a fourth, the distance from the ground to the top of the fourth steeple would be about the same as the altitude of the largest pyramid—the pyramid of Cheops. (At the right, in Fig. 23.) The next time you are near this church look at the top of the spire and then into the air four times as high and you can estimate the height of the Great Pyramid.

This pyramid was originally 481 feet high, the loftiest structure erected in pre-Christian times. At the present date some of the top is gone and the base is covered with sand to a depth of several feet. The boys know 100 yards as a standard of running distances. Each side of this pyra-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 23—Pyramids and Temple of Sphinx.

mid is over 250 yards long—764 feet—and the measurements vary but six-tenths of an inch on a side. If we were to start at one corner and walk around the base once, and three-quarters around again, we would have traveled over a mile. Thirteen acres of ground are covered by this base. One hundred thousand men worked thirty years to build this colossal structure. Steam and electricity were then unknown and just how those huge blocks of stone were elevated to the top is a mystery.

We know it is nearly 2,000 years since Christ was born. These pyramids were built three times as long ago; the exact date is uncertain, but it was between 3,000 and 4,000 B. C. Look on the map for El Ghizeh, on the west bank of the Nile, opposite Cairo. The Great Pyramid and two others are located here; the one at the left in Fig. 23 is the pyramid of Cephren, 454 feet high, and near by is a third (Mycerinus, 218 feet in height). In all, there are about one hundred pyramids situated in various places up the Nile on its west bank.

The one great desire of the old Egyptian was to build a tomb to hold his body after death. These tremendous pyramids were built for this purpose by the early kings, and



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

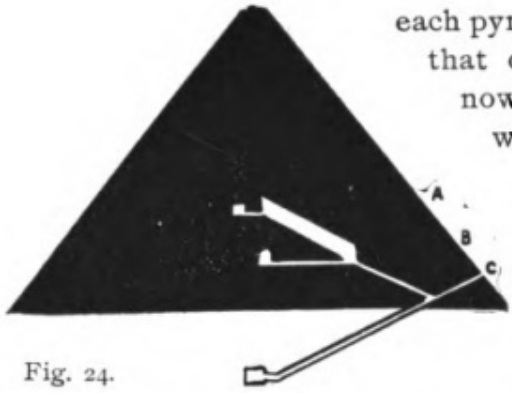


Fig. 24.

each pyramid held but one body, that of the king. We may now understand why the west bank of the Nile was always selected as the site for the pyramids. This side of the river was associated with the setting sun. The sun was worshipped as a god, who, during the night, visited the celestial regions. The dead body was carefully treated to prevent decay. Wrapped in the finest linen, it was put into a heavy paper or pasteboard case which fitted the form closely. This was placed in a wooden coffin and finally in a stone sarcophagus. The stone casket was hidden in a small room in the middle of the pyramid and the passageway leading to it was carefully sealed up with large blocks of stone. (See Fig. 24.) It is less than one hundred years ago that an entrance was found to the Great Pyramid at *C*. The passageway going underground leads to a chamber probably constructed as a blind to tomb robbers. The room at *B* is called the queen's chamber, although nothing was found in it to indicate that a body was ever buried here. At *A* is the king's chamber, not as large as the average schoolroom, which contained the king's mummy. The passages in this pyramid are but 3 feet and 5 inches wide and 3 feet and 11 inches high.

It was customary to mortgage the mummies of their ancestors, and to pay these debts before any others was a point of honor. Mummies were exhibited at their feasts to serve as evidence of the shortness of this life and the quiet of eternity. Their houses were built to last but a few years; their tombs, forever. At death the soul was thought to wander through the Valley of Shades, which was supposed to be under the earth, or to do penance by living in various animals. This was one reason why some animals were regarded as sacred. An Egyptian dare not kill a cat for fear his grandmother might be occupying a suite inside. The *Ka*, or spiritual body, which remained with the mummy in



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

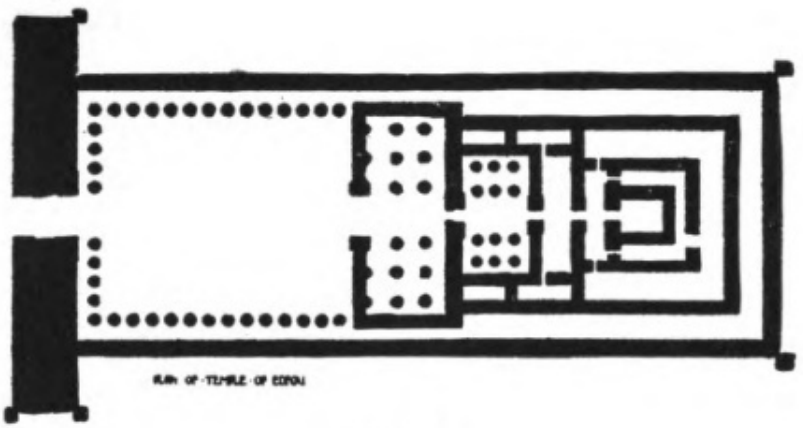


Fig. 25.

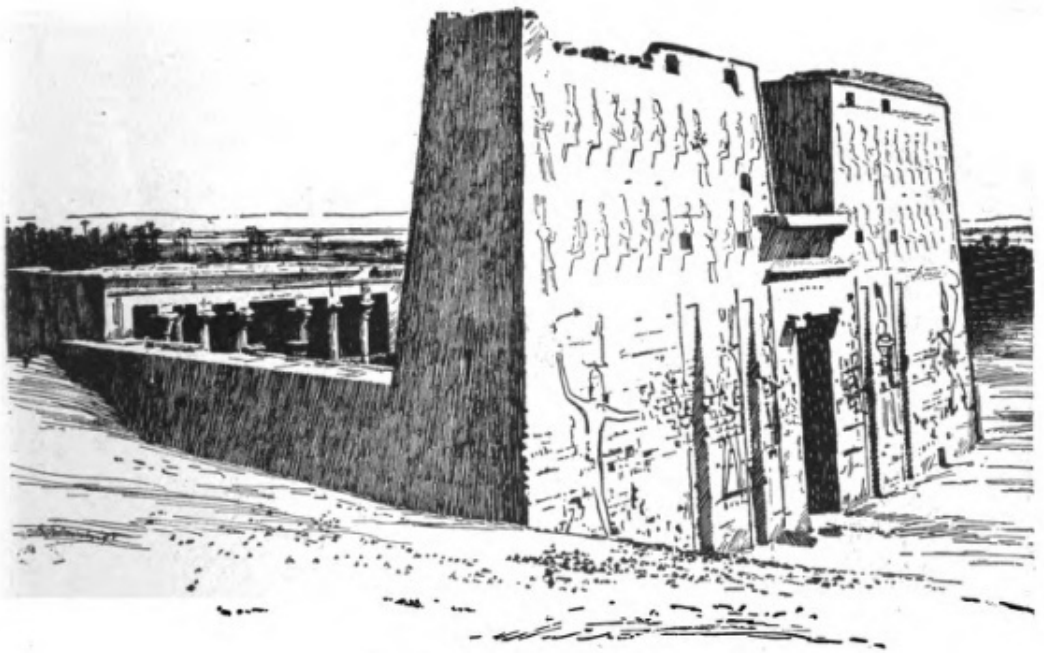


Fig. 26.—Temple of Edfou.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

the tomb, required nourishment, and food and water were left beside the dead, as were the various useful and ornamental articles which had served the deceased. After many years of travel the soul was to return to the body, and for this reason the bodies were so carefully preserved from decay and from tomb robbers; but Egyptian hieroglyphics have never stated definitely how the resurrected inmate of a pyramid was to get out.

Near the Great Pyramid is the Sphinx, even older than the pyramids. The head is human, the portrait of the ruling king, and the body is that of a lion. Thus it expresses the highest type of intellectuality combined with marvelous strength and agility. As the king was supposed to be a relative of the gods, the Sphinx was an object of worship, and a small temple was built for religious purposes directly in front of the body. (Shown in Fig. 23.) The Sphinx is carved from a solid rock and is 70 feet high and 150 feet long. The head has been estimated to be 40,000 times as large as

Fig. 27—Portico of the Temple of Edfou.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

a human head. The beard, nose and lower part of the head-dress are gone.

Art must have existed many centuries to produce such works as the pyramids and Sphinx. Recent authorities estimate that a fair degree of civilization existed on the banks of the Nile 12,000 years ago. Heroditus states that ancient Egypt contained five million people and two thousand cities

Four hundred and fifty miles above Cairo on the Nile is Thebes, the ancient city of temples. All the Theban structures are in such a state of ruin that we may get a better idea of an Egyptian temple from an examination of the Temple of Edfou (Fig. 26), situated about one hundred miles south

Fig. 28—Lotus Capital.

of Thebes. A study of Fig. 25 will help us to understand the plan of the building. In front are the two great masses of masonry called pylons, 110 feet in height. In the centre is the entrance to the temple, a doorway 50 feet high. Passing through this we find a large open court surrounded by columns. Opposite the first entrance is another (seen in the distance in Fig. 26 and nearer in Fig. 27) leading into a hall with a flat roof supported by columns. Finally, after going through several smaller similar halls we reach a sanctuary, where none but the priests and king were allowed. Here



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 29—Obelisk, Central Park, New York.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

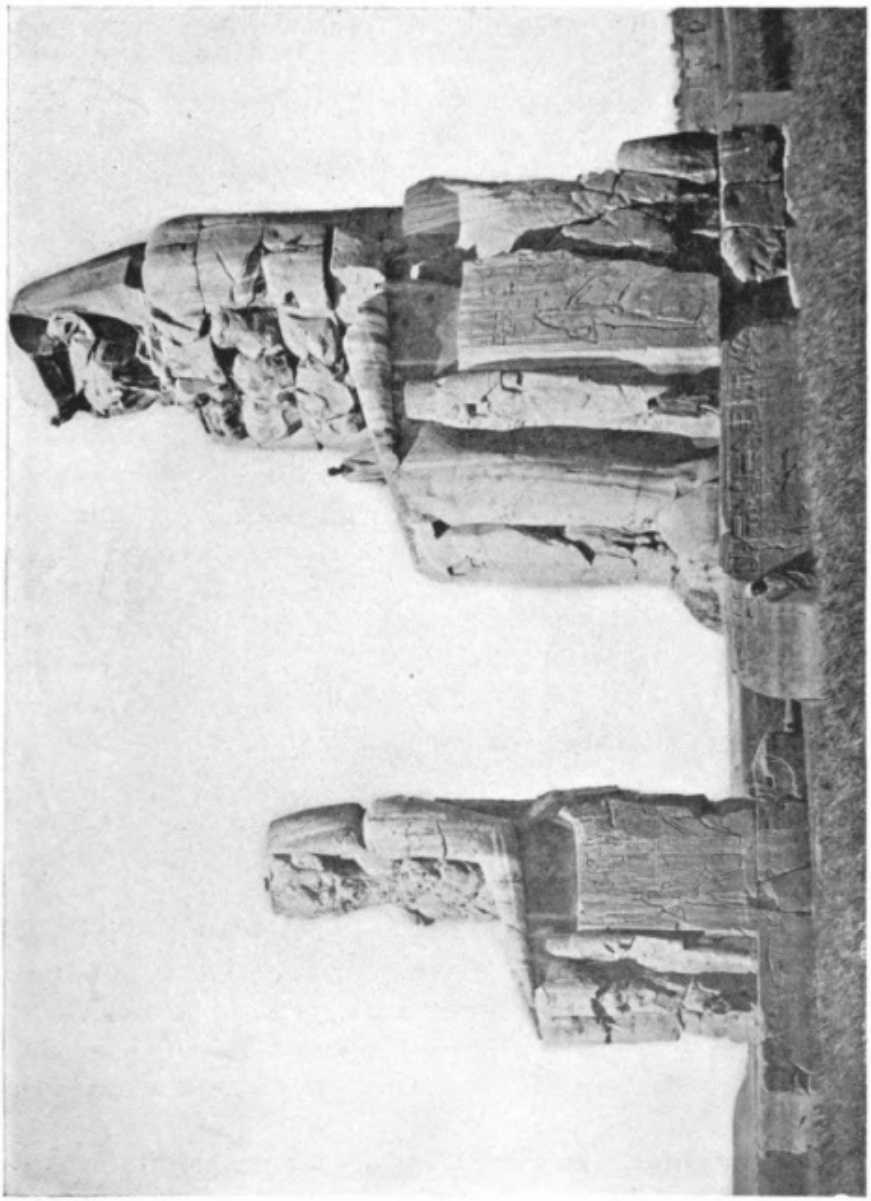


Fig. 30—Singing Memnon.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

were kept the statues of the gods and the city treasures. As but little rain falls in Egypt, a comparatively small part of the temple had a roof, which was always flat. This roof was supported on columns as shown in Fig. 27. Four of the capitals on the front row of columns were designed from the papyrus plant which grew in the Nile; the other two are from the palm. A common capital was shaped to resemble the lotus lily (Fig. 28); another form had its origin in the lotus bud, and sometimes the sculptured heads of goddesses were used.

Thebes contained many temples, all practically alike in plan and construction to the temple of Edfou. The largest of these, Karnak and Luxor, were built by Seti I., and his son Rameses; the latter is generally credited as being the Pharaoh of the Exodus. The temple of Karnak was 1,215 feet long and 376 feet in width. Some of its columns are 33 feet in circumference and 66 feet high. This and many other Theban temples were approached by magnificent avenues of sphinxes.

The Egyptian obelisks are cut from a single rock. One has been brought to this country and placed in its original upright position in New York City (Fig. 29). Similar obelisks of various sizes, often placed in front of temples, are to be seen throughout the Nile valley.

Egyptian sculpture is not noted for its beauty, but is interesting because of its age and peculiarities and often its monumental proportions. Egyptian image cutters were of low caste, the trade descending by law from father to son, hence Egyptian statues are all alike (with but one or two exceptions), conventional, stiff and symmetrical. We shall notice these characteristics in the few statues herein illustrated.

The Singing Memnons (Fig. 30), situated near Thebes, are 66 feet high. Memnon is supposed to have been a sun god, and these statues were said to produce at sunrise a noise not unlike the sound of the word *mem-non*, resembling the sharp twang of a harp-string.

What is believed to be the oldest known statue in the world is the "Wooden Man of Boulak," found in an ancient underground tomb. As its name indicates, it is made of wood and is about three and one-half feet high. The eye-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 31—Wooden Man of Boulak, Egypt.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

lids are of bronze; the eyes are of quartz with a silver nail driven in the centre, giving a peculiarly life-like expression. (Fig. 31.)

The Scribe (Fig. 32) was also found in an underground tomb; probably the original was a favorite servant of the owner. It is made from limestone, the commonest material for these statues, and was colored reddish-brown, the color generally applied to statues of men. In the left hand he holds a roll of papyrus, in the right, a pen.

In Rahotep, a high priest, and Nefert, a princess, we see the same conventionalities in regard to attitude. Nefert wears a wig, beneath which her front hair can be seen. Her flesh was painted yellow, the color used for statues of women. (Fig. 33.) In all these early statues there is an evident effort at portraiture, but there is no attempt to express any beauty of muscular development, vigor or action. The statues of the gods were sometimes composed of the human body joined to the head of a hawk, jackal, ram, ibis, crocodile, cow, lion, cat or other sacred animal; occasionally the head was human and the body that of an animal.

If we look closely at any of the illustrations of Egyptian temples or obelisks, we find picture-writing everywhere. The walls of the tombs resemble a book of the customs and pursuits of the people. Before the world had alphabets, the people made pictures to express their ideas to others. The little child does this, and we may find a striking similarity between these hieroglyphics and the drawings of children. See Fig. 34. A man with a head in profile, the eye shown in front view, the shoulder twisted so as to be at right angles with the natural position with relation to the head, and the legs forced to agree in attitude with the face, is not a true picture of a man, but rather a symbolic representation which was employed. Compare these drawings with those made by little children. The important objects in a group were drawn larger than the others. The king was always pictured many times the size of his enemies, for example, on the front of the temple of Edfou may be seen King Ptolemy holding many of his enemies in his left hand, while in the right he holds a whip or a sword. Children also draw largest the parts of a picture which seem most important to them.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

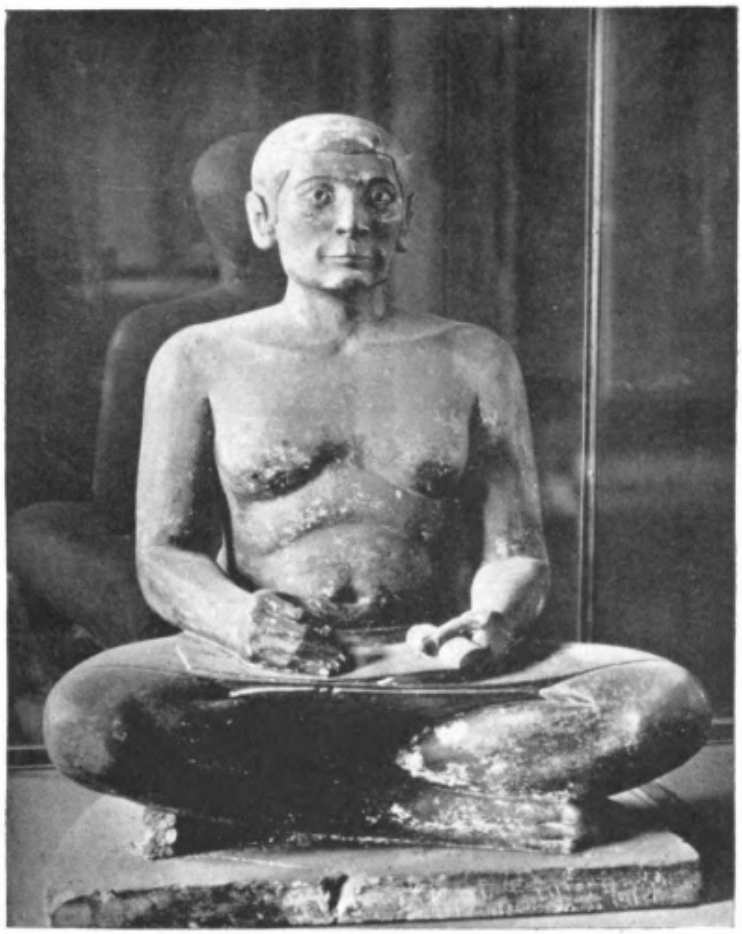


Fig. 32—The Scribe, Louvre, Paris.

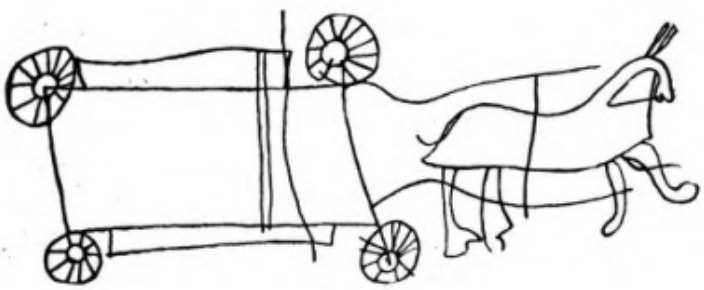


Fig. 35.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

A pond was drawn as a rectangle, water was represented by zigzag lines, and the trees surrounding it were drawn flat upon the ground at right angles with the sides. In the child's drawing, in Fig. 35, the wagon is shown in top view, the horse and wheels as if laid on the ground. It is easier to express ideas this way as all perspective is avoided.

Children enjoy drawing outlines and filling in with flat washes of color. This is precisely what the Egyptians, the world's children, did with all their wall decorations; every drawing was colored.

Fig. 36 contains other symbols. *A* is a picture of the sun; *b* and *c* of the Nile River; *b* suggests waves and *c* may have had a similar origin or it may represent the zigzag course of the Nile; *d* is the royal feather; *e* the royal snake, or asp. The feather and asp were worn by kings and queens to denote their rank, as the crown is used in European countries at the present time. In Fig. 37 we have a relief of a man worshipping a statue typifying truth. We know the man is a king for he has an asp on his headgear; the statue holds the looped cross, the emblem of divine life, while on its head is the ostrich feather, associated with gods and kings as the emblem of justice. Under the king's right elbow on a standard is a bunch of Egyptian water lilies, evidently an offering to the goddess.

*F* (Fig. 36) is a drawing of the Egyptian beetle, and *g* shows the manner in which these old artists drew it. This picture represented immortality. The wings indicate protection; between two feet is the ball of sand which holds the eggs, and the other circle is the sun, the creative power. Small stone beetles were worn suspended from neck chains, much as some people wear crosses to-day.

*H* is the Egyptian fret, showing the wanderings of the soul after death. How well this symbol tells its story can be understood by starting with the first long line and thinking that the soul travels in this direction for awhile, then changes to this—the next line, then goes this way, etc., until finally it ends its journey at the centre, in other words it returns to the mummy. Or, if as some think, the Egyptian believed in the transmigration of the soul, we can imagine these lines as representing various animals.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

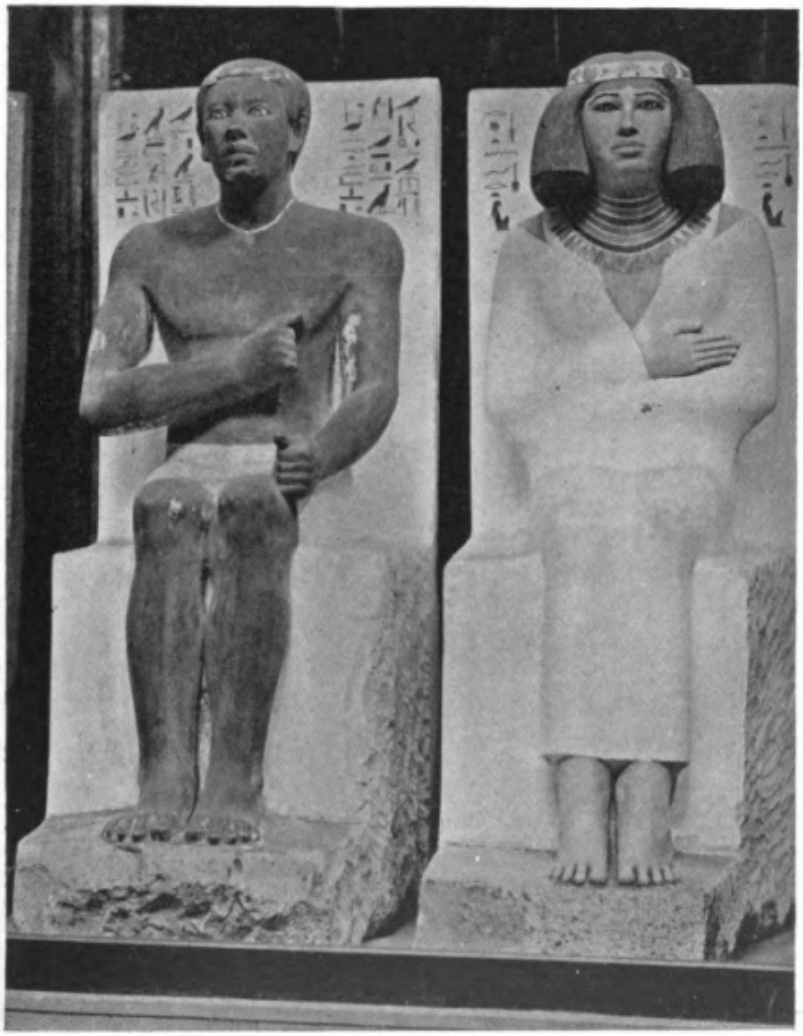


Fig. 33—Rahotep and Nefert.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

*I*, the winged globe, means creation (the sun), protection (the wings) and the power to distribute blessings (indicated by the asps the king's emblem). *J* is the Nile wave-scroll. The Egyptians used these symbols and drew the human figure in the same conventional way for thousands of years because they were forbidden by religious law to make any changes. This accounts for the fact that no improvement was made in this kind of drawing, and that through all those ages they drew as a little child.

There was one kind of drawing, however, in which they were allowed more liberty, and in this work, design, they had made great progress before the beginning of history. Nearly all their decorations involved their pond lily, the lotus. (Fig. 38.) This flower is much like our pond lily, but larger, white or blue in color, and the leaves, buds and blossoms grow from six inches to two feet above the water. The Egyptians held this flower sacred and associated it with the gods, especially the sun god and the god of the Nile. Thus it came to mean immortality and fertility. An Egyptian inscription reads:

> "I bring the flower which was in the beginning,
> The glorious lily of the great water."

And the "great water," the Nile, as seen upon the map somewhat resembles the lotus blossom with its long stem. As has been stated, many Egyptian capitals are carved to imitate the lotus flower and bud.

Undoubtedly the earliest drawings of the lotus were naturalistic, that is, they were as exact pictures of the natural growth as the early Egyptian artists could make. But the later drawings, those which are found in the temples, etc., show that the lotus was treated just as was the human figure,—it was conventionalized. In the centre of Fig. 38 we have an illustration of the natural growth of the lotus, and on either side two Egyptian conventionalized representations. The general outline has been preserved in all, but the arrangement of petals and sepals varies: the type of the flower is retained but the individuality of any particular lily is not intended to be shown. In all Egyptian lily and bud drawings we find this to be true.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 34.

Drawings of this plant permeate Egyptian decoration. Fig. 39 shows the lily and bud growing in the Nile. Fig. 40 is a similar design with the waves of the Nile indicated by the short curves between flowers and buds—a conventional picture of the true appearance of the plant and river. It has been stated that the lotus was associated in religion with the sun, and in Fig. 41 we find the lotus and sun combined to make a border.

Thus far the lotus designs have shown only the side view of the flower. The Egyptians seem early to have discovered that the top view also furnished a good motif for designs, as shown in the central drawing in Fig. 42, where the lotus is represented after the petals have dropped off. On either side are two rosette designs, made from the top view of the lotus. These rosettes are unquestionably among the oldest known, and, as we know, this idea of arranging forms around a centre has been adopted by all the world's designers.

Fig. 43 is a picture of the Nile flowing along until it meets the lotus (top view), around which it circles, then courses as before to another lotus. Between the two lotuses, shown in top view, are two others evidently tipped over by the current.

Figs. 44, 45 and 46 show how the lotus was used in surface patterns. In Fig. 44 the top view of the lotus is combined with the circle (the sun). Between these circles are small, nearly square forms, with the sides made to conform to the



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

sides of the adjacent circles. The sun, in several sizes, side view of the lotus, and separate petals or buds are put together in Fig. 45. In Fig. 44 the circle is a heavy band, the solidity of the rosette seems to demand a strong enclosing form The circle plays a less important part in Fig. 45; it is less interesting than the large rosette, and it is made a secondary matter by employing a narrow line. If the reader will look at this design from a distance, or with half-closed eyes, it will be seen that the Egyptian designer succeeded in making the rosette combinations the dominant effect. Almost unnoticed is the small unit between the large circles. This unit may have been taken from the upper right rosette in Fig. 42, eight lobes being left out that it may better fit the space in which it is placed.

Fig. 46 can be easily analyzed, being made from the circle, lotus petals and a four-lobed rosette.

Any one familiar with the Egyptian temples, pyramids, the sphinx, obelisks, conventional statuary and drawing of the human figure, the peculiar symbols used in picture-writing and the lotus forms in decoration, may be sure of recognizing Egyptian architecture and ornament. As we have seen, the ornament was essentially symbolic. Its aim was to glorify

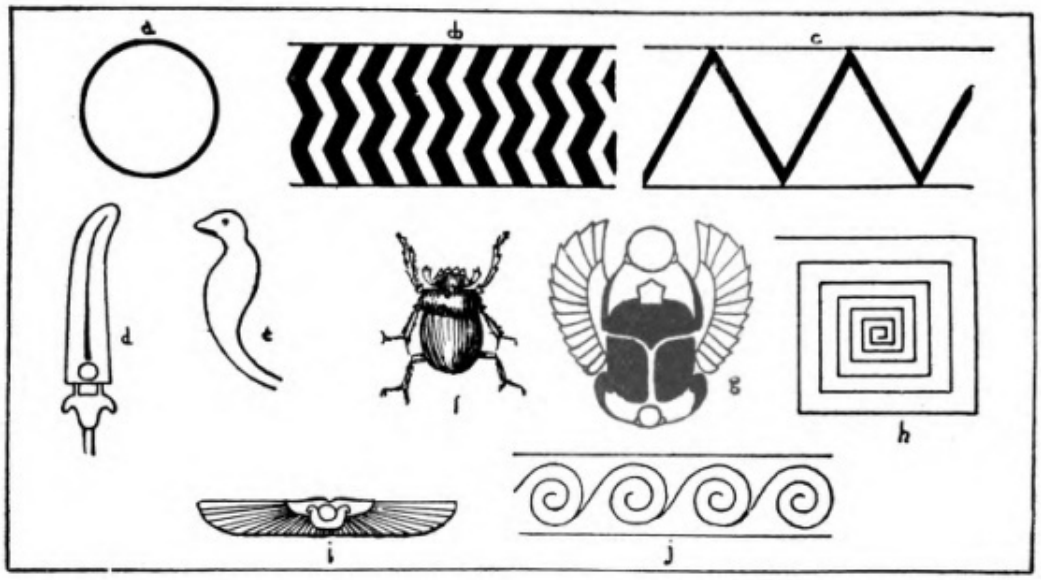



Fig. 36.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Fig. 37—Portion of Wall, Temple of Abydos.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

tne kings and the gods, and doubtless the ancient people of the Nile read its various messages as easily as we do a printed book.

Egyptian architecture and ornament are so evident an expression of a peculiarly individual and conservative people that their various forms have been but sparingly employed by succeeding nations. Their architecture is not adapted to the climate or civilization in this country, and only two structures are to be found patterned after Egyptian buildings. These two are the "Tombs" Police Court and the 42d St. Reservoir in New York City. We do, however, find such ornament as the circle, wave-scroll, rosettes, etc., on many modern objects, but when so employed they are not in any way symbolic, and are used merely to beautify some surface.

*Teaching Egyptian Ornament.*—As suggested at the beginning of the above subject-matter, an allusion to some Bible story will serve as an interesting introduction to the study of Egyptian art. Dates and dimensions are meaningless to the pupils unless associated with something with which they are familiar. One method of teaching the height and length of the Great Pyramid (Fig. 23.) is given. Thirteen acres is a very indefinite quantity to most people, but if compared with a ten-acre park near the school its area is understood. Have a sketch of the section of the Great Pyramid made on the blackboard.

From the primary grades obtain some illustrative sketches and see (1) how children tell picture stories; (2) how nearly all children use a stereotyped representation for the human figure. (3) Note how the child emphasizes the important objects in his drawing by making them largest, *e. g.*, heads and hands compared with the rest of the body, people compared with houses, etc. It is very easy to ascertain what the child considers the most interesting parts of his picture. (4) Many drawings will be found to contain the same combinations of facts and appearances as illustrated in Fig. 35; the child not understanding appearance drawing often pictures the facts. (5) Picture books are frequently printed in outline that the children may color the forms. This comparison of the Egyptian art expressions with children's drawings is



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

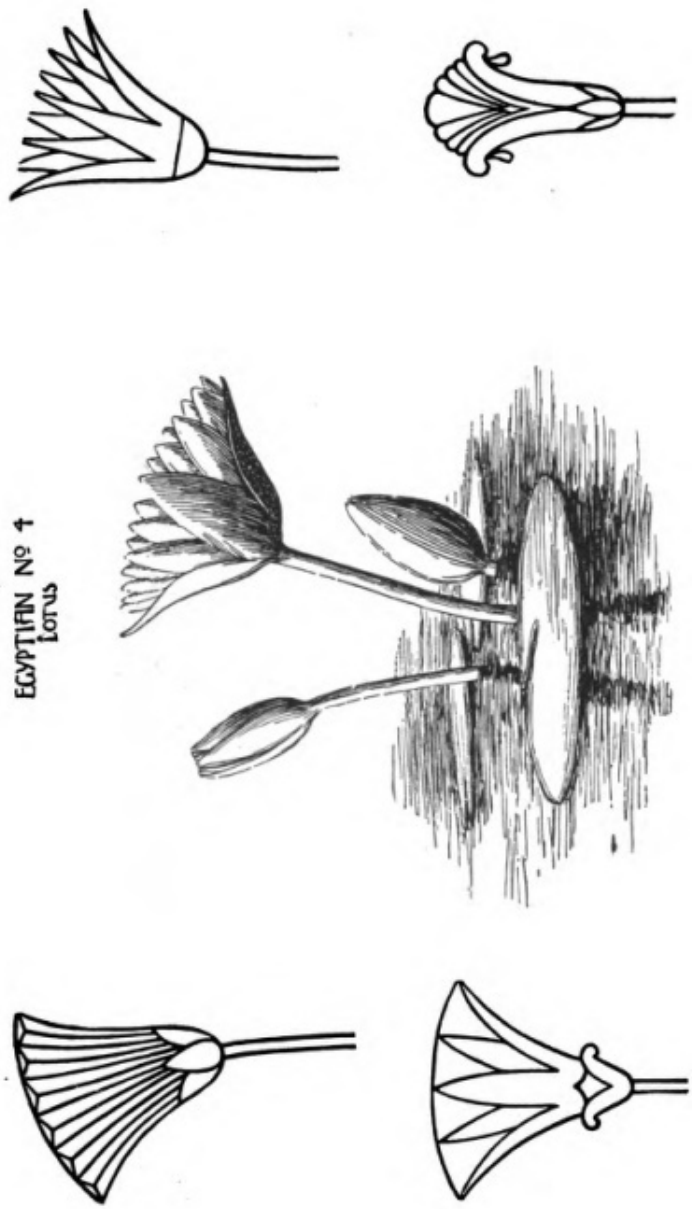



Fig. 38.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

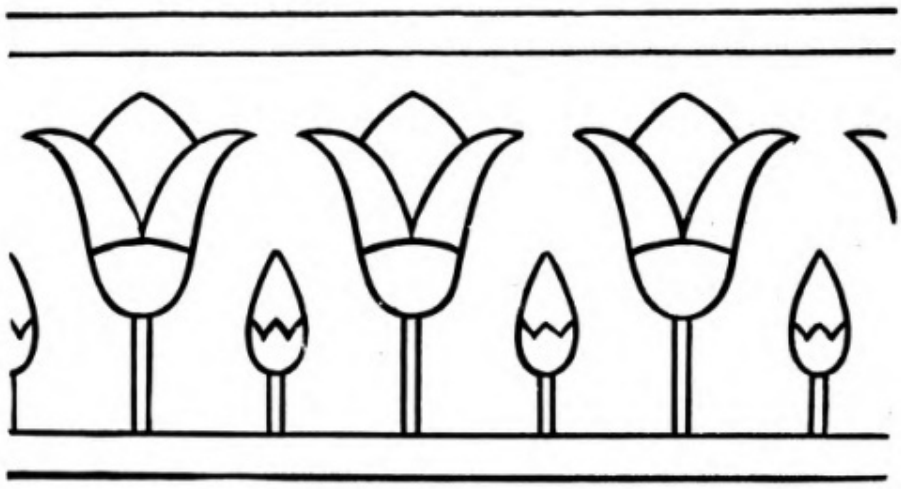


Fig. 39.

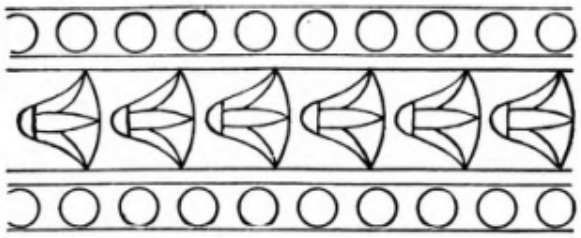


Fig. 41.

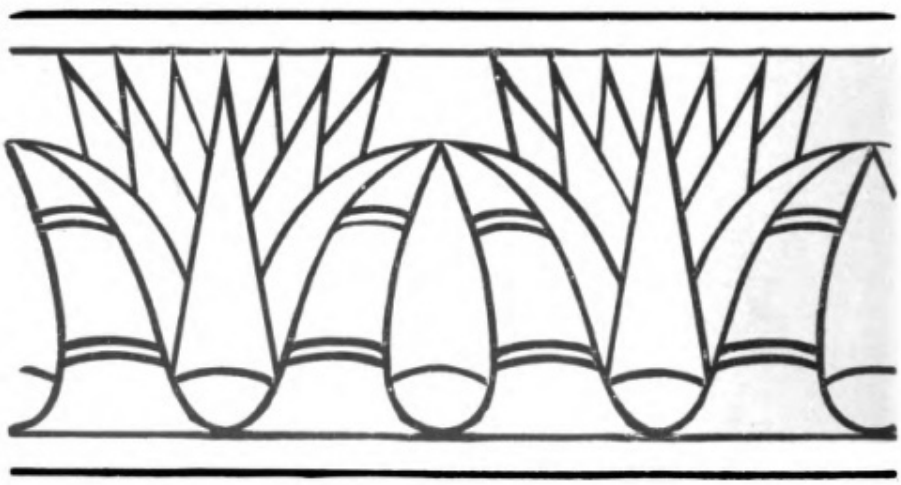


Fig. 40.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

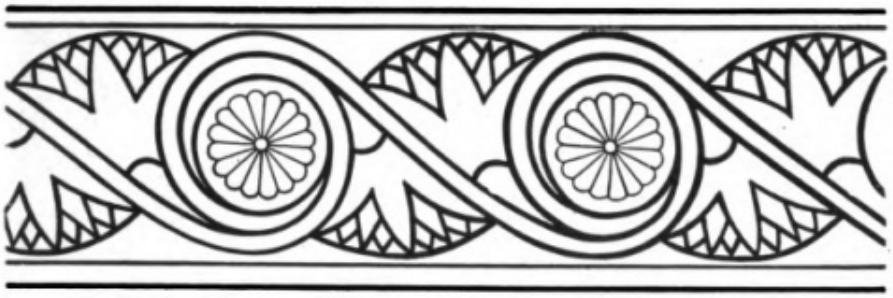


Fig. 43.

very interesting to a class of any age and will lead to a sympathetic understanding of Egyptian picture writing.

After a talk with the class about this style of ornament, let each pupil make a sheet of labelled sketches of these interesting symbols, as shown in Fig. 47. The lotus is the predominant element of Egyptian ornament; have it drawn many times, singly and as illustrated in borders, on paper and at the board; then reproduce some of these forms from memory. The class ought to know how to *draw* the lotus, and how to *spell* it. Fig. 48 gives the steps in drawing the most difficult border.

While these lessons on the drawing of the ornament are being given, the pupils may be collecting illustrations of Egyptian art, which may later be mounted as in Fig. 49.

Analyze in class the surface patterns to ascertain what elements are combined to make the units. Let each pupil select one surface design and carefully draw it. The methods of drawing one unit and of spacing off the entire surface are shown in Fig. 50. When one unit is completed it may be traced and transferred to the remaining squares, and then the whole inked, or colored if the teacher has an illustration of the original coloring. Label this sheet, Egyptian Lotus Ornament.

For additional general suggestions see Chapter V.

Summary:

1. Talk on the ancient Egyptians and their art, including pyramids, age, size, purpose; religion, peculiarities of; temples; sphinx; obelisks; picture writing, comparison with



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

EGYPTIAN: No 6

TOP VIEW OF LOTUS AND EGYPTIAN ROSETTES

Fig. 42.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

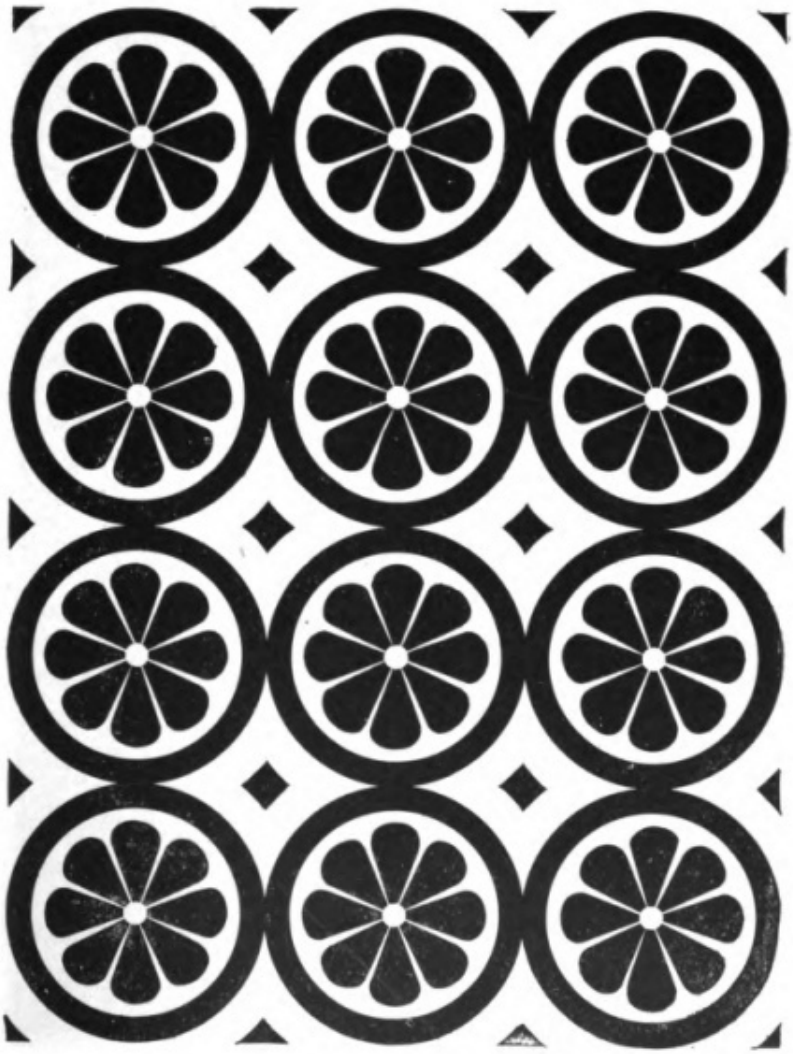


Fig. 44—Lotus Surface Pattern.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

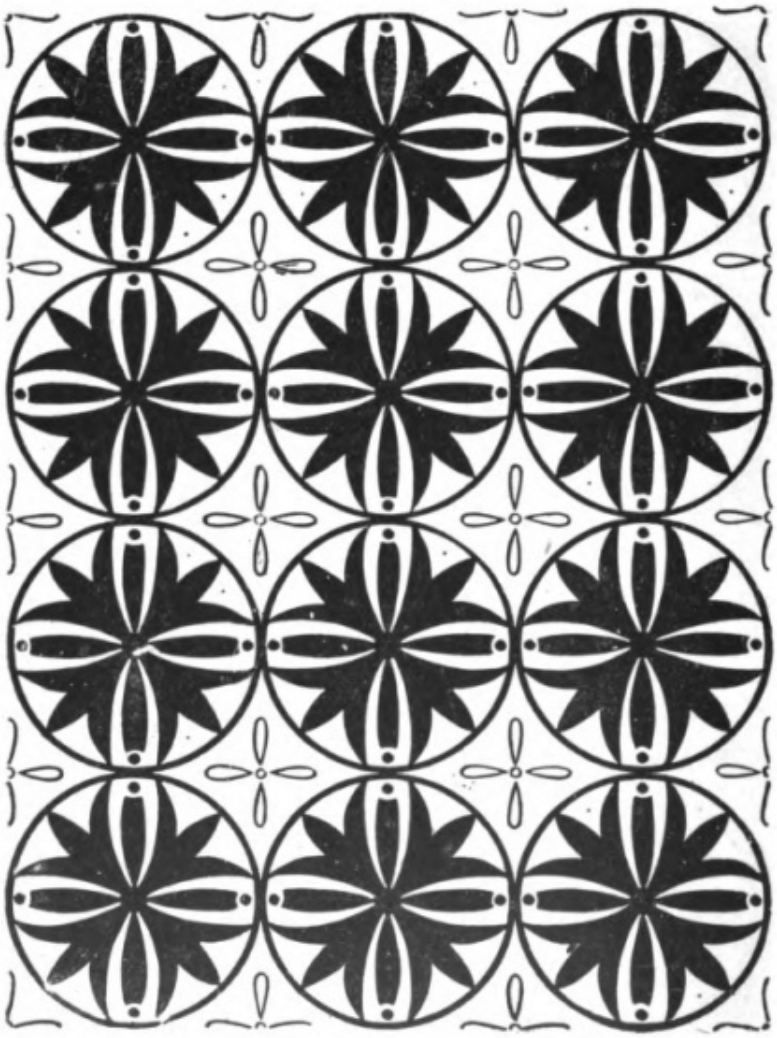


Fig. 45—Lotus Surface Pattern.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

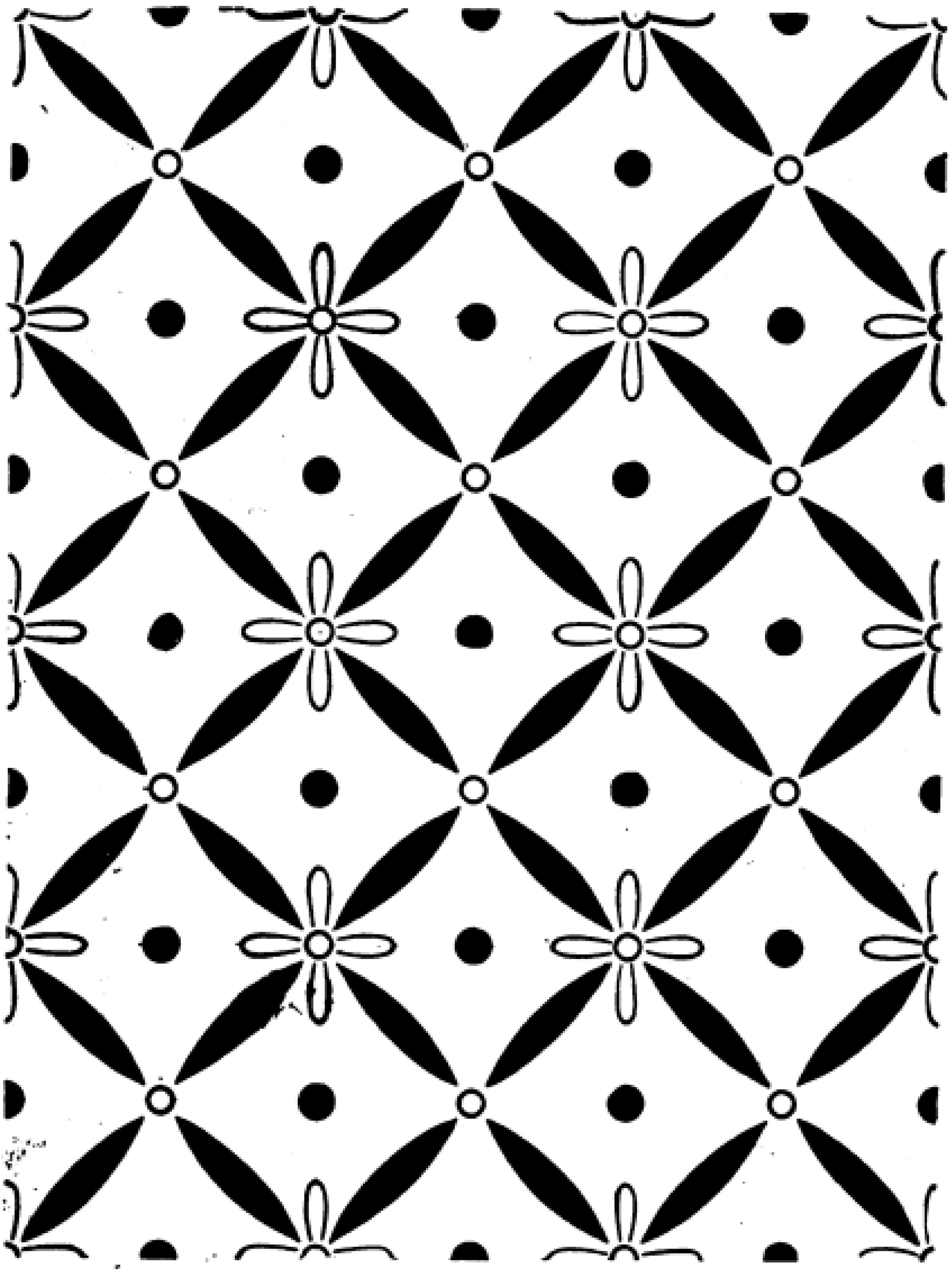


Fig. 46—Lotus Surface Pattern.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

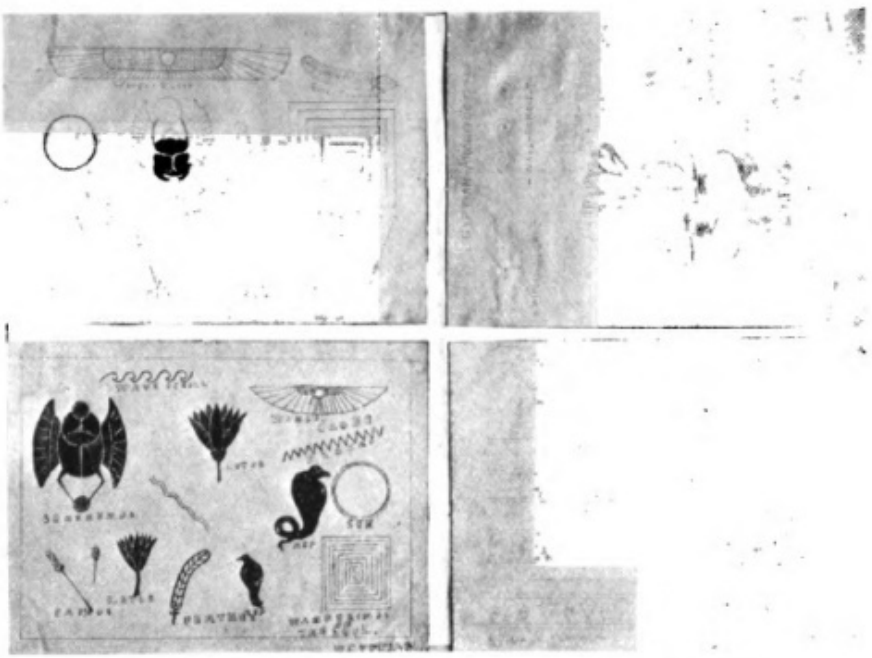


Fig. 49—Collected Illustrations of Egyptian Ornament.

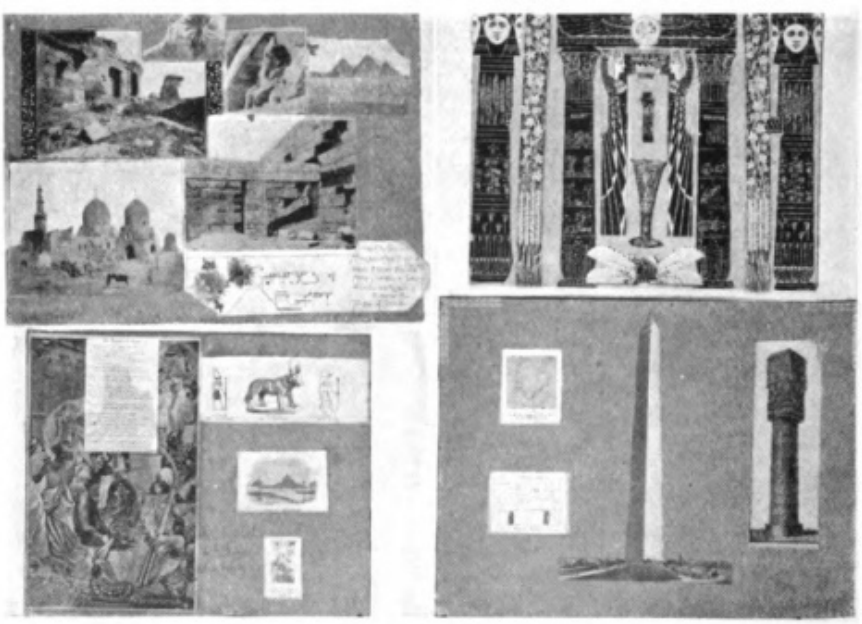


Fig. 47—Pupils' Sketches of Egyptian Ornament.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

child's; symbols and their meaning; the lotus, how drawn and employed in design.

2. Sheet of sketches with symbols labelled.

3. Mounting illustrations brought in.

4. Analysis and careful drawing of one Egyptian surface pattern.

EGYPTIAN ARCHITECTURE: Pyramids, 4000 B. C. Sphinx and Sphinx temple. Temples (dating from about 1200 B. C.): Karnak, Luxor, Medinet Abou, Abydos, Ipsamboul, Philae, Denderah, Edfou. Tombs: Beni Hassan. Colossal statues and obelisks.

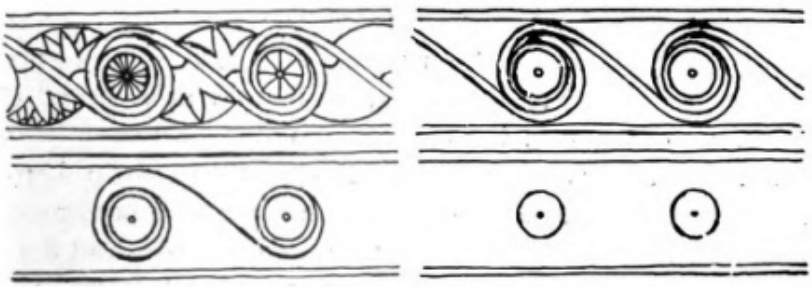


Fig. 48.

Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER VII.

## GREEK.—650–100 B. C.

"And nobly plain, the manly Doric rose;
The Ionic then, with decent matron grace,
Her airy pillar heaved; luxuriant last,
The rich Corinthian spread her wanton wreath."
—*Thompson.*

THE records state that as early as 1500 B. C. various settlements had been made in what is now known as the peninsular of Greece. We shall consider but one of these settlements, that at Athens. The first Athenians settled on a large rocky elevation, which can be seen in the distance (Fig. 51), probably selecting this site as a protection from neighboring tribes. Later, this rock, the Acropolis, became the King's residence and legend and history assert that the common people dwelt in caves hewn out of the hillsides near by. In times of peril all were assembled on the Acropolis. As Athens increased in size, the Acropolis became the site of the city treasury and temples of the gods, and about 450 B.C. the most beautiful buildings in all the history of the world were located upon it. This period in Greek history is often called "The golden age of Pericles," in honor of the leading contemporary statesman.

The Greek schools were conducted in the open air. Gymnastic games, singing patriotic verses and reciting stories of Greek heroes (the same stories that our high-school students read in their Greek lessons) formed the daily program. This schooling and its schoolhouse evolved an extraordinary regard for things beautiful. To such an extent was physical beauty worshiped that prizes were given in competition to the handsomest men and women; in some parts of Greece, all the weak or deformed children were killed, only the strong and



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 51—Temple of Jupiter.

healthy were thought worthy to live. The games of the schoolboys culminated in the great Greek athletic contests.

The boys and girls in the higher grades, being interested in field sports may remember that the best athletes in this country were sent to Greece in the spring of 1896 to take part in the revival of the contests held there over two thousand years ago. We know of the excitement occasioned here by intercollegiate football and rowing matches and other trials of skill and strength, but it is only a drop compared with the interest aroused by the ancient games in Greece. Messengers were despatched all over the known world to procure the best athletes of all nations. One writer states that if we were to combine the enthusiasm of a camp-meeting, cattle show, political rally, college games and a circus, we should not have the excitement of the Pan-Athenian games. They were held once in four years. The victor in modern games receives a badge or a medal and a newspaper notice. The winner in the ancient games was almost an object of adoration. Walls of cities were torn down that he might not enter the city gates in common with others. He was bribed to change his birthplace that some city or town might be thus honored. Enormous sums were paid him as a model to pose for artists. The Greek runner would race six hun-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

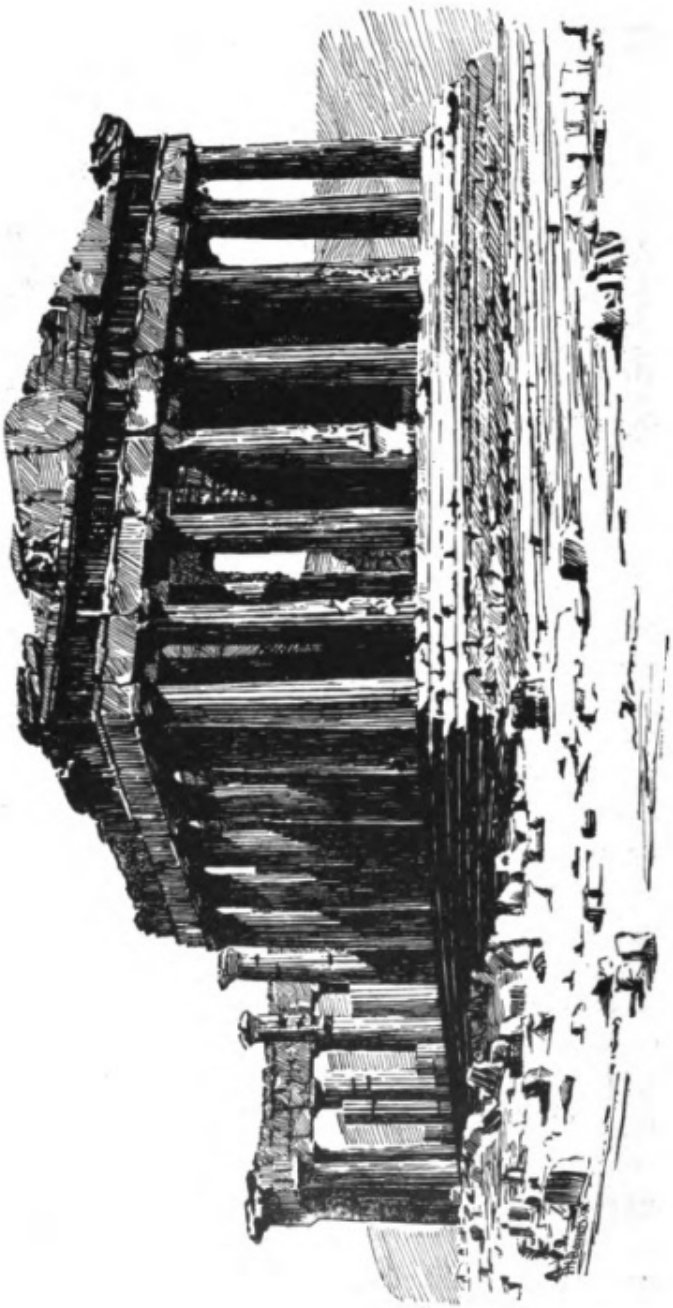


Fig. 52—Parthenon.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

dred feet and catch a hare. He could jump fifty-five feet. (This probably means a hop, step and a jump, the modern record in this sport being fifty feet and one-half inch.) The contestants were trained from childhood, and must have been magnificent specimens of physical development. The games called for grace, quickness and skill rather than brute strength, and were an expression of the Greek taste. Later under the rude and warlike Romans the games degenerated into brutal and blood-thirsty exhibitions.

The contests lasted several days and were held as a part of the celebration due the goddess Athena. As a finale, a procession composed of the rulers, priests, attendants and citizens and headed by the victorious athletes marched to the top of the Acropolis, where the concluding exercises were held in or on the porch of the largest temple, the Parthenon (Fig. 52). Inside this building was a gold and ivory statue of the goddess forty feet in height. Athena, or Minerva, was at first considered a representation of the clear, bright upper regions of the sky; then an embodiment of high intellectual powers; later, as a goddess of war, and she was usually represented with a helmet and spear; and lastly she was regarded as a symbol of high intelligence in all the arts and sciences. The myth says she sprang from the brain of the all-wise Zeus, and that he had the day before swallowed Metis (intelligence), his wife.

The interiors of Greek temples were considered as places for the gods themselves and their statues and not for worshipers, thus differing essentially from the modern church. While it is true that the best Greek architecture was always embodied in the temples consecrated to the gods, Grecian art rejoiced in the freedom from religious laws which in Egypt bound the artist to a mechanical repetition. Greece was plentifully supplied with quarries of white marble and other stones, and the temples were built with beautiful exteriors, that they might add to the joy of the national out-of-door life.

The Parthenon was 220 feet long and 100 feet wide. As can be seen in the plan (Fig. 53) it contained but two rooms; the smaller was used as the city treasury; the larger contained the statue of Athena, which was placed upon a pedes-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

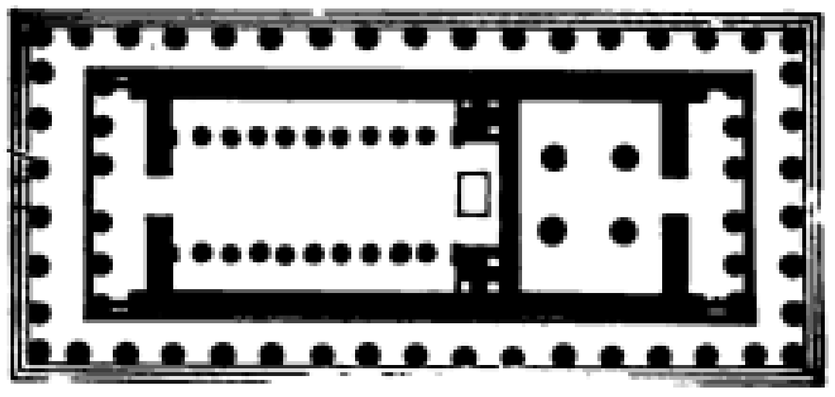


Fig. 53—Plan of Parthenon.

tal, indicated by the rectangle opposite the entrance. The whole structure was built of white marble, and was completed in 438 B. C. Ictinus was the architect and Phidias the sculptor. (Plutarch says Pericles made Phidias general superintendent of all the artistic work done in the state.)

The three styles of architecture employed in ancient Greece are distinguished by the capitals and columns used. The Parthenon was built in the earliest style, the Doric. Vitruvius, an ancient Roman historian states that the Doric column (Fig. 54) was suggested by the figure of a man, being about six diameters high; the average man is about six times the length of his foot. The flutes in the column he explains as suggested by the drapery in the flowing Greek dress. (The claims of Vitruvius regarding the origin of the three Greek styles of architecture are not substantiated by facts, but will, perhaps, serve better than the statements of other authors to interest the pupils in differentiating each capital from the others.)

The early Doric capitals, constructed long before the Parthenon, have the top-heavy, flattened-out appearance illustrated in Fig. 55, where the outside edges of the curved part seem to be in danger of breaking off; a few hundred years after the time of Pericles this same part of the capital was made too straight and stiff (Fig. 56). Again, the early Doric columns were but four to five (lower) diameters high, and the very late productions were too slender for the capital, being six and seven diameters in height.

In the construction of the Parthenon, we find a wonderful understanding of beauty. Some time ago the Turks used this building as a powder-house, and an explosion wrecked about half of it, but enough remains in place to convey an idea of its original glory, and to enable us to study some of its features in detail.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

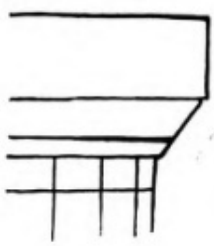


Fig. 56.

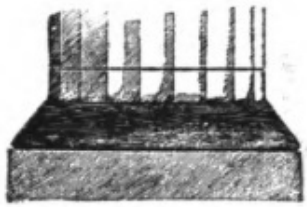


Fig. 54.

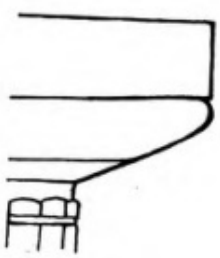


Fig. 55.

One writer has used as a text, "Nature is the source of all that is possible in art," and he has presented us with some very interesting conclusions regarding the natural, the arm or leg, and the artificial column. In brief, he states:

1. The natural column has roundness; so has the artificial.

2. The natural columns vary in length from four to six diameters in animals noted for power and majesty. The Doric column is five and a half or six diameters high.

3. The diameter of the natural column diminishes as it approaches the wrist or ankle; true in the artificial column.

4. This diminution is not in straight lines but involves curves which vary in different animals:—decidedly curved in the human figure, little in the elephant. The artificial column seems to be a happy medium, not an imitation of any one natural form.

5. The natural capital is the hand or paw, generally on one side for convenience of locomotion. The artificial column stands still so the capital is the same all around.

6. Every hand or paw has certain common characteristics in outline when applied against a flat surface; first, concave, then slightly convex terminating by an abrupt convex curve to the surface against which it is placed.

He says further, that "all six of these ideas are embodied in that wonderful specimen of generalized imitation, the original Doric column; that form on which no subsequent efforts have been able to effect any improvement in fitness of expression to its particular purpose; that form which when first seen, so throws into the shade everything else that we have seen applied to the same purpose, that it seems too perfect for human invention."



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

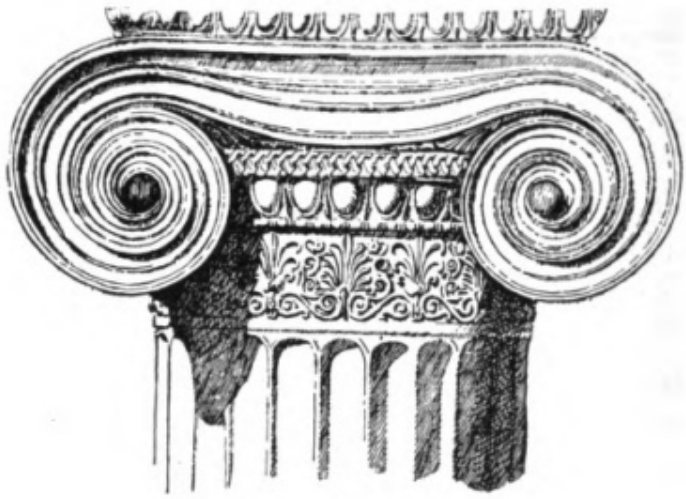


Fig. 57.

The columns tapered from the bottom to the top, curving outward three-fourths of an inch in the thirty-four feet of their height. They are not vertical but slanted toward the cella, the principal room in the building, at so slight an angle that if they were continued upward they would meet at a point over a mile above the base.

The long line of the base of the Parthenon is two and one-half inches higher in the middle than at the ends. The roof was the same number of inches lower in the centre of the sides. Various reasons are given for this deviation from a straight line in the columns and other parts of the temple. It may have been with a view to increasing the apparent size through correcting perspective effects. (An explanation of this statement would involve problems too complicated for public-school pupils to comprehend.) The slight swelling in the middle of the platform and column would suggest elastic resistance. Perhaps it was merely an expression of the Greek distaste for straight lines. Whatever the reasons for these subtle proportions and curves may be, it is certain that the Parthenon in its original form was a creation not to be criticized by modern architects.

In our study of Egyptian architecture we found only flat roofs. The Greek temples had sloping roofs which added a new feature, the pediment, to the world's architecture. The pediment is the triangular portion extending along either



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 59—The Erechtheum.

end of the temple just under the roof (Fig. 52). On the western pediment of the Parthenon was a carved representation of the strife between Athena and Posidon (Neptune) for the land of Attica (Southern Greece). The eastern pediment contained an illustration of another Greek myth, the birth of Athena, the scene representing the goddess just after she has come forth from the brain of Zues.

The second style of Greek column is the Ionic (Fig. 57). Vitruvius claims that this column was suggested by the figure of a woman. It is from eight and a half to nine and a half diameters in height, which Vitruvius says represents the slenderer figure of a woman. The scrolls at the sides of the capital may have represented hair, and the decorations between them, a necklace. The Ionic column has twenty-four flutes, typifying, as in the Doric, the Greek dress, allowing for four more folds in the woman's dress. Vitruvius thought the base represented sandals.

The Ionic capital, very different from the Doric, is an equally beautiful composition. The spirals are seen first, spirals so beautifully chiseled that they cannot be drawn by any mechanical means. Note how the curves between and connecting the spirals offer contrast and break the otherwise monotonous repetition of horizontal lines. The rhythm in the height of the horizontal bands, beginning with the an-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

themon border below and proceeding through the astragal, the egg and dart, guilloche and the bands of the slight curves above, is quiet and unobtrusive, yet how much more beautiful than a mechanical repetition of ornament of equal heights. See the variety in the forms of ornament employed, how each by its different character of line and arrangement adds to the beauty of its neighbor. And best of all, the spirals in their beautiful simplicity retain their place as the dominant feature, the decoration holds its place as a support and de-

GREEK · Nº. 3 CORINTHIAN

Fig. 60.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

lights the eye through its contrast in line and mass, and both combined form a harmonious whole, a perfect unit.

This style of column was used on a small three-room temple called the Erechtheum (named from Erechtheus, an early Athenian king), also situated on the Acropolis. In the distance at the left in Fig. 59 may be seen one of the Ionic columns. The construction of this temple seems to violate the usual Greek method of building—nearly all temples being constructed somewhat as was the Parthenon—but it is really three temples in one. On the right side may be seen the Carytid porch, often called the Porch of the Maidens.

The remaining style, the Corinthian (Fig. 60) Vitruvius explains as developed by an architect who saw a basket of flowers on the grave of a Corinthian maiden, while around the gravestone grew the acanthus. The acanthus is a plant common in Southern Europe, having deep-cut shining leaves. An idea of its growth may be obtained from the lower half of the Corinthian capital. It was seldom used by the Greeks in decoration, but later under the Romans it was very freely employed. By giving the imagination free play one can imagine that in Fig. 60 the decoration represents plants growing around a stone. Vitruvius further states that the Corinthian order may be understood "to represent the delicacy of a young girl, whose age renders her figure more pleasing and more susceptible of ornaments which may enhance her natural beauty." The column was about ten diameters in height. This capital cannot be classed with the other two in point of beauty. Its upper and lower halves are not distinctly one growth. The two halves are almost unrelated as can be proved by putting a piece of paper over either—each is complete in itself (although not well proportioned as individual capitals) and does not require the other. In line with the thought, "the beauty of simplicity far exceeds the mock beauty of gaudy, showy ornamentation," the Greeks seldom employed this capital. The only perfect illustration of a Greek Corinthian capital that has been found is in the choragic monument of Lysicrates. In the foreground of Fig. 51 may be seen an illustration of the Roman Corinthian columns, which were an outgrowth of the Greek order.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 61—Horsemen From Frieze of the Parthenon.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

The gymnastic training had a great influence upon sculpture, and such names as Phidias, Praxiteles and Lysippus are well known to-day. Not one whole Greek statue or relief has ever been found. Casts of these old broken statues are sold in all civilized countries, and are used as models in modern art schools. Artists and anatomists are unable to find any flaw in them. The Greek physical ideal was not expressed in such an extraordinary development of muscles that the subject appears weighed down by its own strength. Their athletic training aimed to secure agility, symmetry, buoyancy and grace of form, a body which might have com-

Fig. 62—Metope, from the Parthenon.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

plete command of itself, and this is the impression we get from the Greek statue, be it of the male or female figure.

The top of the *outside* of the cella wall contained a carved representation of the Pan-Athenian procession. This panorama was about three and one-half feet high and over five hundred feet long. About half of it was found in the ruins and sold to Lord Elgin, an Englishman, for thirty thousand pounds. These fragments, now in the British Museum and known as the Elgin marbles, form the most valuable collection of marbles in the world. Fig. 61 gives a view of that part of the frieze which was composed of Athenian youths riding on spirited horses.

On the outside of the Parthenon, just below the roof, on the sides and the pediment in front, was a repetition of squares (metopes), in which were reliefs of various myths connected with Greek history. Fig. 62 pictures one of these, a contest between a Lapith and a Centaur, emblematic of mankind and a mischievous monster, or of the conflict between the Greeks and the Persians.

Among the Elgin marbles in the British Museum may be found the three figures illustrated in Fig. 63. They were taken from the eastern pediment of the Parthenon and are generally called The Three Fates. Many artists consider this the finest group of Greek figures that has ever been found.

The Winged Victory (Fig. 64), was modeled on a base resembling the prow of a ship. We note how well the sculptor has carried out the idea of forward motion in the pose of the figure and the arrangement of the drapery, which seems to be blown backward. In this statue and The Three Fates, and in fact all Greek statues, despite the fact that heads and arms or other parts of the figure are missing, the bodies seem to be full of vitality and we almost expect to see them move.

The Greeks rarely portrayed physical suffering in their statues, as they discouraged any art expression other than the pleasurable and the beautiful. Whatever the attitude of the statue the face exhibits the same calm peaceful expression indicative of a well-balanced contented mind. The Venus de Milo (so called from the island of Melos, where it was found at the beginning of the nineteenth century) and the Hermes (Mercury) give us typical Greek heads. (Figs. 65 and 66.)



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 63—The Fates. From the Pediment of the Parthenon.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 64—Victory of Samothrace, Louvre, Paris.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 65—Venus De Milo, Louvre.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Fig. 66—Hermes. By Praxiteles.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

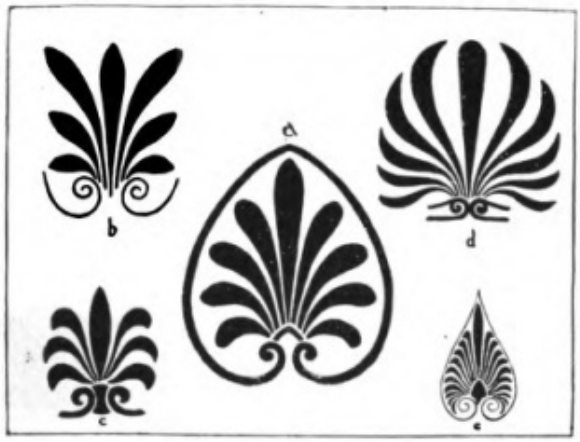



Fig. 67.

## Ornament.

The most notable feature of Greek ornament was the anthemion (Fig. 67), often called the "honeysuckle ornament" from the fact that some authorities consider it to be a conventionalized representation of the honeysuckle blossom. (Fig. 68.) Others say that it is but the natural result of using a brush to design a simple pattern of brush strokes to fill such a form as an oval or an ellipse, and that it was not suggested by any one flower. Let us examine *a*, Fig. 67, for a moment. The enclosing form is an oval—the most beautiful of the simple geometric figures—which terminates in spirals, "infinite" curves. (See page 34.) Although no straight lines (which generally indicate strength) are used *strength* and *firmness* are evident in the way the lobes or petals are arranged and bound together at the *growing point* near the spirals. The lobes *radiate* from the growing point; there is *rhythm* in their varied size, the accent being in the middle lobe; the design expresses perfect *repose* in that it is well *balanced;* and *conformity* to the *enclosing form* is shown in the termination of the lobes at the right distance from the oval outline. The grace and beauty of simple curves are obvious in their *bilateral* or *symmetrical* arrangement. Each and every element in the design adds to the beauty of and is necessary for the completed whole, hence there is *unity* in the formation and arrangement of its parts.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

This form *a* in Fig. 67 was varied in many ways as illustrated in *b*, *c*, *d* and *e*, and in Figs. 69 and 70. It was cut in marble (Fig. 71) and painted on everything from public buildings to toys. A stone or metal anthemion was used as a crowning glory on the wonderful Parthenon; one was placed on the roof at either end over the highest angle of the pediment. Figure 72 shows us an illustration of one of the beautiful Greek vases, on which the anthemion forms the decoration. Vases were made of all sizes and used for numerous purposes ranging from medicine receptacles and cologne bottles to coffins and cellars. Diogenes is said to have lived in one of these large vases.

In Figs. 73–76 we have Greek borders in which the anthemion was employed as the unit of design. In each ob-

Fig. 68.

serve how the anthemion is varied to conform to the enclosing outline,—the oblong in Fig. 73, the oval in Fig. 74 (and note how the Greek lily, as it is called, fits in the space between the ovals in this border), the triangle in Fig. 75, and the ellipse in Fig. 76, while in each of these borders all the principles of design mentioned above as found in the anthemion are retained.

A few other characteristic Greek patterns may be mentioned. The *frets*, or *meanders* (Fig. 77) may be recognized as having their origin in the old Egyptian fret, *h* in Fig. 36. The *egg and dart* molding is slightly suggestive of the Egyptian lotus and bud border (Fig. 40). Others say it is a conventional picture of one row of leaves showing points between another row. The *guilloche* is a form of meander with the corners rounded, and reminds us of the Nile wave scroll,



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 69—Anthemion Forms.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 70.—Anthemion Forms.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 71—Molding from Erechtheum.

*j* in Fig 36. Undoubtedly the Greeks obtained many ideas of decoration from the Egyptians. One authority claims the anthemion is a development of the old lotus patterns. Compare Figs. 38 and 67.

Greek pediments, columns, capitals, sculpture and ornament are by no means strangers to American boys and girls. Illustrations of all these elements may be found in every city. No other school of architecture and ornament has been so much copied or has had such an influence on all subsequent art creations.

"It is vain to tell us that other epochs and other nations are better entitled to our attention and consideration, for the lips that have once drunk from Attic fountains of the pure waters of their inspiration will not suffer themselves to be weaned from the country and the era of their choice by any meaner spell. . . . . Her olive groves and flowering hills appear ever green to the imagination. The lapse of centuries has only cast a brighter, though more mellow, hue over the shrines and glories of the queen of cities; everything connected with her is pregnant with sweet and imperishable associations. At the mere mention of her streets, her porticoes, her temples, her theatres, or her ports, a hundred cherished fancies wake from slumber, and the voices of the departed sound familiarly in our ears. The Athens of



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Pericles rises from the grave. . . . . We gaze around and say, here stood the Parthenon, the wonderment of art to all succeeding ages; here rose the Propylaea, the splendid entrance to the venerated Acropolis, which modern skill has endeavored to imitate, but has not hoped to equal. . . . . The Athenian himself was so filled with the consciousness of her loveliness, that her name never rose to his lips unless accompanied by some term of endearment. There is no one acquainted with the Greek poets, or even with the historians, who can help being struck with the exuberance of their affection toward Athens. Every epithet which can convey the idea of loveliness or splendor is lavished upon 'the violet-crowned city.'"

## Teaching Greek Ornament.

1. An interesting introduction to a talk on Greek art may be found in the reference to the Olympic games. When the teacher is familiar with the preceding subject-matter a few headings like the following may be helpful:

*Greek Art:* 1. Athletic Games. 2. Early Athenians.

Fig. 72.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

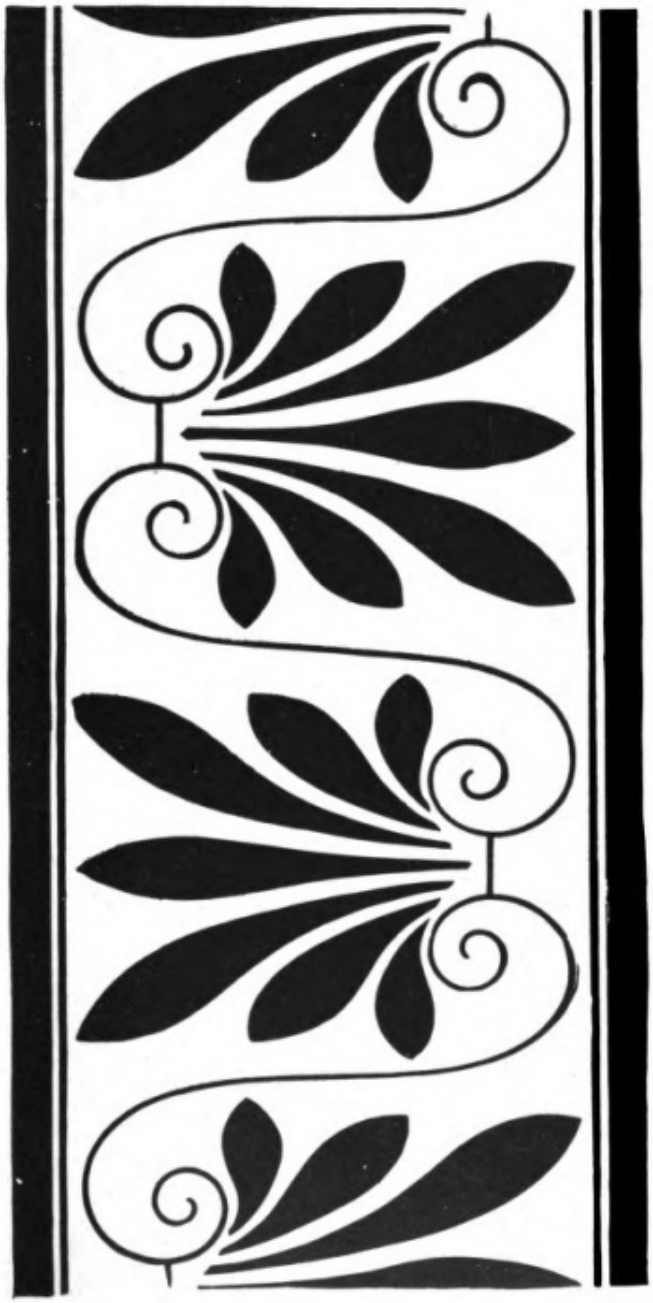


Fig. 73—Anthemion Border.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 74.

Fig. 75.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Fig. 76.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

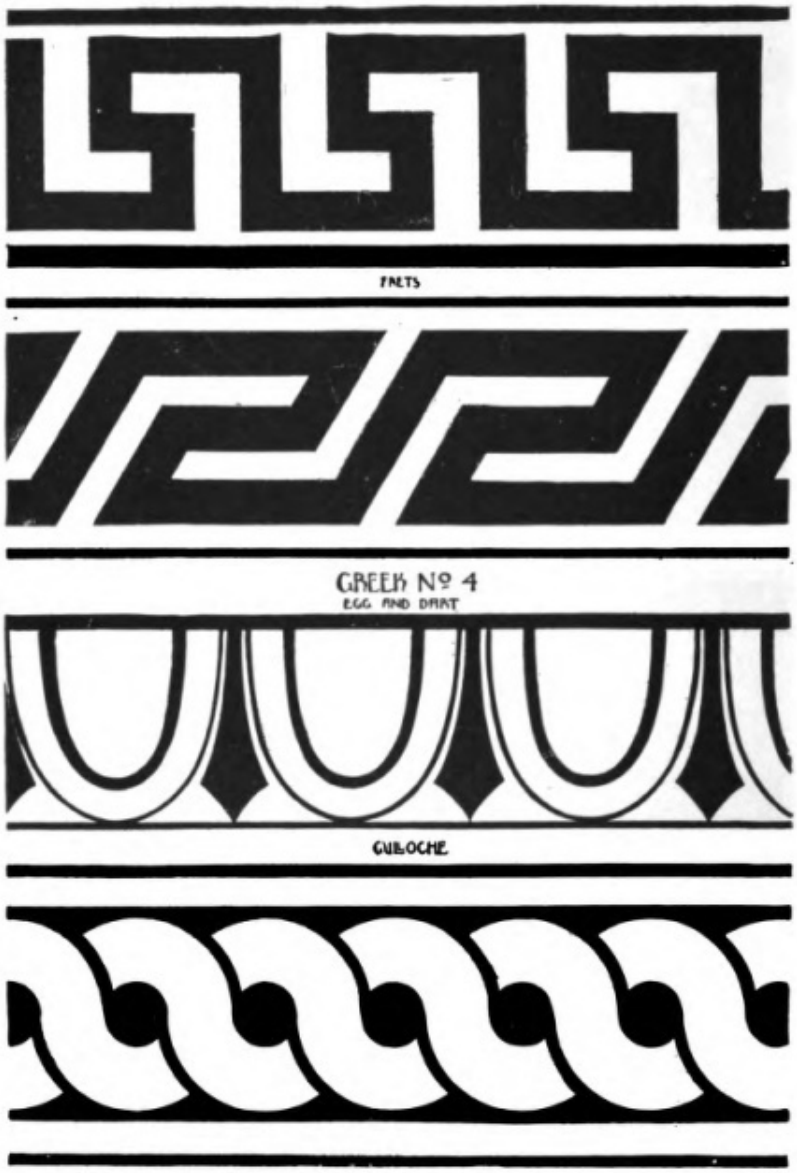



Fig. 77.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

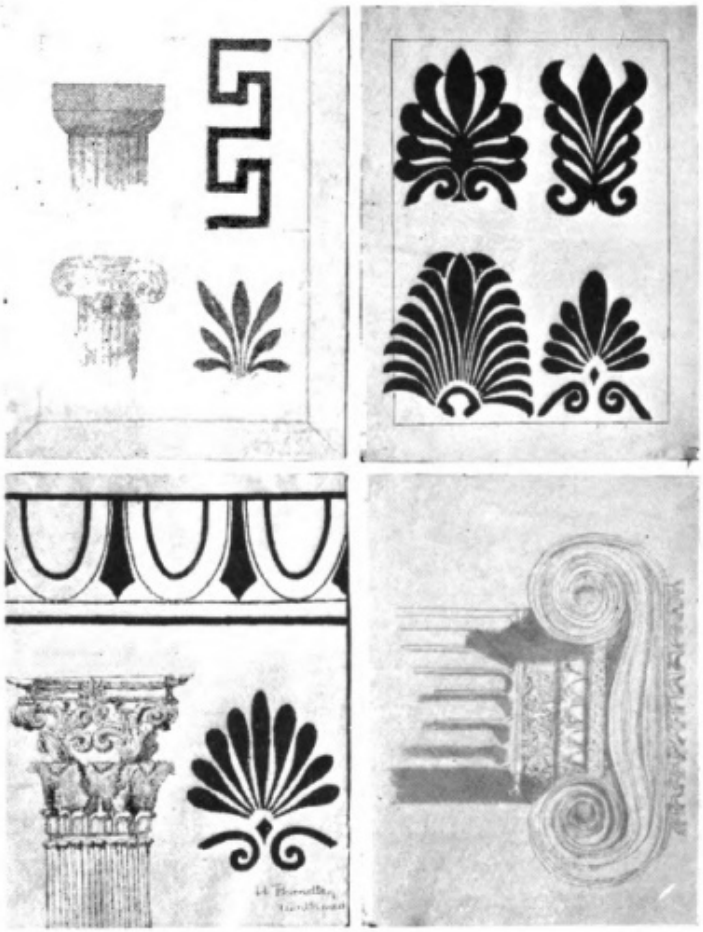


Fig 78—Pupils' Sketches of Greek Ornament.

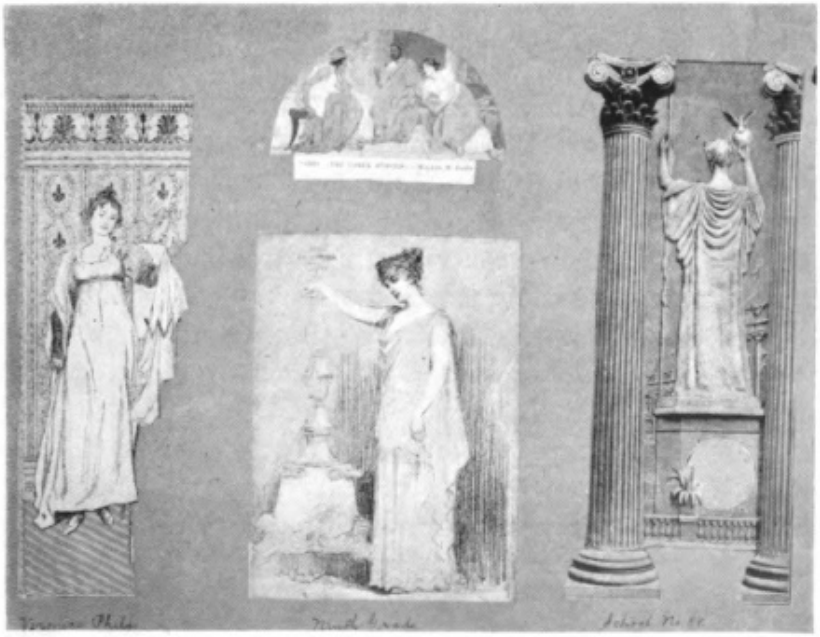


Fig. 79—Collected Illustrations of Greek Ornament.

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

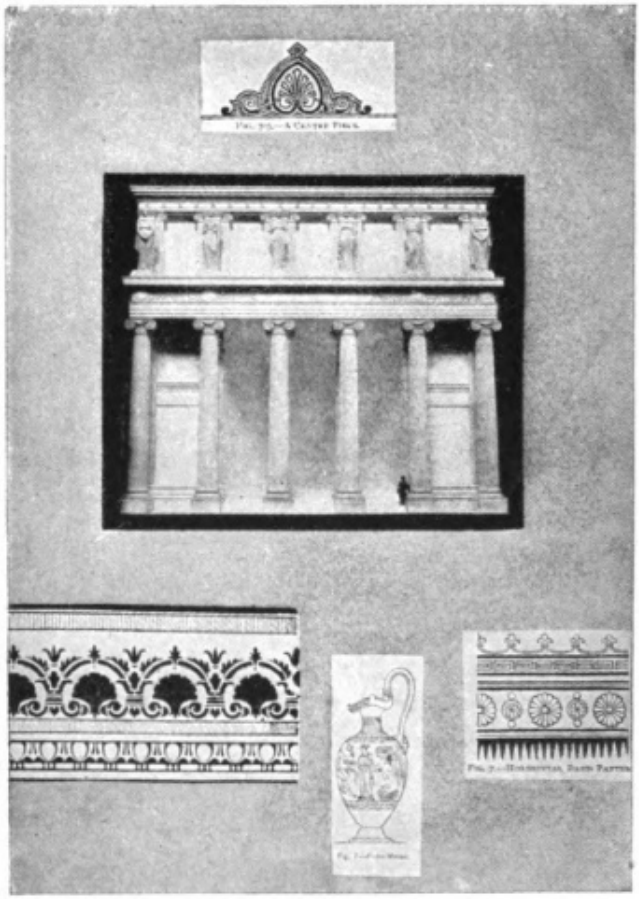


Fig. 79—Collected Illustrations of Greek Ornament.

3. Temples. 4. Athena and Parthenon. 5. Doric Style. 6. Pediment, new feature in architecture. 7. Ionic. 8. Corinthian. 9. Sculpture, Elgin marbles. 10. Ornament, anthemion, how used. 11. Frets, egg and dart, and guilloche. 12. Influence on later architecture and ornament.

This list includes the most important facts found in the first part of this chapter, and may safely be used as a basis for work. Additional general suggestions for teaching may be found in Chapter V.

2. Have each pupil make a sheet of sketches of Greek capitals, anthemions, etc. (Fig. 78.) Have the anthemion forms (Figs. 69 to 76) copied many times, using single brush strokes to make the lobes. Then encourage the making of original variations of these forms.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

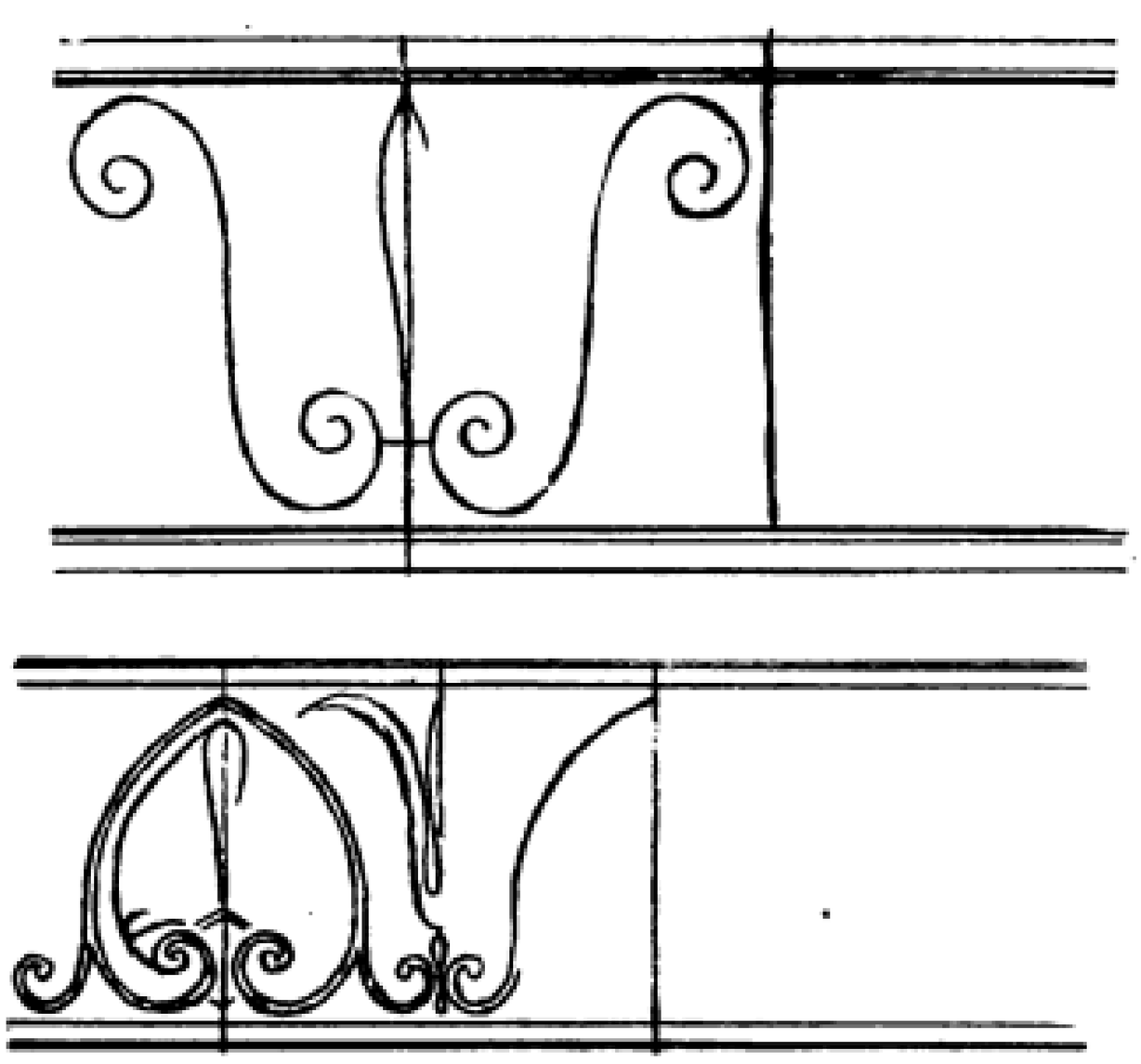


Fig. 80.



148353

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

3. Ask pupils to cite examples of Greek architectural and ornamental forms employed in city buildings. Each pupil may make a sheet of collected illustrations of Greek art ideas, or the class may combine their clippings and mount upon a large paper. (Fig. 79.)

4. Careful drawing of one Greek anthemion border. (Figs. 73–76.) Allow individual pupils to choose which border they will draw.

The method of drawing these borders is illustrated in Fig. 80. In each seek the large general forms and draw these first, then add details. After one of the units is completed it may be traced and thus repeated in the remaining spaces, or, if the teacher prefers, all may be drawn free-hand without using the tracing paper. Label the sheet, "Greek Anthemion Border."

### Greek Architecture.

Temples at Corinth (650 B. C.); Pæstum (610 B. C.); Castor and Pollux (480 B. C.) at Agrigentum; Nike Apteros (466 B. C.) at Athens; Athena (450 B. C.) on island of Ægina; Zeus (450 B. C.) at Olimpia; Theseus (450 B. C.) at Athens; Parthenon (438 B. C.); Propylæa (438 B. C.), and Erechtheum (408 B. C ) at Athens; Apollo Epicurius (430 B. C.) at Phigalæa; Zeus (400 B. C.) at Nemea; Dionysus (330 B. C.) at Teos; Monument of Lysicrates (330 B. C.) at Athens; Olimpian Zeus (170 B. C.); theatres in various places.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER VIII.

## ROMAN—100 B. C -300 A. D.

IMAGINARY to imagine a large enclosed park, about one quarter of a mile square, containing pleasure gardens, athletic grounds with a race-course and gymnasium, and on one side a building 730 ft. by 380 ft. which was nearly all roofed over. Think of this building as containing lounging and reading-rooms, libraries, art galleries decorated with such statues as the Laocoon, the Farnese Bull, and the Gladiators, and equipped with beautiful marble baths capable of entertaining thirty-five hundred bathers at one time. Picture the grounds and buildings as replete with every possible decoration and animate with human interest—groups of nobles clad in robes of rich coloring, attended by scores of slaves. Let the reader image such a scene as here described, and he will have a true idea of one characteristic feature of ancient Rome, the luxurious baths, the use of which was a part of the daily program of the Roman noble. Who were the people that lived in such sumptuousness? For several hundred years before and after the birth of Christ the whole known world was ruled by them. Rome, "the eternal city," was the capital of a nation of tremendous strength. Her armies were everywhere victorious; her accumulated wealth was immense; her political methods and statecraft have ever been the admiration of the world.

Among other spoils of war brought to Rome were many Greek works of art. This created a demand for architecture and ornament. The Roman life was not conducive to the training of artists, hence it was necessary to import Greek artists to carry out the wishes of the Roman populace; almost every work of art produced in Rome was planned by



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

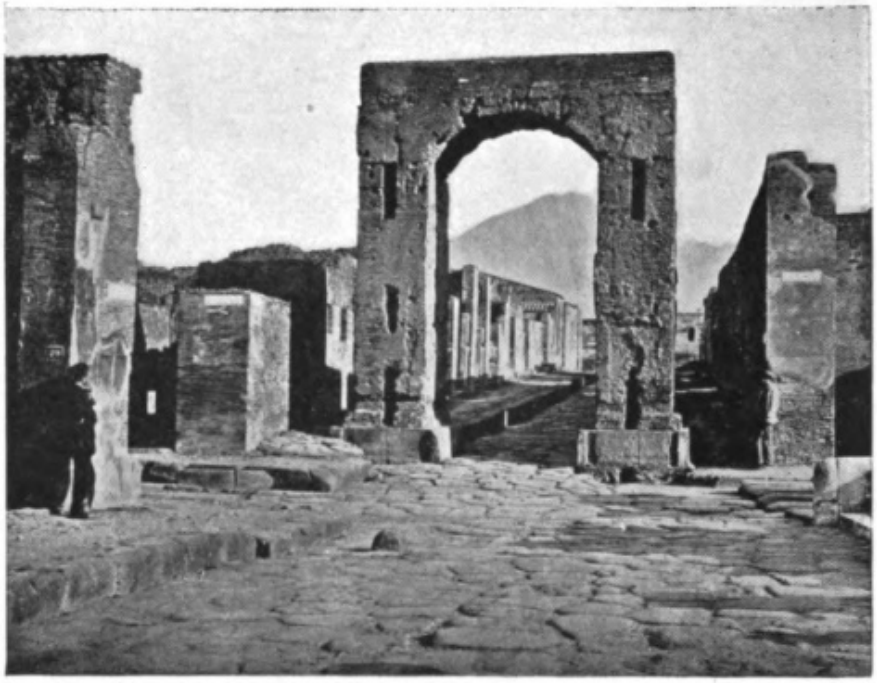


Fig. 81—Street in Pompeii.

these Greco-Roman citizens. Their efforts have been called Roman, because the trade-mark of the Romans, utility combined with lavish display, was noticeable upon all the buildings, not only of Rome, but of many in other parts of Italy, Sicily, Asia Minor, Syria, Africa, France and Britain. All the art productions of these conquered countries lost their nationality and became Romanized.

The Egyptians built temples and tombs. The Greeks constructed temples and theatres. But the Romans were essentially practical and their architecture must be useful as well as ornamental. Whatever would serve to consolidate power, not art, interested them. Thus we find theatres, amphitheatres, baths, basilicas, palaces, tombs, arches of triumph, pillars of victory, gates, bridges, aqueducts and sewers. Throughout all this range of architecture, we shall find scarcely an original feature. To be sure, we have not found the arch in our studies of Egyptian and Greek art (it was rarely used either by the Egyptians or Greeks, as they considered it not so permanent as the straight lintel over columns), but the Romans borrowed the idea from a people



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 82—Corinthian Capital.

(the Etruscans) who lived in Italy before Rome became a centre of any importance. In looking over pictures of Roman architecture, we at once notice that this round arch is really a dominant characteristic. (Figs. 81, 84, 86, 87.) Used in doors, windows, bridges, etc., it suggested the half-cylindrical vault, which in turn resulted in the hemispherical dome. (Fig. 85.) We may notice that neither the vault nor the dome have been found in Egyptian or in Greek architecture.

The round arch was nearly always combined with a Roman elaboration of the Greek Doric, Ionic or Corinthian columns. (Figs. 84, 86.) The Corinthian, seldom used by the Greeks, was most freely adopted as being nearer the Roman ideal of profuse ornamentation. By comparing Fig. 82 with the Greek Corinthian in Fig. 60, the added scroll and acanthus decoration will be seen. This capital is one of the most elegant examples of the Roman Corinthian, and was found in the temple of Castor and Pollux. (Castor was



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 83—Roman Composite Capital.

the god of equestrian exercise; Pollux was the god of boxing.) One variety of the Corinthian, called the Composite (Fig. 83), was made by combining the Ionic volutes (spirals) with the acanthus foliage from the Corinthian. In the Roman Corinthian capital the top scrolls grow out of and are strongly united with the acanthus foliage below, while in the Composite capital the Ionic and Corinthian features are not bound together, the two parts are unrelated, and the jointure is not successfully hidden. The result as a whole is not pleasing and was not much used. Many other kinds of capitals were occasionally employed, such as combinations of foliage, animals, armor, masks, monsters, and the human figure. None of these have ever been considered worthy of



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

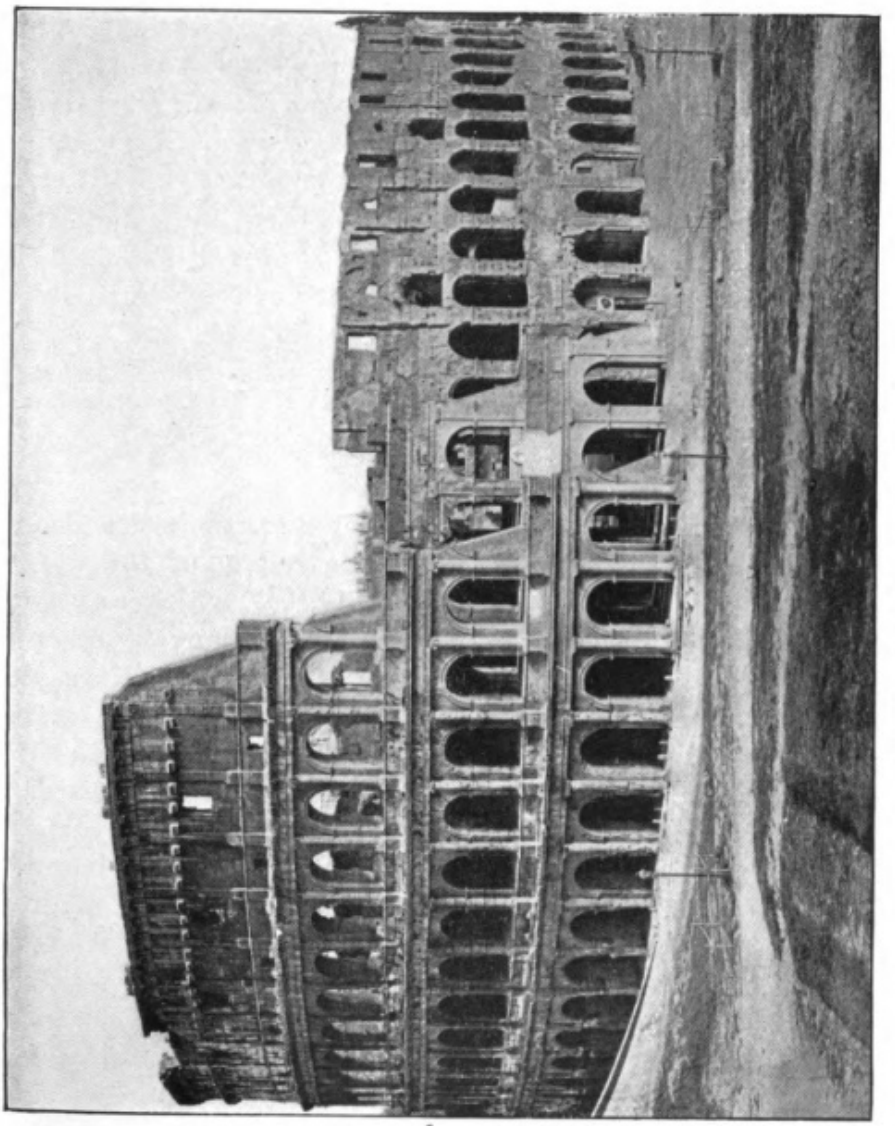


Fig. 84—The Colosseum, Rome



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

a special name, nearly all being but the childish expression of a desire for novelty.

The Egyptian and Greek buildings were made of stone and but one story high. The combined use of arch and pillar led to the construction of buildings of six and seven stories. The Romans generally built with bricks, somewhat longer and flatter than ours. This brick work was encased in marble. During the Augustan age (31 B. C.—14 A. D., with which such names as Virgil, Ovid and Horace are associated) it is recorded that the emperor boasted that he found a city of brick and changed it into marble. The baths, arches, temples, etc., were brilliantly painted and trimmed with gold, silver and ivory. Vitruvius wrote: "What the ancients accomplished by art we attempt to effect by gaudy coloring. Expense is now substituted for skill. Who in former times used vermillion except for physic? We now cover our walls with it." Pliny said it this way: "A man now cares nothing for art, provided he has his walls covered with purple."

Many Roman structures are more noted for their size than for any other feature. This is particularly true of the Colosseum, or Flavian Amphitheatre (Fig. 84), which excites more admiration because of its immensity than any other building in the world, unless we except the Hall of Karnak in Egypt. The word "amphitheatre" means two theatres. The ancient theatres as those of modern times contained seats in a semi-circle facing the stage. In an amphitheatre the audience sat all around in an elliptical building facing the arena in the centre. Rome had few theatres and many amphitheatres, for the drama was a very monotonous affair after the gladiatorial contests of the arena. The Colosseum, so named from a colossus of Nero (ruled 54–68 A. D), which stood near, was begun by Vespasian and finished by Titus 70 A. D. Its dimensions are: length, 620 feet; width, 513 feet, and height, 157 feet. Eighty thousand spectators could view the arena which was of such size (287 feet by 180 feet) that four thousand gladiators have fought there at one time. An awning suspended from poles fitted into holes at the top of the walls shielded the audience from the sun. (*Quo Vadis* presents a very vivid picture of Roman life, includ-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 85—The Pantheon, Rome.

ing the scenes of the arena.) The three orders of columns were used in this building, the Doric below, followed by the Ionic, and, at the third story, by the Corinthian. The great weight of the walls was really supported by the arches, and the columns were added as decorations.

The Pantheon (Fig. 85) was at one time the entrance hall to one of the baths. The triangular pediment and porch were added later by Agrippa (son-in-law of Augustus) and the whole was changed into a temple dedicated to all the gods. From a critical architectural standpoint, the placing together of two such unlike parts as the portico and dome is not pleasing. The latter overpowers and is out of key with the quiet harmony of line in the portico. The dome is 146 feet in diameter and the same in height. It has never been surpassed in size. At the top is a circular opening of 23 feet across, which affords the best interior lighting. The portico, dome and the interior of the building present such splendid construction and decoration that the Pantheon is justly considered the most magnificent of Roman temples. It is also noted as the burial place of many celebrated men,



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

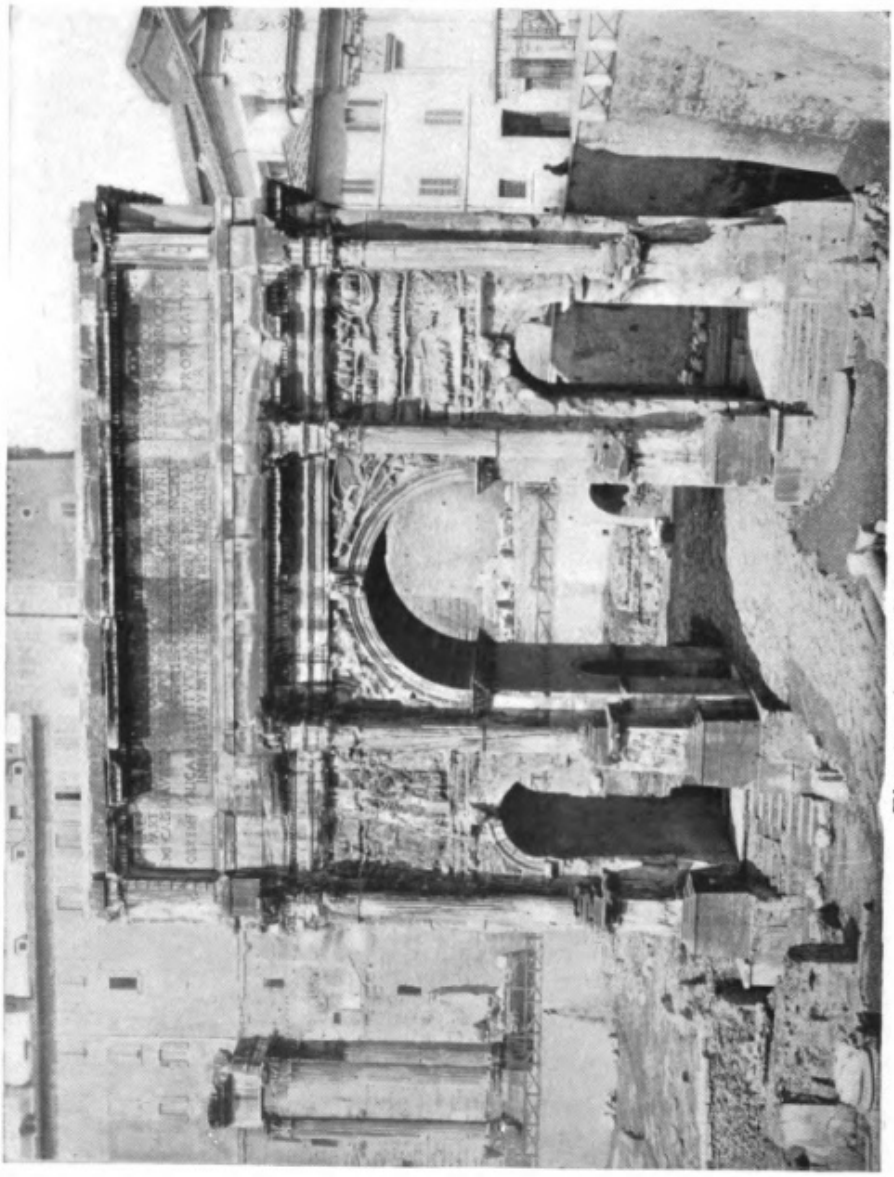


Fig. 86—Arch of Septimus Severus.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Fig. 87—Aqueduct Near Rome.

among others, the artist Raphael. "An interior like that of the Pantheon—with its simple divisions, its surfaces so sparingly broken, its immense dome brooding equally over all—conveys a sublime idea of unity, which is perfectly expressive of the character of the Romans."

We can mention but one or two other Roman creations. Chariot races and sea fights were held in immense circuses (read the "Chariot Race" from *Ben-Hur*). Cæsar's circus is said to have held one hundred and fifty thousand people. Triumphal arches (Fig. 86) were built on the great roads as memorials of successful conquests (just as the people in New York city erected the Dewey Arch to celebrate the return home of Admiral Dewey). This was an outgrowth of the custom of decorating the city gates.

One of the Roman roads, the Appian Way, three hundred miles long, is yet in good condition, although it has been used two thousand years. Aqueducts brought water from distant springs to the city; one of these was sixty-two miles long.

Portrait statues of wax, marble and bronze adorned the streets and houses. We remember that the Greek statuary represented the ideal, but the thousands of statues in Rome



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 88—**The Emperor Augustus.**



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

pictured the famous men and women of that period and were erected for their glorification.

Fig. 89 shows a part of Rome. In the distance, at the right, can be seen one of the seven hills of Rome, the Palatine, upon which was Cæsar's palace; at the left, the Colosseum. Nearer and about half way between is the Arch of Titus. The arch in front at the left is that of Septimus Severus. The centre of the foreground contains the ruins of the Forum of Trajan (ruled 98–117, A.D.).

The Romans placed ornament upon almost everything, from public buildings to the commonest kitchen utensils. The scroll and the acanthus, rarely employed combined by the Greeks, formed the basis of Roman ornament. In fact this combination, a continuous scroll, branching into smaller scrolls, decorated with acanthus foliage, leaves, rosettes, blossoms and tendrils, is generally accepted as the key-note of the Roman style. Figs. 90–92 are typical illustrations. Genii, dolphins, griffins, grotesques, masks, eagles, wreaths, festoons and ribbons were commonly used with the acanthus and scroll. The acanthus is what is termed *soft* acanthus and differs from the Greek (Fig. 60), which is called *prickly* acanthus. (See page 79.) In Fig. 90 at the right are flowing scrolls and acanthus growths, and at the left is an enriched Greek anthemion form. The small astragal ("button and bead") border at the top is also from Greek ornament. (See Fig. 71.) Fig. 92 is made up of the human figure with decorative wings terminating in acanthus foliage, enriched vase forms, tendrils, rosettes, etc., a very characteristic example of Roman ornament.

Fig. 93 shows four rosettes from the Arch of Septimus Severus. Compare them with the rosettes on the Greek Corinthian capital. (Fig. 60.)

We remember that Egyptian art was symbolic, that it was an ever-open book of history and religious teachings. We have learned that the Greeks were interested in intellectual pursuits. Their art aimed to give æsthetic joy through a contemplation of beauty of form and color. Roman art was an expression of power and love of display. Egyptian art challenged the understanding. Greek art appealed to the emotions. Roman art compelled surprise and admiration.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

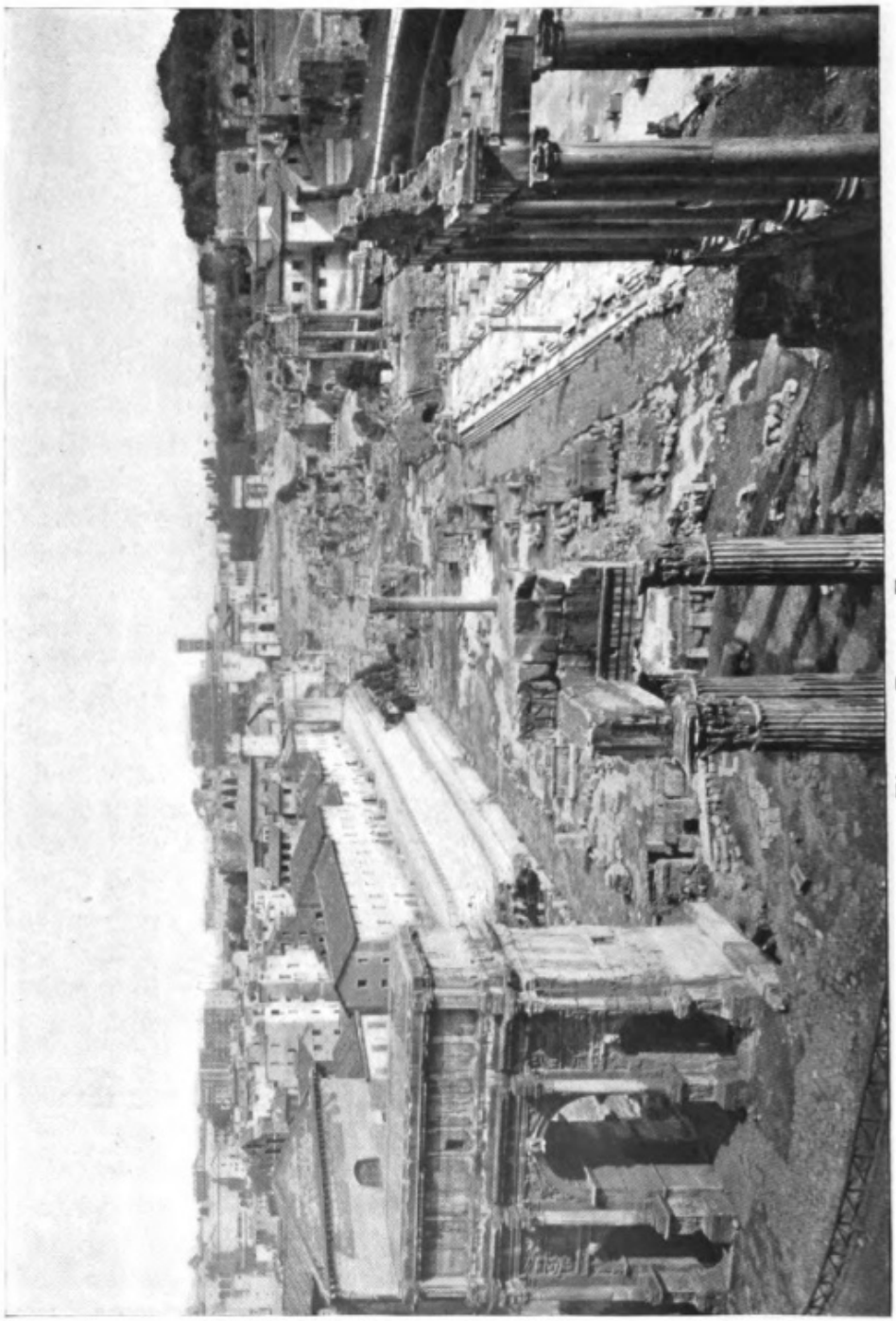


Fig. 89—Roman Forum.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Fig. 91—Roman Acanthus Ornament.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Fig. 90—Roman Acanthus Ornament.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

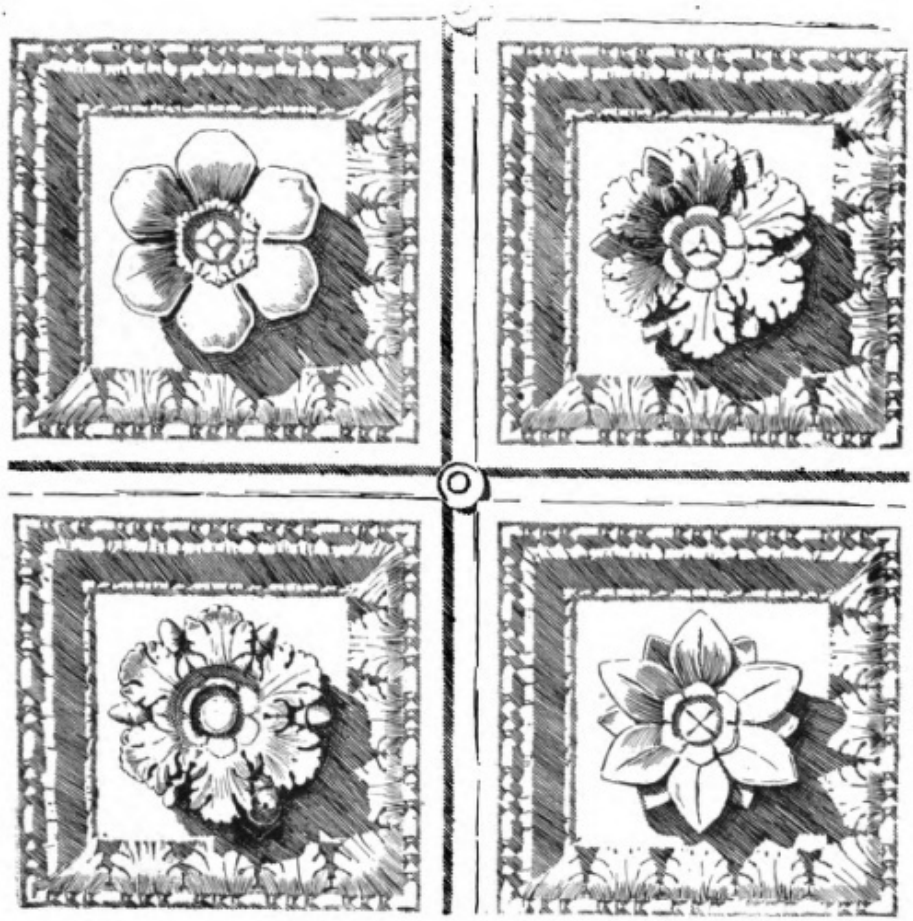


Fig. 93—Roman Rosettes.

It lacks the symbolism of the Egyptians and the refinement of the Greeks, yet it presents a variety of new combinations, many of them very rich and beautiful.

The elements which were practically first employed by Roman architects, the arch and dome and several stories in one building, have had a great influence on all later productions, even to the present time. The Roman capitals, arches, gates, bridges, acqueducts, sewers, roads, baths and palaces have been admired and copied by all civilized countries. The same statement holds true with regard to their ornament. In the decoration of modern buildings and of commercial articles we may find the acanthus and scroll forms used as they were two thousand years ago.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

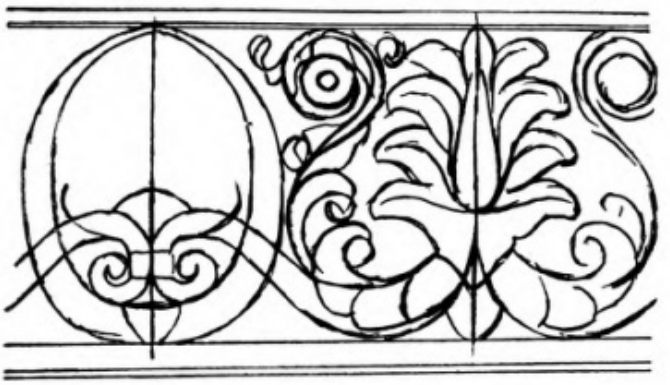
Fig. 92—Marble Ornament, Trajan's Forum, Rome.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Fig. 94—Roman Acanthus Elements.



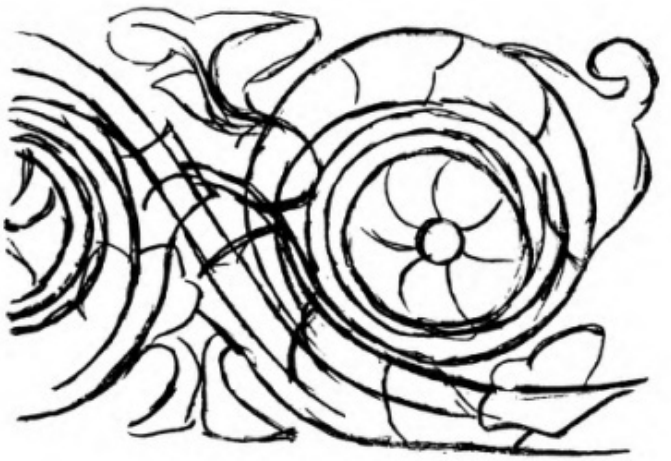


Fig 95.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

With some classes, reading the "Chariot Race" from *Ben-Hur*, or some parts of *Quo Vadis* will introduce Roman ornament in a very interesting manner.

Roman architecture was essentially practical. Roman ornament was rich. When these two sentences are fully understood through a knowledge of Roman art the pupil will have an intelligent idea of Roman citizenship, for the character of the nation is found perfectly portrayed in its art, and will be able to recognize Roman work wherever seen. Emphasize the characteristic features, the round arch and dome and several-storied buildings, and the scroll and acanthus ornamentation.

In most classes it will be sufficient to know that we are considering the Rome of the first two or three centuries after the birth of Christ. An outline like the following may be helpful in preparing and presenting the lessons:

1. A talk on Rome and the Roman life; the beginning of Roman art through the importation of Greek artists; the practical character of Roman architecture; capitals; new features, such as dome, arch, several stories; Colosseum; Pantheon; use and character of acanthus ornament.

2. Sketches of acanthus forms and any of the capitals and buildings which the pupils can draw.

3. Mounting collected illustrations of Roman buildings and ornamental details, including modern adaptations of Roman elements of design.

4. Careful drawings of one or more examples of Roman acanthus ornament.

A soft pencil, pen and ink, or a piece of charcoal or crayon is a better medium than the brush for drawing Roman ornament, but some practice work with the brush may be done as shown in Fig. 94.

The methods of drawing two acanthus borders are illustrated in Fig. 95. The general plan to be followed in drawing any of the ornament is: first, block in the shape of the oblong or square which includes the whole design; secondly, draw the large masses, all the long flowing curves, then the important offshoots and add the details last. The illustra-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

tions of Roman ornament are not made up of regular repeats, hence tracing paper cannot be employed in drawing them. It must all be done boldly and freely, striving to reproduce the luxuriant growth and healthy vigor of the characteristic Roman acanthus.

Ask pupils to look for buildings having Roman architectural elements.

Additional general suggestions may be found in Chapter V.

ROMAN ARCHITECTURE. Temples: Jupiter Capitolinus, 600 B. C., rebuilt 70 A. D.; Vesta, 72 B. C.; first Pantheon, 27 A. D., rebuilt 117–138 A. D; Apollo, Concord, Julius, Jupiter Stator (Castor and Pollux), Mars Ultor, Minerva, Saturn, 27 B. C.–14 A. D.; Vespasian, 96 A. D.; Minerva, 96 A. D.; Trajan, 117 A. D. FORUMS: Trajan, 117 A. D. Colosseum, 78–82 A. D. Baths of Agrippa, 27 B. C.; Nero, 54–68 A. D.; Titus, 78 B. C.; Caracalla, 211 A. D.; Diocletian, 305 A. D.; Constantine, 320 A. D. ARCHES: Titus, 79–81 A. D.; Trajan, 117 A. D.; Severus, 203 A. D.; Constantine, 327 A. D. COLUMNS: Trajan, 117 A. D. Houses at Pompeii and Herculanum, 60–79 A. D. THEATRES: Marcellus, 23–13 B. C. CIRCUSES: Maximus, 54–68. Basilicas, roads, bridges, acqueducts.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

## CHAPTER IX.

### BYZANTINE.—A. D. 328–1050.

HOW many boys and girls know that, secretly and by night, the early Christians held their meetings in underground cemeteries? Rome was undermined with these burial places. There were between eight and nine hundred miles of subterranean passages, three or four feet wide and high enough to walk through. Occasionally there was a small room on either side.

In some places there are five stories of these vaults. They were hollowed out of the soft rock as tombs were demanded and extend without plan in every direction. The walls were cut away leaving openings similar to berths in a stateroom. In each was placed a body, and a slab containing the name of the deceased, closed the opening. It is estimated that these catacombs contained six million bodies. And here, under pagan Rome, during the first centuries A. D., martyrs were buried, meetings were held and Christians were baptized. At times, persecuted by the Roman authorities, these same cemeteries served as places of refuge. Because of the labyrinthian passages the pursuers were soon convinced that their best move would be to get out if they could find the way. Afterwards, when the Christian faith became legalized (328 A. D.), the catacombs became the Mecca of bands of pilgrims. Catalogues were prepared for their guidance to the graves of the noted saints and martyrs.

The first Christian style of architecture had its beginnings, not above the ground, but under it in the catacombs. As has been stated, the name was placed on the slab which en-



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

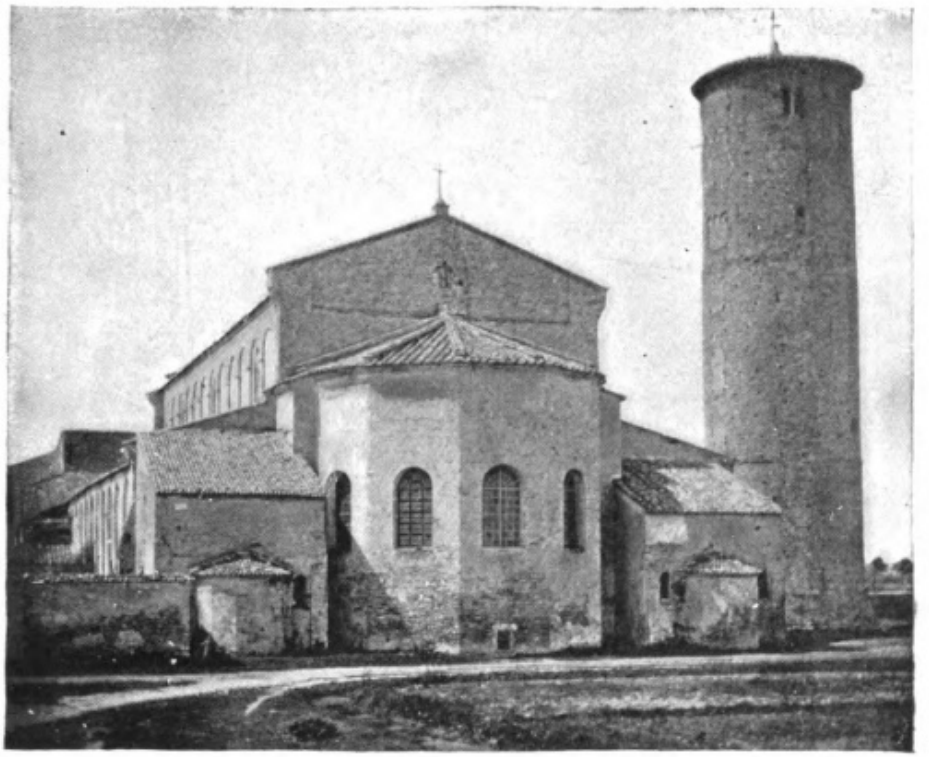


Fig. 96—St. Apollinare in Classe, Ravenna.

closed the body. Added to this in the oldest vaults were painted or carved fruits, flowers, birds and genii, all borrowed from the Roman world above. As in ancient times, love of decoration and religion were the dominant factors in this new era of art. The Christians soon began to regard the ornamentation of the Romans as a worship of nature. They cared not for the beauties of this world. Their hope was in the hereafter. With Christianity came new ideas which must find an expression in art, and as with the early peoples, as the Egyptians, the first expression was in symbols, which might declare the religious beliefs. In this way it came about that the Roman ornamentation soon gave way to a series of signs and pictures relating to sacred history. The Roman birds developed into doves, signifying pure Christian souls. The palm suggested eternal peace; the peacock, immortality; the anchor, hope; a shepherd and sheep, Christ and his flock; a ship, the church; the cock,



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig 97—Santa Sophia.

watchfulness; and the cross, lamb, vine and serpent referred to biblical passages. The fish, the Greek spelling of which gave the Christian confession of faith, was also freely used. These symbols are found repeated over and over again throughout the passageways.

As years went by the people desired more ambitious illustrations. Symbolism was found insufficient. Few could read, all could not attend meetings; many thought that art should be further employed to stimulate religious fervor. At this time it was not infrequent to have scenes from the Old and New Testament acted out at the religious services. One bishop, who felt the responsibility for the education and conduct of his flock, noticed that there was much dancing and feasting to hasten the long hours of vigil. He concluded that it would be a good idea to cover the walls with sacred pictures that they might "feed with their eyes instead of their lips" Gradually more pretentious paintings were introduced. The living biblical pictures were replaced by permanent representations of the same subjects.

Although these early pictures are generally called "paintings," they were really mosaics made from small cubes of colored glass. There was almost no effect of perspective



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

attempted and but little light and shade. The figures were clothed in sack-like gowns and oftentimes pictured floating in the air. Backgrounds were always of gold, which was applied to the glass cubes. The early Christian artists seemed to desire to express contempt for sensuous beauty that the spiritual ideas might predominate, consequently art progress was retarded, as is always the case when religion rules rather than inspires.

With Constantine, in 328 A. D., Christian art came up out of the ground. A short time before this Constantine was preparing for war with a rival who claimed the throne. He said if his armies were victorious he would accept the Christian religion. He achieved success and proclaimed Christianity as the state religion. Its influence was at once felt in architecture. No more baths or theatres were built, and for nearly seven hundred years all efforts were centred in the building of churches. The first religious services above ground were held in the private basilicas (Roman business exchanges or court-houses) of wealthy believers. These were found suitable and the first Christian churches were modeled after them. Figure 96 shows one of these old churches, St. Apollinare, Ravenna. (Built in the 6th century.)

The exterior is very plain but the interior contained mosaics similar to those of the catacombs. In many cities pupils may find modern churches which are later developments of this form of construction. An interesting feature is the bell-tower at the right, the first step in the evolution of the modern church spire. These towers were sometimes used as storehouses for treasure and for personal safety from opposing factions.

Constantine in 330 A. D., removed the capital of the Roman empire to Byzantium and renamed the latter Constantinople. From Byzantium comes the term "Byzantine" which is applied to all Christian art produced previous to 1000 A. D. In Constantinople during the 6th century, Justinian built a church known as Santa Sophia (Fig. 97). ("Santa" is a contraction from the latin *sanctus*, meaning Holy.) This church is "as surely the masterpiece of Byzantine architecture as the Parthenon was of the Greek." Upon its completion Justinian exclaimed, "I have surpassed thee,



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

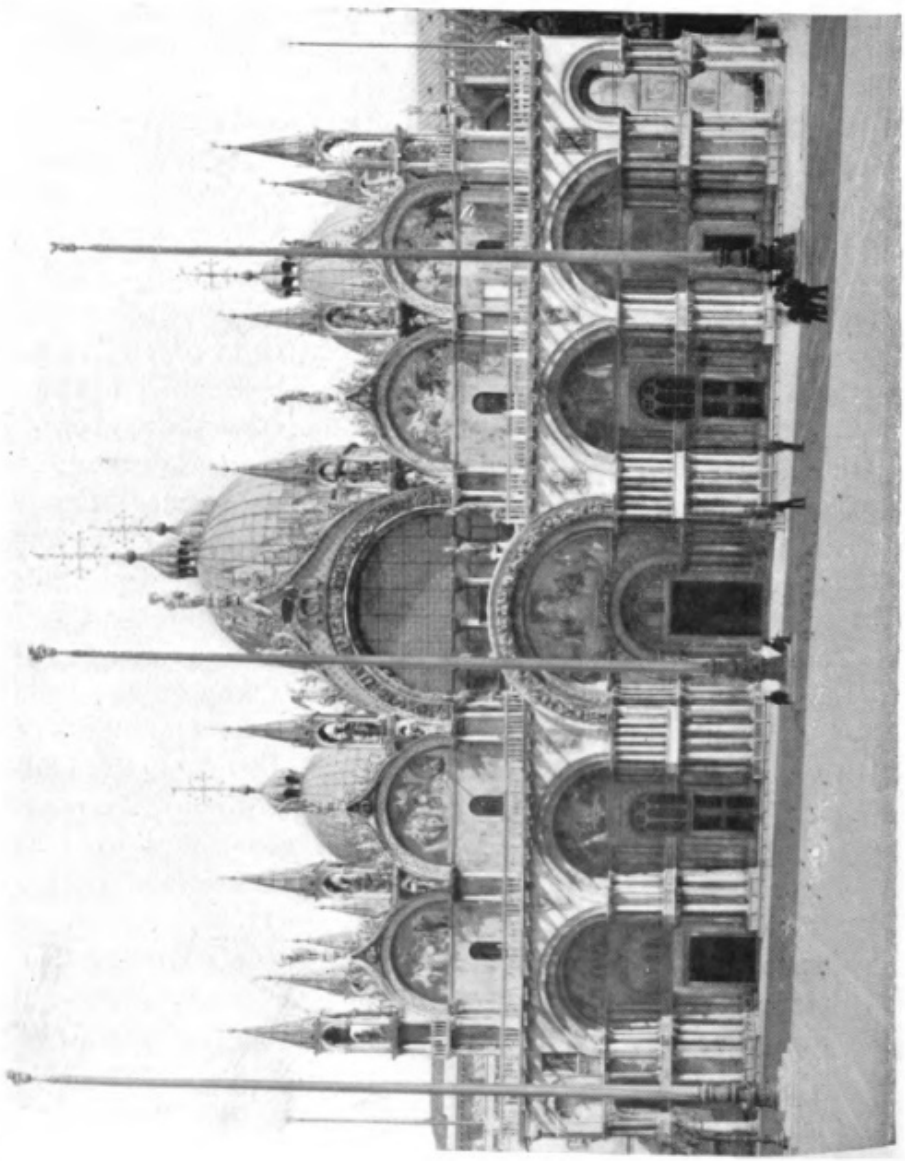


Fig. 98—St. Mark's Church, Venice.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

O Solomon!" No building from the time of Constantine to the 12th century approaches Santa Sophia in grandeur and beauty. The ground plan is a cross. The large central dome—significant of the vault of heaven—was adopted from the Roman baths. The Roman domes had a circular base. Here, for the first time, we find a dome resting upon walls forming a square. Excellent lighting was afforded by a series of windows piercing the lower part of the dome. "Sprouting out" from this central feature are semi-domes, the whole forming a marvelously harmonious design. The interior effect is perhaps unsurpassed by any church in the world. The large dome is 180 feet high and 106 feet in diameter. "It hangs with little apparent support like a vast bubble over the centre. Such is its lightness that it appears to be suspended by a chain from heaven."

During the early centuries it was customary to make the churches repositories for collections of objects associated with Christianity. It is interesting to note that writers of the 11th and 12th centuries affirm that Santa Sophia contained the cross on which Christ was crucified. It was kept in a wooden chest. Three successive days each year it was placed on exhibition. The emperor headed a procession formed according to rank and all passed and kissed the cross. Among other treasures stored in this church are mentioned the doors of Noah's ark, the chain which bound the Apostle Paul, the stone on which Christ sat and conversed with the woman of Samaria, the table of Abraham, the column by which Peter wept, and the lance which pierced His side, the sponge that was offered to Him and the reed that was placed in His hand.

It will be noticed that there is but little ornamentation on the outside of Santa Sophia. (The minarets were added later by the Mohammedans and are not Byzantine.) The interior was covered with the most beautiful marbles and stucco work and with Bible pictures in mosaics, suggesting one vast and glorious Bible or prayer-book.

Another noted Byzantine Church is St. Mark's at Venice. The round arches show the influnce of Roman architecture, and the dome arrangement is quite similar to that of Sta. Sophia. (See Figs. 89 and 99.)



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 99—Arch above Doorway, St. Mark's, Venice.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Fig. 100.

Fig. 100 is a drawing of a Byzantine capital which is like the Roman Corinthian (Fig. 82) in the arrangement of the foliage on the lower part and the use of the spirals at the top, but being quiet and much less enriched it shows a different spirit of design. In Figs. 101–104, we see other more characteristic Byzantine capitals which are unlike the Roman, in which the curve was concave and the acanthus applied. The typical Byzantine capital was generally curved outward and the ornament incised.

An Oriental taste for detail treatment was created by trade with the East, and Byzantine ornament often reminds us of an Eastern rug. The acanthus and other leaves were broad toothed, acute pointed, flat and in low relief. Compare Figs. 103 and 105 with the Roman acanthus (Figs. 90–93). The general effect (at a distance) of lace-work seemed to be more desired than beautiful detail. A study of these illustrations will reveal many half-hidden symbols, the meaning of which the class can and must understand if the true character of



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 101—Marble Capital, Ravenna.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

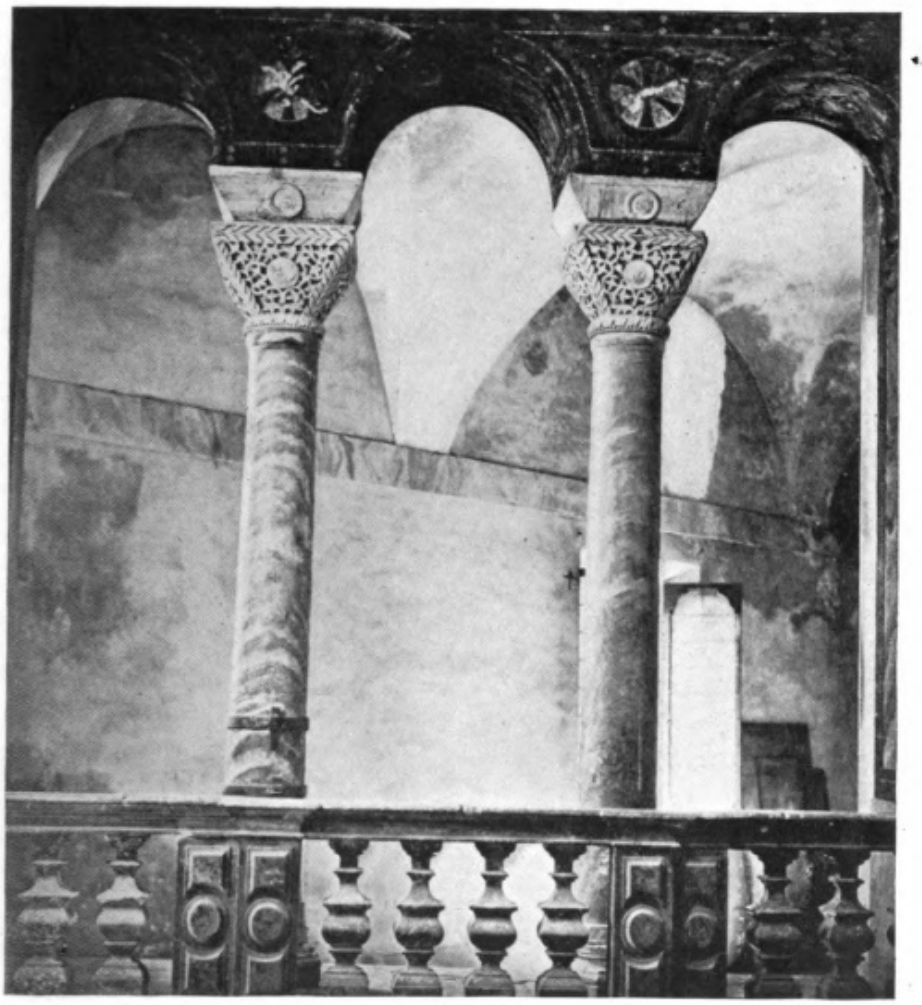


Fig. 102—Marble Capitals, Venice.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

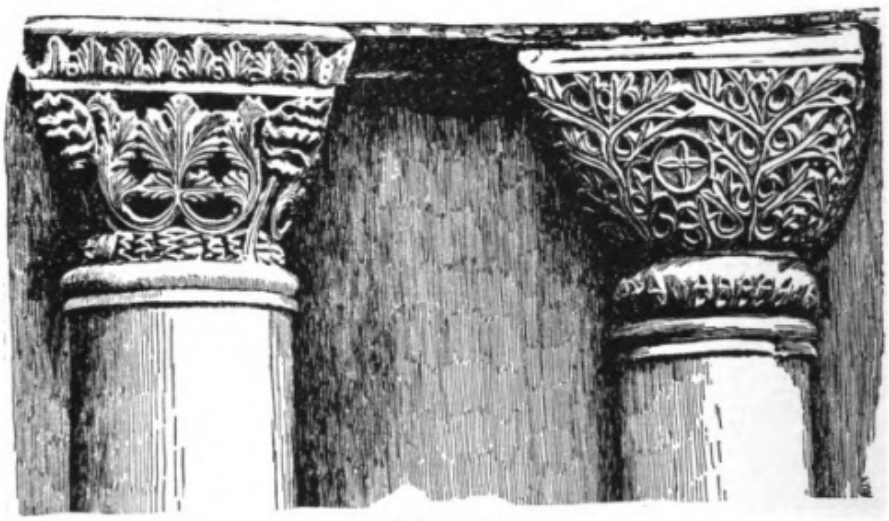


Fig. 103.

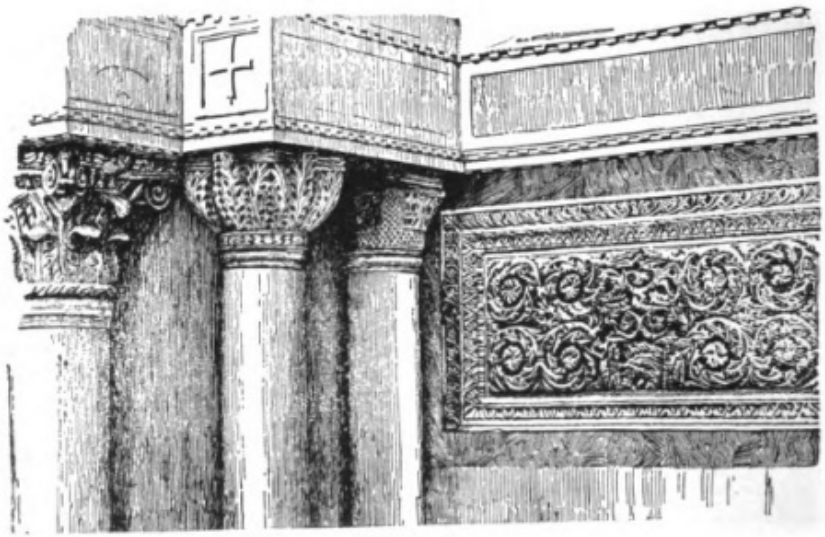


Fig. 104.

Fig. 105.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 106.

Byzantine ornament is to be grasped. (Fig. 143 shows us some of the symbols in later Christian [Gothic] art, all of which, except the gargoyle and fleur-de-lis, originated in Byzantine ornament.) In Fig. 109 may be found the cross, vine, circle, peacock, in fact a sermon in stone. Around the edge is a border a lingering influence of Greek (Pagan) art, being borrowed from the Greek astragal. (See Fig. 71). Fig. 108, includes the cross, circle, quatrefoil, peacock, dove and vine, and similar symbols may be seen in the other Byzantine illustrations.

More clearly than words this decoration depicts the life of the people. Piety, self-restraint and a desire to create beauty which would be approved by strict church law—these impressions come to us from Byzantine ornament. No style of ornament is the product of any one person. It is the product of a nation. What a contrast between Roman and Byzantine ornament! What a revelation of the change of thought and customs of the nations that adopted Christianity!



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

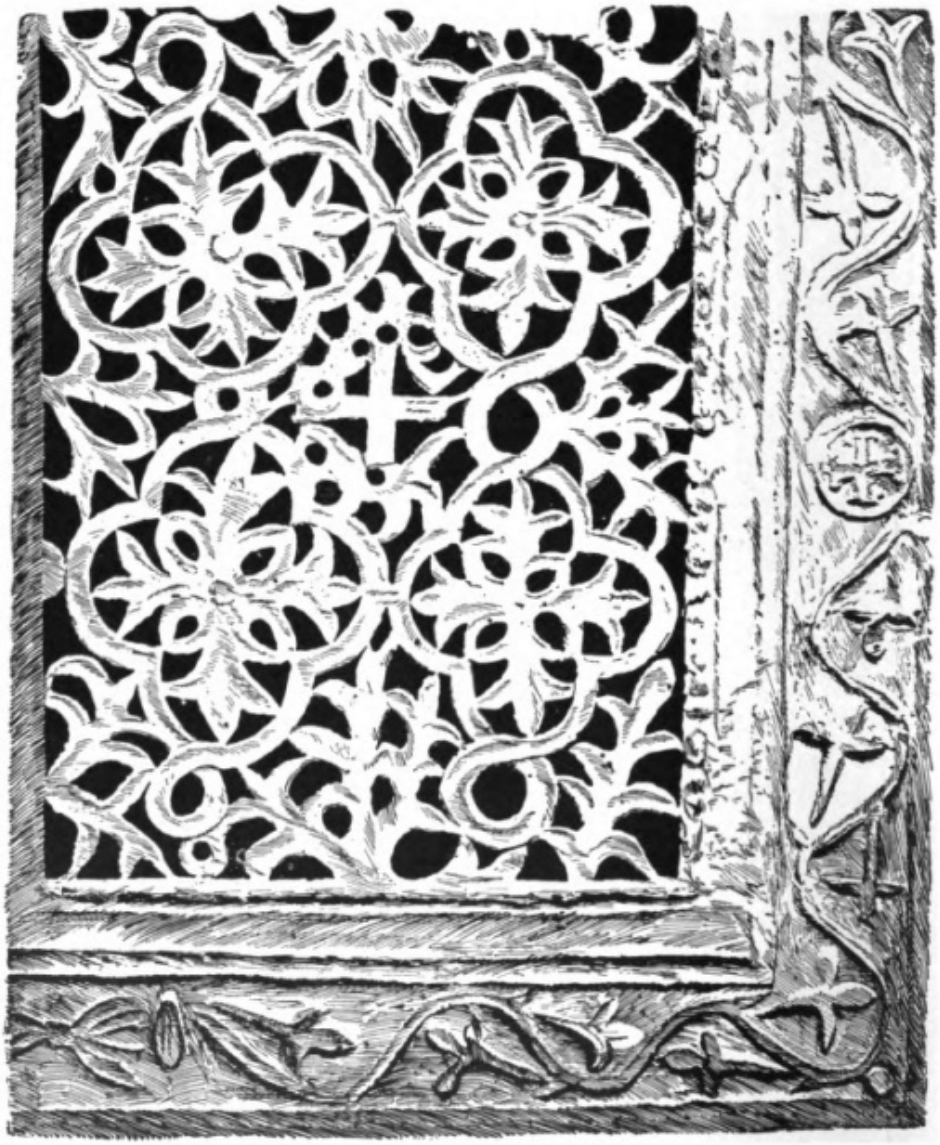


Fig. 107—Detail Marble Screen. Ravenna.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Fig. 108.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

The influence of Byzantine architecture on the later styles is not so noticeable as that of the Greek or Roman. The early Christian architects gave us but one new feature in construction, the arrangement of domes as found in Santa Sophia. This idea is occasionally found adopted in modern churches or other large buildings. Byzantine ornament was a stepping-stone toward the Gothic and is not uncommon in the decoration of our churches and public buildings.

### Teaching Byzantine Ornament.

The lessons on Byzantine ornament should include:

1. Talk on the beginning of Christian art, its causes, place, time and symbols; purpose of mosaics; influence of

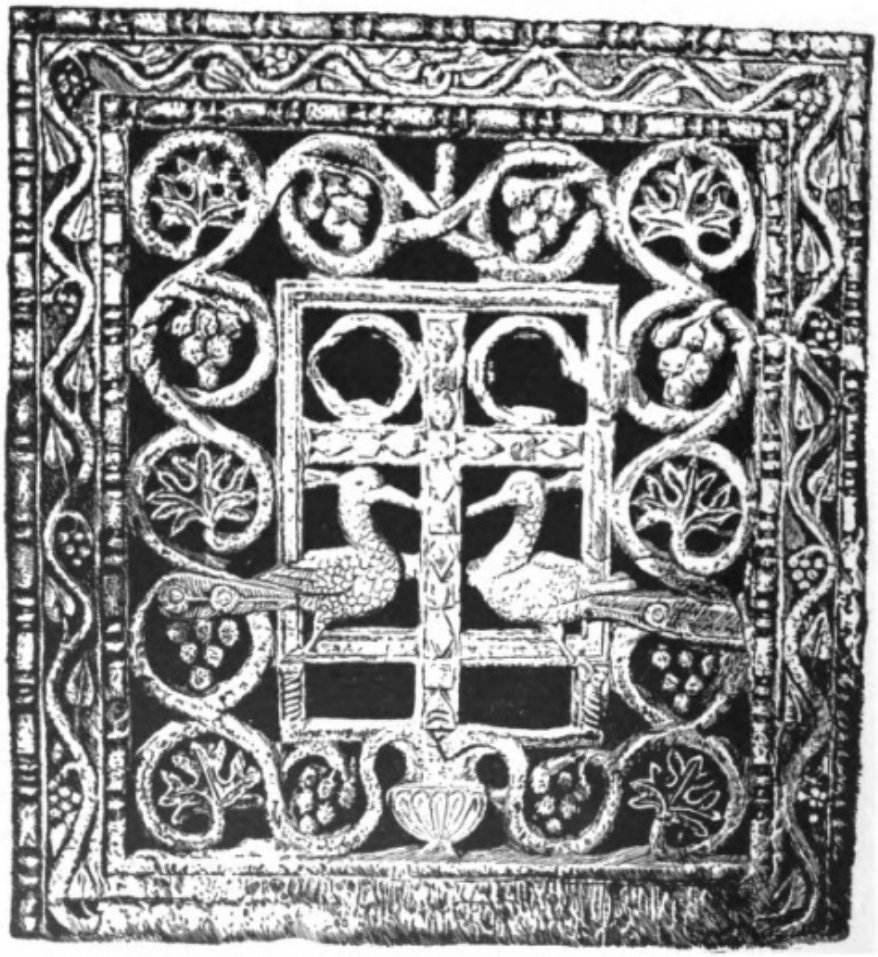


Fig. 109—Marble Screen, Ravenna.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

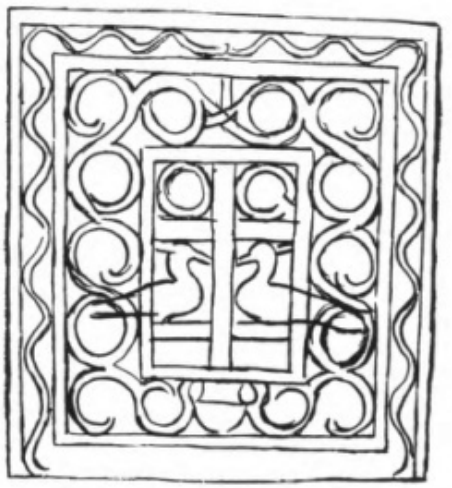


Fig. 111.

Constantine's proclamation; Santa Sophia; capitals; the new acanthus; the life of the people as expressed in their art; influence on subsequent styles. These are the points to be emphasized. Chapter V. contains additional general suggestions.

2. Sketches of symbols (as found in Figs. 106–109, etc.). Some pupils may add to this a drawing of a Byzantine capital or Santa Sophia.

Meanwhile have the class look for Byzantine capitals and ornament in modern buildings.

3. Mounting collected illustrations of Byzantine architecture and ornament, including pictures of modern buildings and designs showing Byzantine influence.

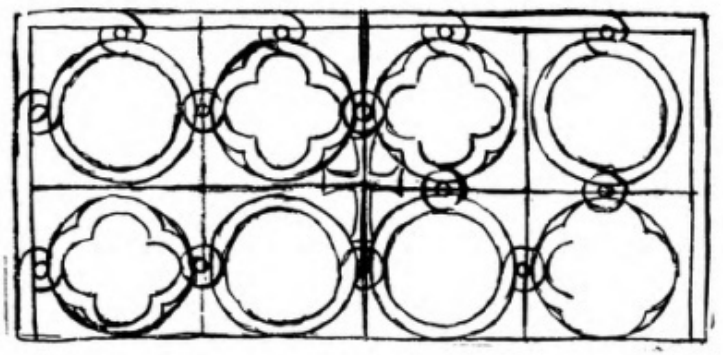


Fig. 110.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

4. Careful drawing of one surface or border design from the Byzantine school. Lead the pupils to discover the symbols in the example to be drawn; note how the simple signs are used to make a decoration. Observe that Byzantine ornament is not made up of units which can be repeated by tracing as every unit is different from the others. Draw all the large forms in the pattern first as shown in Figs. 110 and 111, working toward the smaller and adding details last. Use pencil, pen, charcoal or crayon.

BYZANTINE ARCHITECTURE.

Sta. Appollinare in Classe, 338 A. D., Ravenna.

San Vitale, 527–540 A. D., Ravenna.

Santa Sophia, 532–538 A. D. (first building), Constantinople.

St. Mark's, 997–1071 A. D., Venice.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

## CHAPTER X.

### SARACENIC.—A. D. 632–1850.

HEN Mahomet was forty years old he betook himself to a secluded cavern in the mountains. It was the Arab custom to retire to such places one month each year for prayer and meditation upon the great questions of life. During this particular period of solitude, Mahomet believed, that through the special favor of heaven, the true religion had been revealed to him. Henceforward his whole tremendous energy was employed in teaching Islam, "That we must submit to God." His wife was his first convert; in three years he had gained but thirteen believers. At the age of fifty-three, to save his life, he fled from Mecca to a place now called Medina. The whole East reckons time from this event, the Hegira, 622 A. D. At Medina many new converts were enrolled. Mahomet's creed was a decided improvement upon the wooden idolatries which it crushed. Through a liberal use of force the faith extended and united the wandering tribes of Arabs into the Arab nation, reaching from India to Spain by way of Northern Africa.

Again we find religion the incentive to art creation. Mahomet was the corner-stone of a new style of architecture and ornament. He built the first mosque at Medina. As the Moslems conquered the surrounding countries, the Persian, Egyptian and Turkish temples and churches were appropriated for Mahommedan services. (In this way Santa Sophia (Fig. 97) became a Mohammedan church in the fifteenth century.) For many years the followers of the Prophet



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

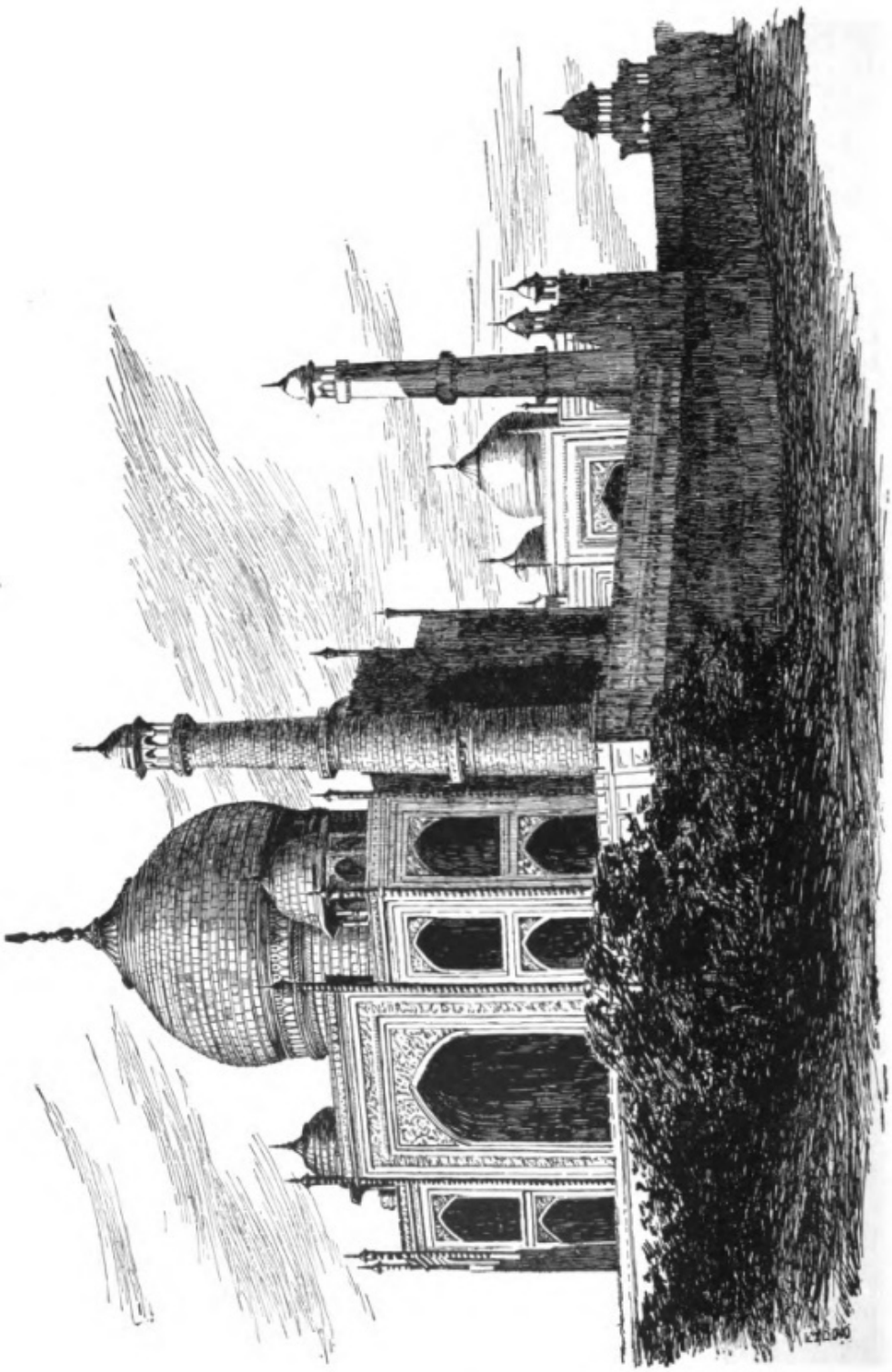


Fig. 112—Taj Mahal.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

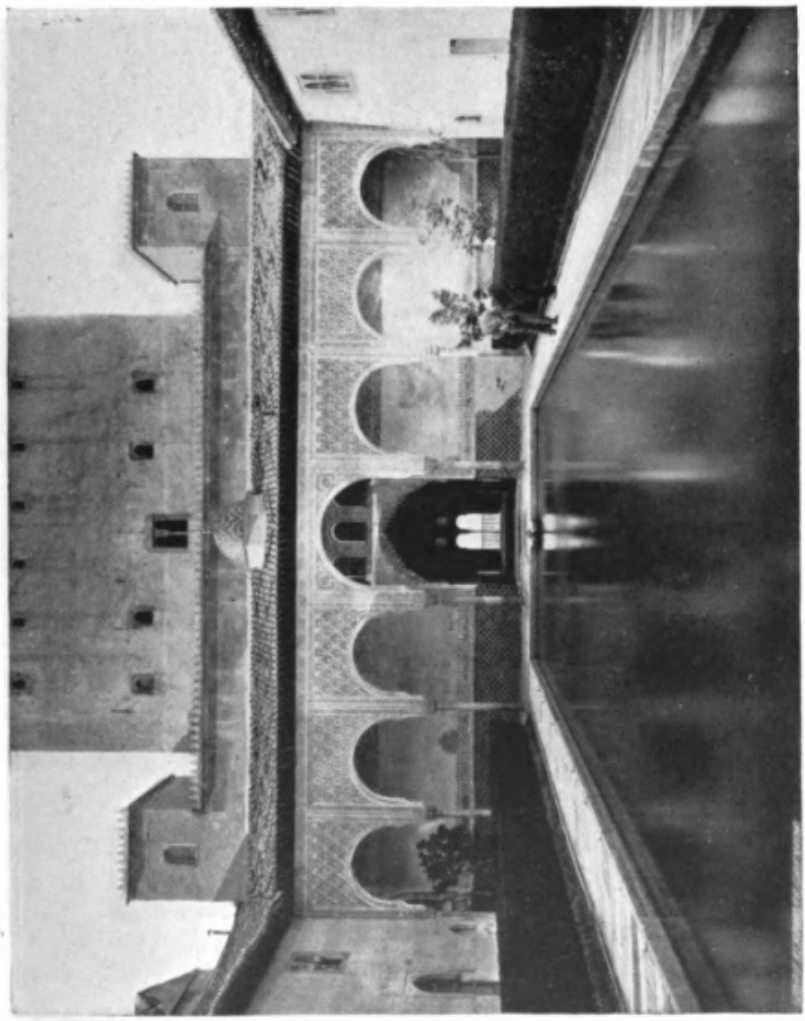


Fig. 113—Ambassador's Court, Alhambra.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Fig. 114—Entrance to Mosque, Alhambra.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

had not time for the consideration of architecture. Then came the desire for mosques and tombs, and native architects were employed. This resulted in more or less imitation of the native art of Persia, Turkey and Egypt. Especially prominent do we find the influence of the Byzantine dome arrangements.

Every mosque has four distinguishing features: A fountain for ablutions; a niche to indicate the direction of Mecca; a pulpit for the reading of the Koran; minarets for calling to prayers. The latter is a variation of the modern church-bell idea, the Mohammedans preferring the human voice. There can be no mistaking a Saracenic mosque, tomb or city. The abundance and variety of domes and minarets and the character of the ornamentation at once determine the style. Taj Mahal (Fig. 112) is considered one of the most beautiful examples.

Twenty thousand men worked twenty-two years upon it. Built entirely of white marble and studded with precious stones, the total cost was twenty million dollars. It stands on a terrace 18 feet high and 313 feet square. Of quite recent date (A. D. 1650), it was built by an Indian prince at Agra, in North-central India, as a festal hall with the idea of using it later as his tomb. This was a common practice among the Moslems.

We are at once attracted by the large central dome. Then we notice others, smaller and characteristically Saracenic, bubbling up from the square and octagonal sub-structures. Heretofore we have found only the round dome. And now we see the large doorways and windows with the same curve in the pointed arch that we found in the domes. This form of arch is sometimes called a keel arch, from its likeness to the bottom of a ship. About the windows and doors was placed considerable ornament. This attracts the spectator and tends to prevent the eye from comparing the openings with the size of the building, which process would result disadvantageously to the latter.

In other Saracenic buildings we may find the common pointed arch (Figs. 118 and 123), much like the arch used by the Gothic builders, the Roman semi-circular, (Fig. 113), and a new arch, from its shape called a horseshoe arch (Fig. 114).

If we were to travel from Agra westward to the Atlantic



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

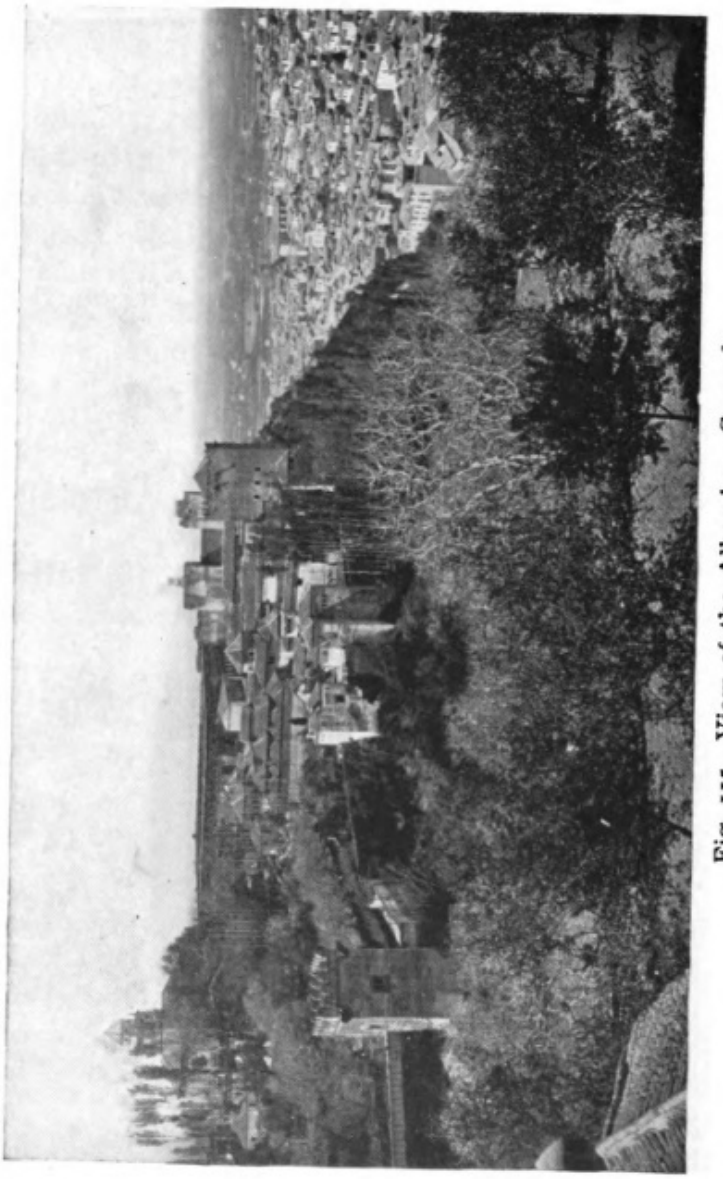


Fig. 115—View of the Alhambra, Granada.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

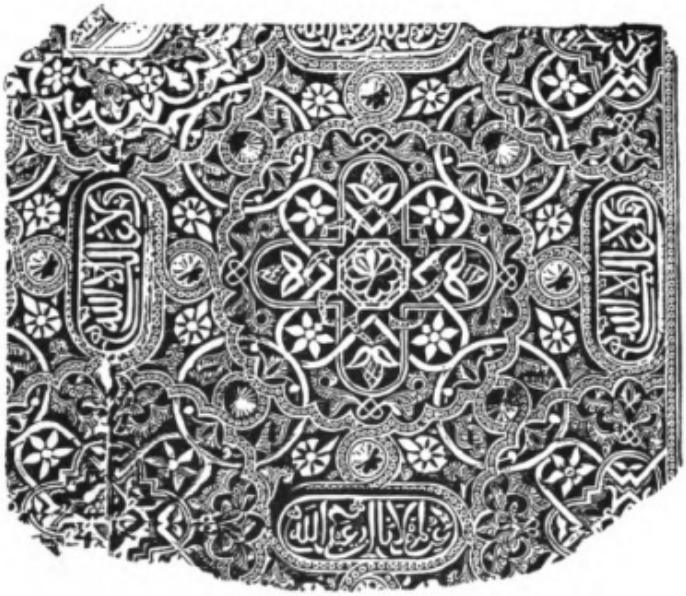


Fig. 116.

we should find Saracenic domes and minarets predominant in all cities. The greater part of these were erected between 900 and 1350 A. D. Even in Spain the Moslems at one time held powerful rule. Beautiful examples of their art may be found in the great mosque at Cordova, the Alcazars at Seville and Malaga. The Madison Square Garden tower in New York City was fashioned after the Giralda at Seville, which was designed by El Gebir, sometimes called the inventor of algebra—as every high-school boy knows. And who has not heard of the Alhambra at Granada! Washington Irving's "Alhambra" rivals the "Arabian Nights." Columbus was obliged to postpone his discovery of America until the Christians under Ferdinand had taken Granada and the Alhambra from the Moslems. As will be seen from Fig. 115, the outside of the Alhambra looks more like a fort than anything else, and it was indeed used for this purpose by the Moorish kings of Granada. Nothing is to be seen which is essentially Saracenic. In some ways it reminds us of the Acropolis at Athens. It was built between 1240 and 1348 A. D. Inside these massive walls we may find the perfection of Moorish ornament. Every *principle* of nature which can be used in design is here employed in perfect harmony. The



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 117.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

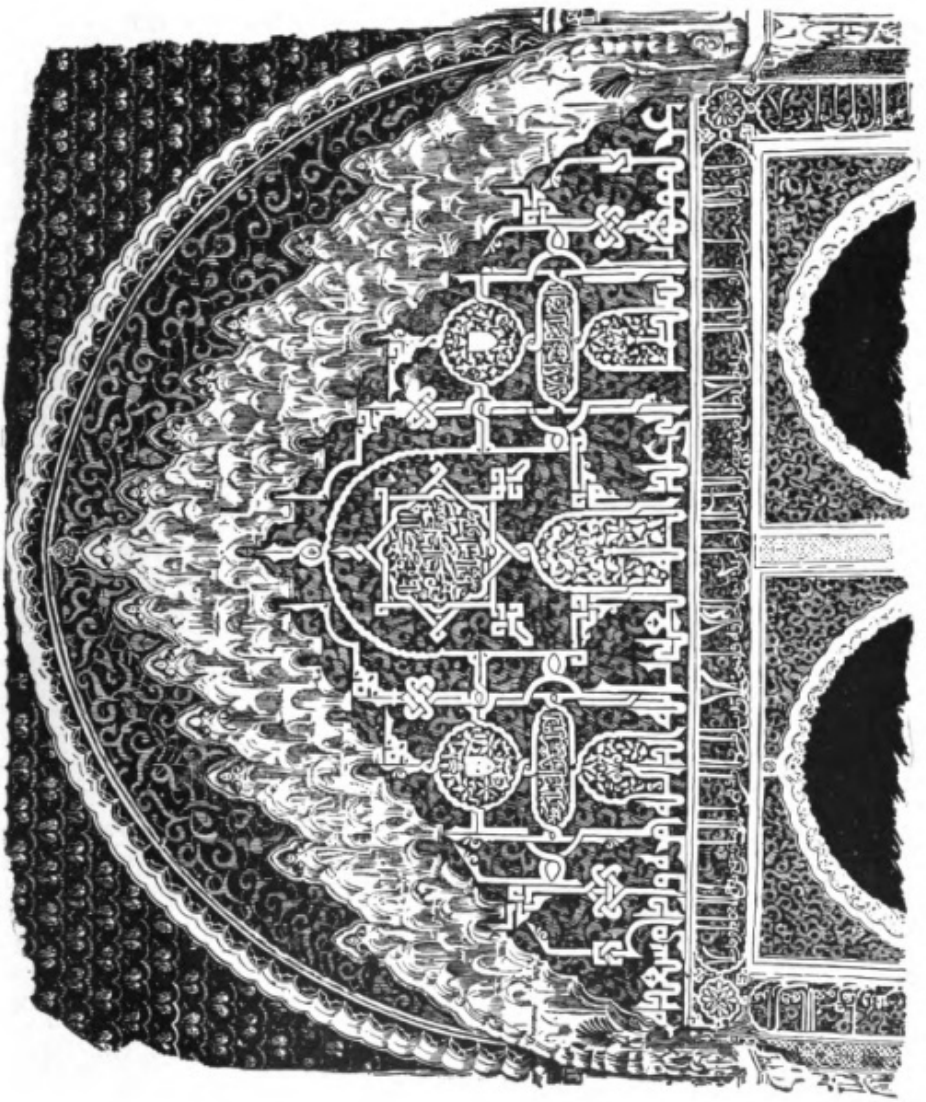


Fig. 118.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 119.

Koran forbade the use of natural forms. We can see in Figs. 116–120 many suggestions of flowers and leaves, but they are copies of neither. Nature suggested and the Saracenic artist created,—but he did not copy. "Arab art is not nature; it is a dream of nature."

The interior of the Alhambra is covered with decoration as seen over the two doorways in Fig. 118. Yet it seems that if anything were added or taken away the whole effect would be marred. Perhaps we miss the hidden meaning, the symbolism of the Egyptian and Byzantine ornament, but in many places (as over the doorways) we find Arabic writing expressing such thoughts as "There is no conqueror but God;" "There is no God but God." Occasionally there are other



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

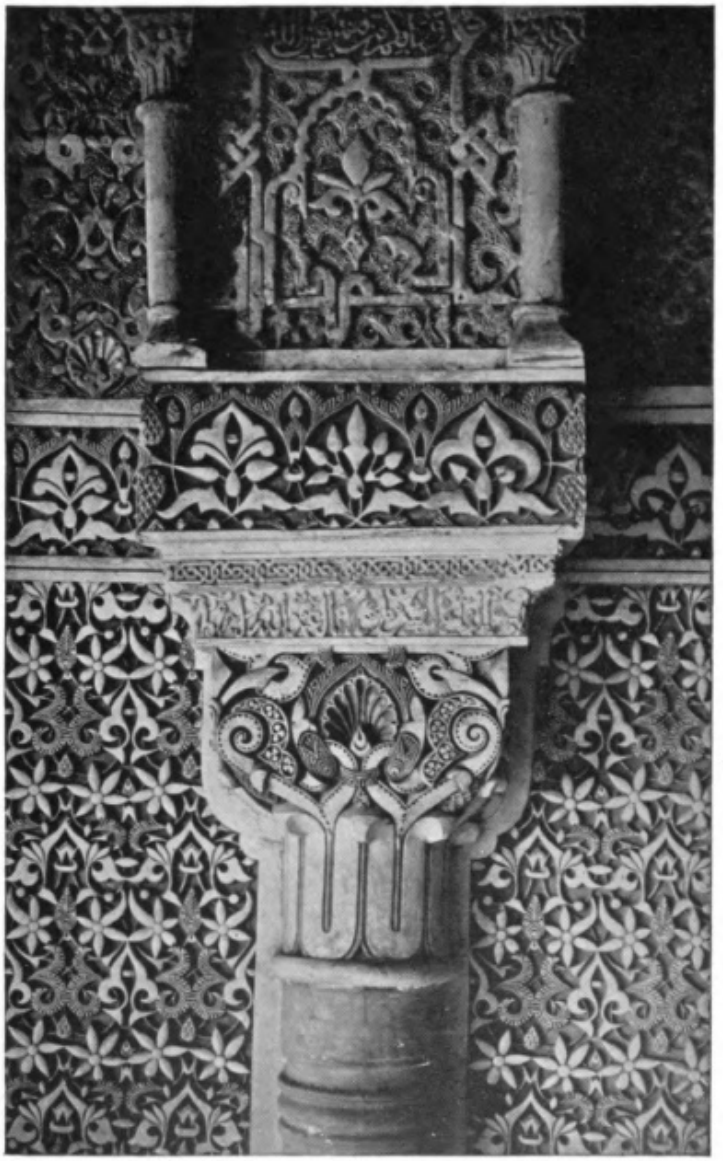


Fig. 121—Marble Pilaster, Court of the Albercas, Alhambra.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

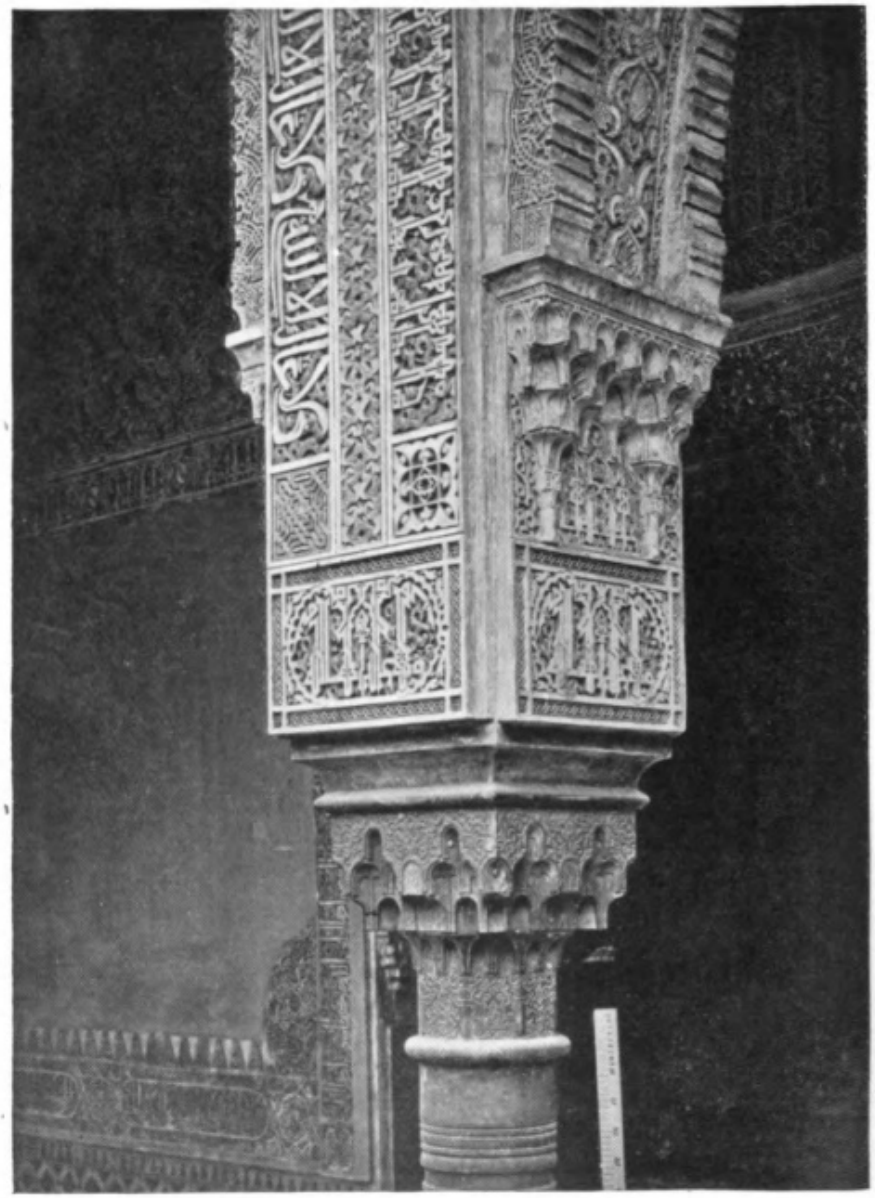


Fig. 122—Marble Capitol, Alhambra.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

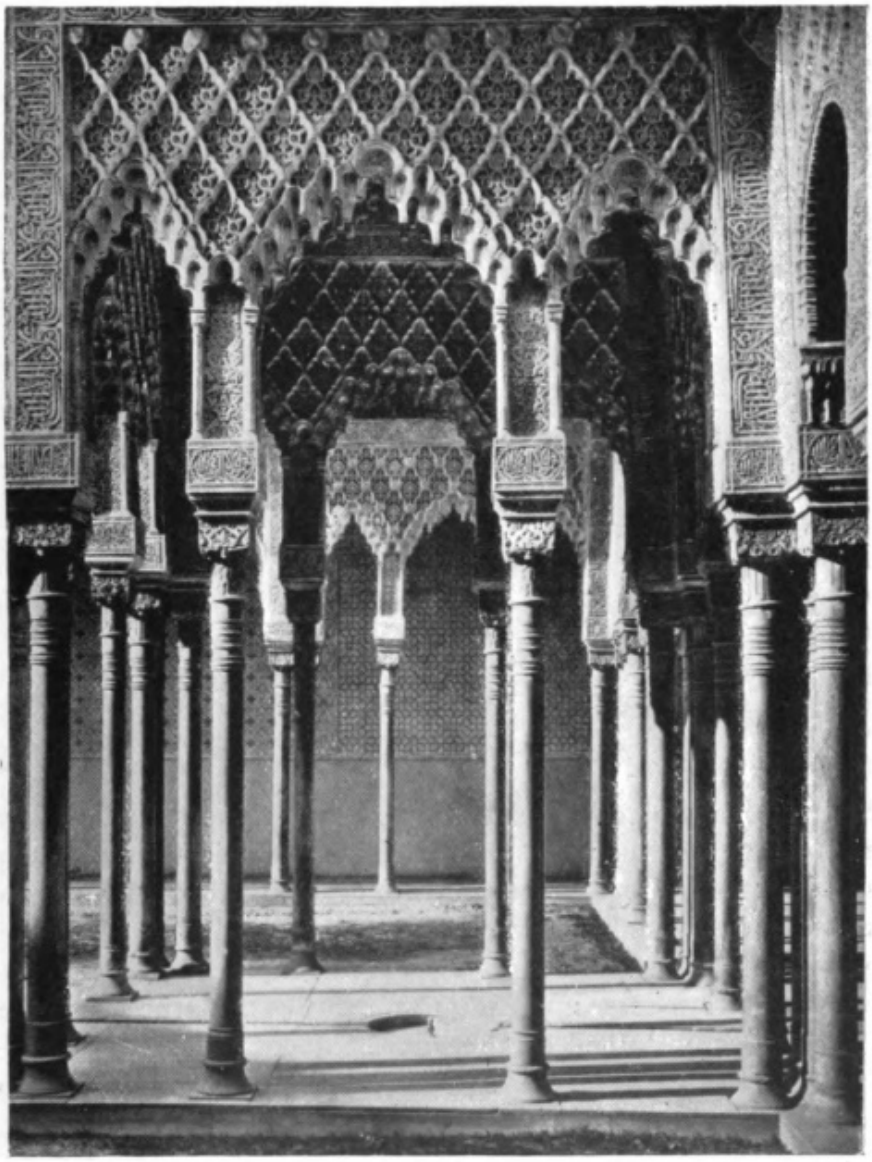


Fig. 123—Court of the Lions, Alhambra.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Fig. 120.

inscriptions which indicate that the designers had a due appreciation of their own efforts, for it is stated that whoever should study the decorations would be instructed as by a treatise on design. Again, the artist proclaims that the windows were placed high above the floor to prevent the spectator from contemplating the beauties of nature when he should be entertained by the interior decorations.

The ornamentation was applied to the walls and ceilings in stucco and plaster; marble was seldom employed. Fig. 117 gives a bit of detail showing the method of working out a design on a flat surface. The same ornament was applied to capitals (Figs. 119–123).

The columns were very slender, about twelve diameters in height (Fig. 123). The beauty of the design was increased by the use of color. Red, blue and yellow (gold) were used



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

to emphasize the important parts of the whole scheme. At a distance the general geometric forms appear. This is illustrated in Fig. 118, where the detail is subordinated by using a lower tone of color. The same plan is noticeable in the Oriental rug of the modern Moslems.

Quite in contrast to these designs are those composed wholly of straight lines, distant relatives of the Egyptian fret and the Greek meander (Figs. 36 and 77). Figs. 124 and 125 present a few of the innumerable *interlacings*. At the top of Fig. 125 is another Arabic inscription.

Fig. 126 contains a few brush drawings of Saracenic elements. Note the exquisite curvature and the vigor and life in all. Here again we see that these figures are very much like plant forms, yet no one of them is the picture of any particular growth.

In the larger cities the Jewish synagogues furnish Saracenic models that lack but little of being complete mosques. The Jews in Spain abut the time of the Moslem conquest, 1492, first adopted this style of building. Aside from its use in synagogues, Saracenic architecture has had no great influence on later work, although occasionally a horseshoe arch or acorn dome may be seen in modern buildings. These characteristic elements of Saracenic architecture are very suggestive of Mohammedanism, probably this is one reason they are not more universally employed.

Saracenic ornament is adopted in modern times when a light, graceful, fantastic surface covering is desired. The interior decoration of theatres, frets, grilles, rugs, tapestries and wall-papers are often Saracenic in character.

## Teaching Saracenic Ornament.

(1.) The talk on Saracenic ornament should involve an elaboration of the following points: Mahomet and the beginning of the Saracenic style; mosques, Taj Mahal and its Saracenic features; arches; spread of Saracenic art; Alhambra; characteristic ornament; columns, frets, elements, influence. General additional suggestions may be found in Chapter V.

With a brush each pupil may then make (2) sketches of Saracenic elements from Fig. 126, or interesting bits may be



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

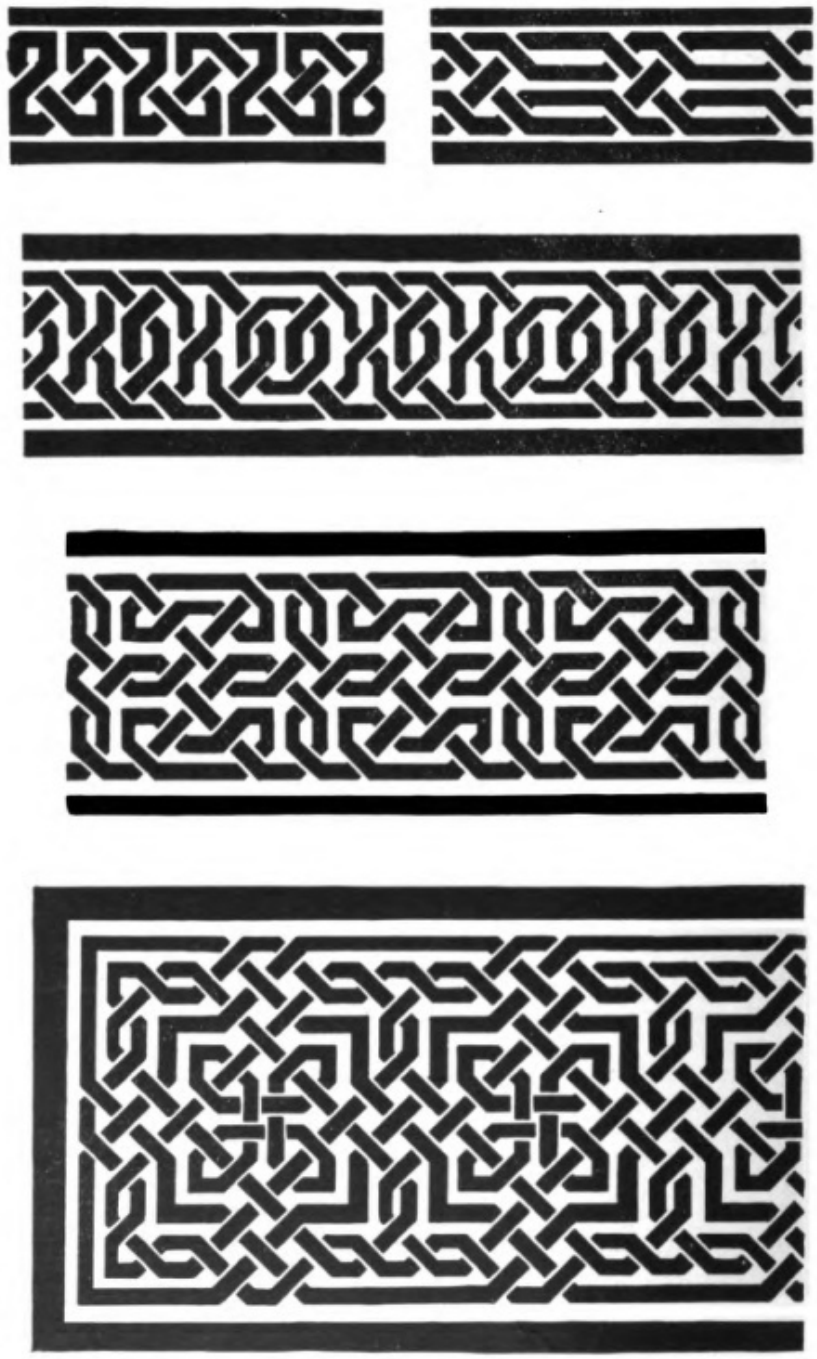


Fig. 124.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

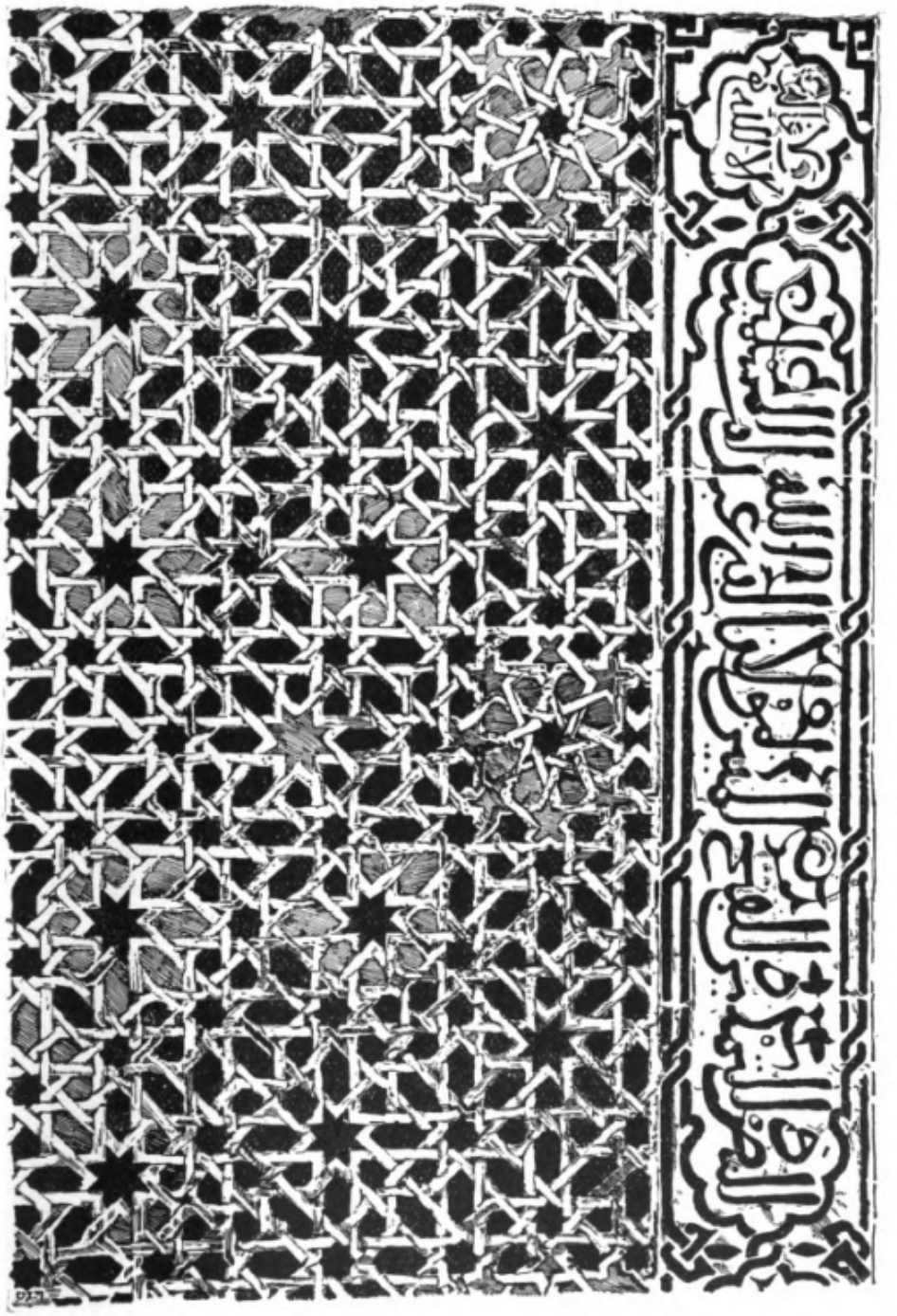


Fig. 125.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 126.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

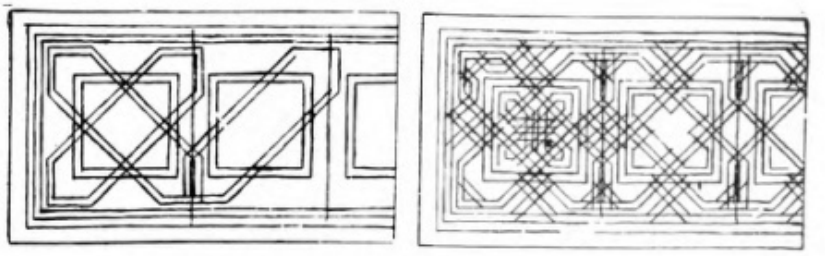


Fig. 127

chosen from Figs. 116–118. These can not be well drawn if the pupils use any but vigorous and live methods. There are no "inch at a time" lines here. Find the longest curves, or those which seem best to build upon, and draw them first with a continuous free stroke of brush (or pencil). After copying one of these brush drawings several times, try to reproduce it from memory. Get the *spirit* of the drawing. When the pupil has this quality in his reproductions, he will perceive that the same attributes which make these Saracenic units beautiful permeate all nature. He is now ready to receive suggestions from nature. Designing becomes selecting (and drawing).

Some of the class may like to draw one of the frets in Fig. 124. The method of drawing the lowest one is shown in Fig. 127. As in drawing everything else, the largest features should be represented first, then the details can be put in their proper positions. These frets should be sketched in free-hand, and when the parts have been rightly placed, the lines may be corrected, strengthened with a rule and the bands inked in.

Probably there will be a few pupils who are able to draw one of the capitals.

(3.) Each pupil, or all those in a room, may make a sheet of collected pictures of Saracenic ornament and architecture, including modern buildings and designs showing the influence of this style. See Figs. 49, 79 and 155.

(4.) Drawing of one large Saracenic surface pattern. Draw the large enclosing forms first, working toward the details and background. See Fig. 128.

(5.) If time permits, a very interesting exercise consists



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

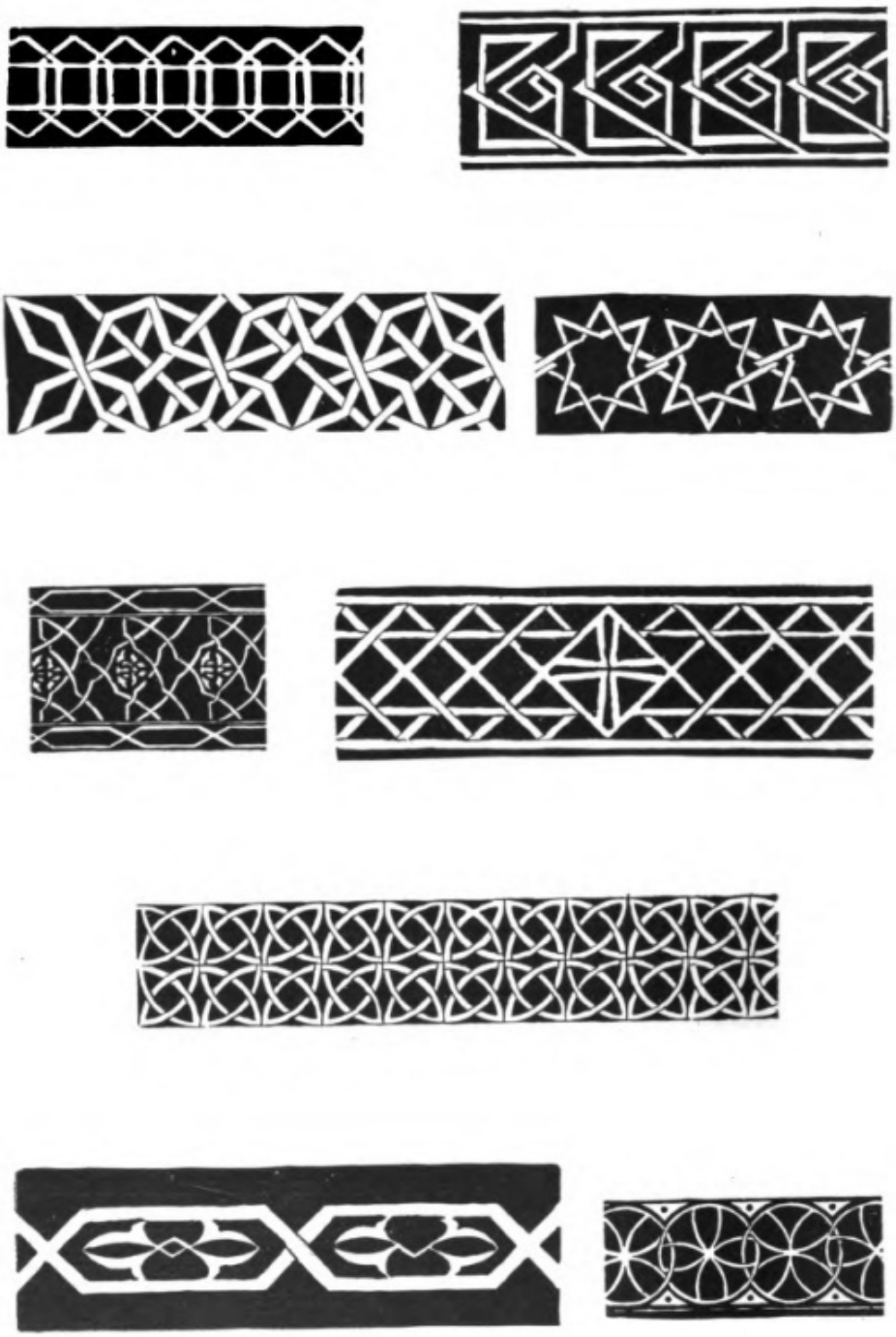


Fig. 129—Original Designs by Pupils.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

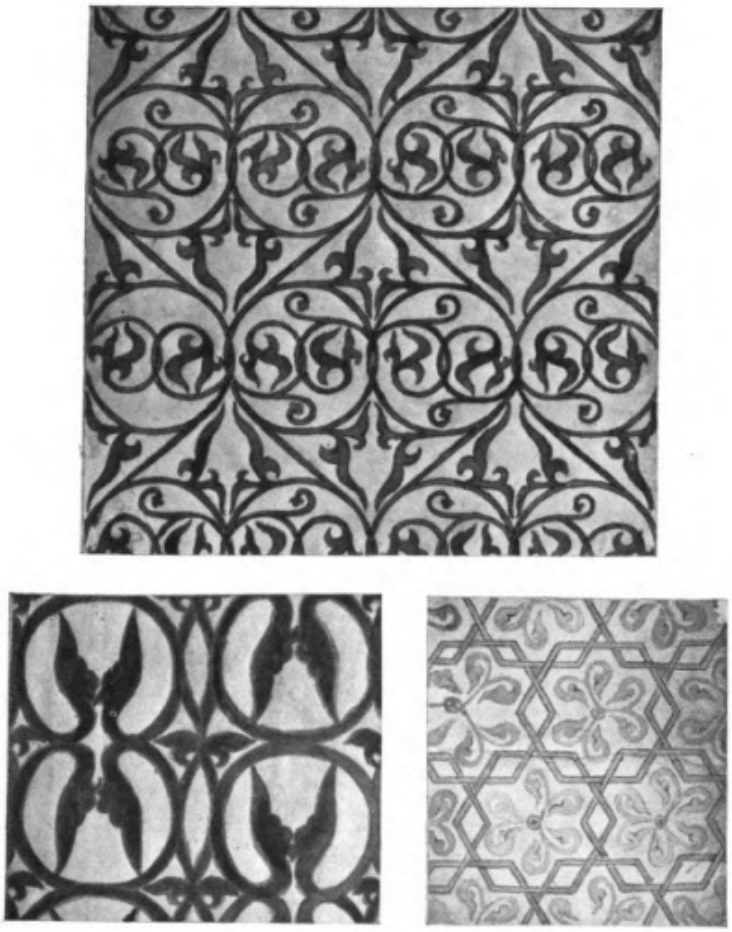


Fig. 130—Original Designs by Pupils.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Digitized by Google

Fig. 131—Mohammedan Dome and Dome of the Rock, Jerusalem.

Original from NEW YORK PUBLIC LIBRARY

in designing original fret borders, as shown in Fig. 129, or in making original surface patterns from Saracenic elements. (Fig. 130.)

## Saracenic Architecture

Dome of the Rock, 638 A. D., Jerusalem; Sultan Hassan, 1356; Ibn Touloun, 876; Tombs of the Khalifs, 1250–1400, Cairo.

Mosque at Cordova, 786–796; Alcazars at Seville and Malaga, 1225–1300; Giralda at Seville, 1160; Alhambra at Grenada, 1248–1306; Spain.

Jumma Musjid and Tomb of Mahmud at Bijapur, 1550; Pearl Mosque and Taj Mahal at Agra, 1650; India.

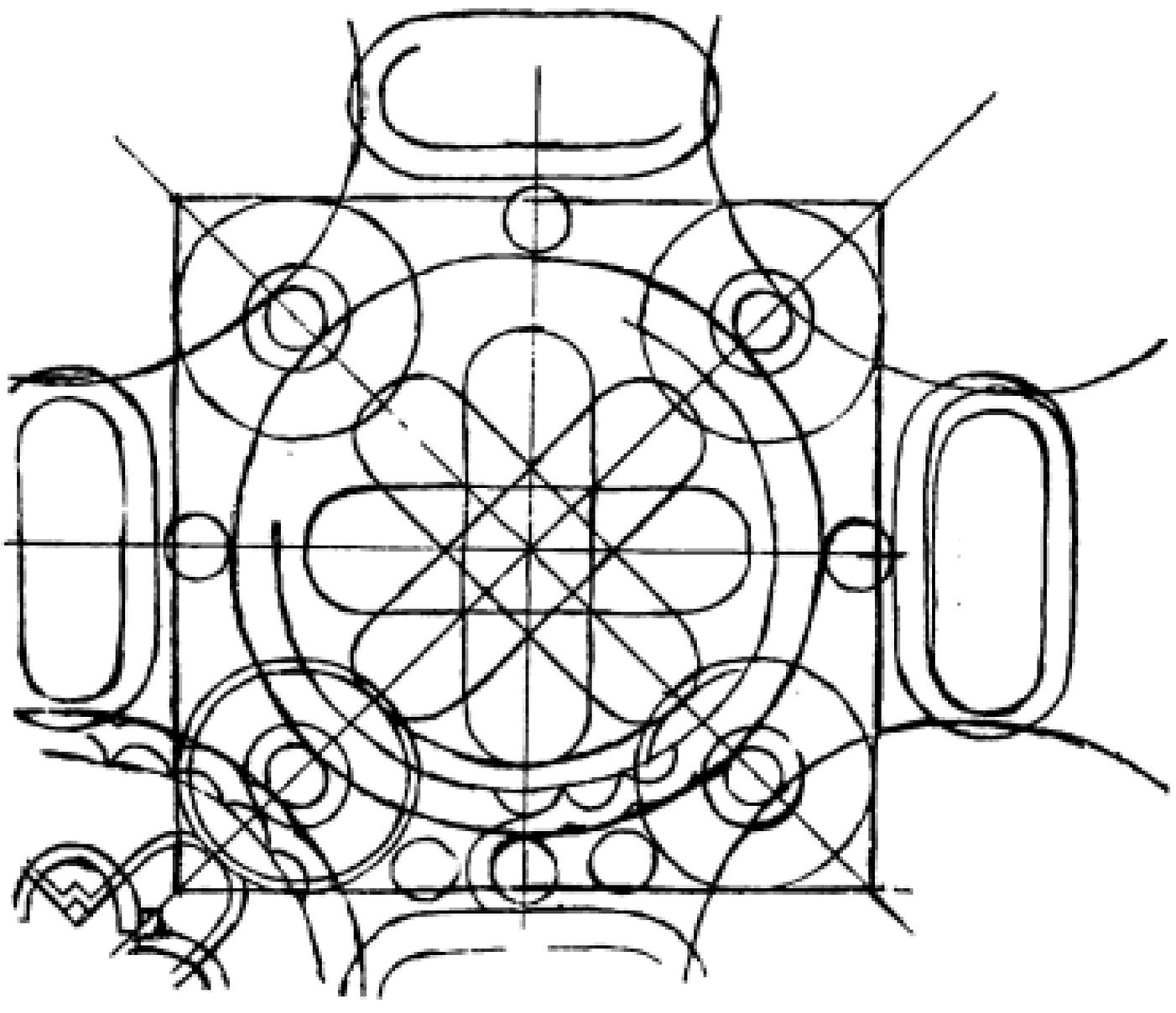


Fig. 128.



Digitized by Google

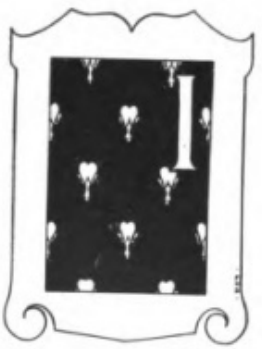
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER XI.

## GOTHIC.—A. D.-1150-1500.

"How strange the sculptures that adorn these towers!
This crowd of statues, in whose folded sleeves
Birds build their nests; while canopied with leaves
Parvis and portal bloom like trellised bowers,
And the vast minister seems a cross of flowers!
But fiends and dragons on the gargoyled eaves
Watch the dead Christ between the living thieves,
And, underneath, the traitor Judas lowers!
Ah! from what agonies of heart and brain,
What exultations trampling on despair,
What tenderness, what tears, what hate of wrong,
What passionate outcry of a soul in pain,
Uprose this poem of the earth and air,
This mediæval miracle of song!"

—*Longfellow.*



IT was about eight hundred years ago (A. D. 1096) that the people in Northern Europe determined to drive back the Turks, who threatened to invade Italy, and to take possession of the Holy Land. We may well commence the study of Gothic ornament with the story of the crusades.* These early Christians saw many beautiful temples in the East which were erected to glorify the pagan gods. In all the history of the world, the best architecture has been closely connected with religion. This is true of pagan as well as Christian nations. The crusaders returned home with an unbounded enthusiasm to erect houses of worship, dedicated to the true God, which would surpass those devoted to paganism. These Christian people did not wish to be imitators of heathen nations, and therefore evolved, and in less than one hundred years perfected, a style of

* "Crusades," Encyclopædia Britannica.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 132—Cologne Cathedral.

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

architecture and design very different from anything which had been seen before.

Let us for a moment examine a picture of a Gothic cathedral—that at Cologne is an excellent illustration. (Fig. 132.)

What an immense structure it is; the surrounding buildings look like mere sheds! Those mighty towers rise to a height of five hundred and twenty-five feet, and are echoed again and again all over the building. This calls our attention to the strong vertical tendency of all the masses and leading lines. Everything seems to be stretching heavenward. Gothic lines are "infinitely perpendicular without the horizontal restraint of the Greek temple, which cut short aspiration heavenward and bound it firm and solid to the ground." This grand architectural structure was commenced in 1248, and finished in 1880. It was one of the results of the crusades.

All classes helped to build the cathedrals. Nobles and peasants worked side by side, dragging the stone from the quarries; and there was quite a rivalry between the neighboring towns to see which should have the most magnificent church. Working on the buildings was regarded as a form of religious worship. They were built in the form of a cross. Cologne Cathedral is over five hundred feet long and about half as wide. Perhaps the builders thought that the snow and ice would be less likely to remain on the roofs and spires, if they were made nearly vertical. Windows were introduced everywhere that the structural design permitted, so that the warm sunlight might help to heat the building in winter. This is true of northern Gothic churches. In the warm southern portions of Europe, we know that the same people built with much less-inclined roofs and smaller windows. (Fig. 133.)

We notice two forms of windows—the pointed arch (Fig. 134) is employed in one, and the other, the rose or wheel window (Fig. 135), is circular in shape. This pointed arch is seen repeatedly, not alone in the windows, but in doors, spires, buttresses, and in all detail decorations. Its origin is not definitely known. Various theories have been promulgated by different authors. Some have suggested that the intersections of semicircular arches led to the construction of



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

this arch; others trace it to the interlacing of the branches of trees planted in parallel rows. It is probably true that it was taken from some of the buildings found in the East. (A very few arches were used in Egyptian underground tombs 3,000 or 4,000 B. C., but so far as is known, they never were employed in other buildings of that period.) It is certain that it was never used in Europe previous to the end of the first crusade, and soon after the return of the crusaders it appeared all over that continent.

Probably the first Gothic churches had windows composed of one pointed arch; later, this arch was subdivided so as to make a geometric tracery inside. The same may be said of rose windows,—small circular windows at first, enlarged in after patterns, and changed to complicated designs. All were beautifully illuminated with stained glass, which gave a rich coloring to the inside of the building. This use of stained glass seems to have been suggested by the mosaic floor and

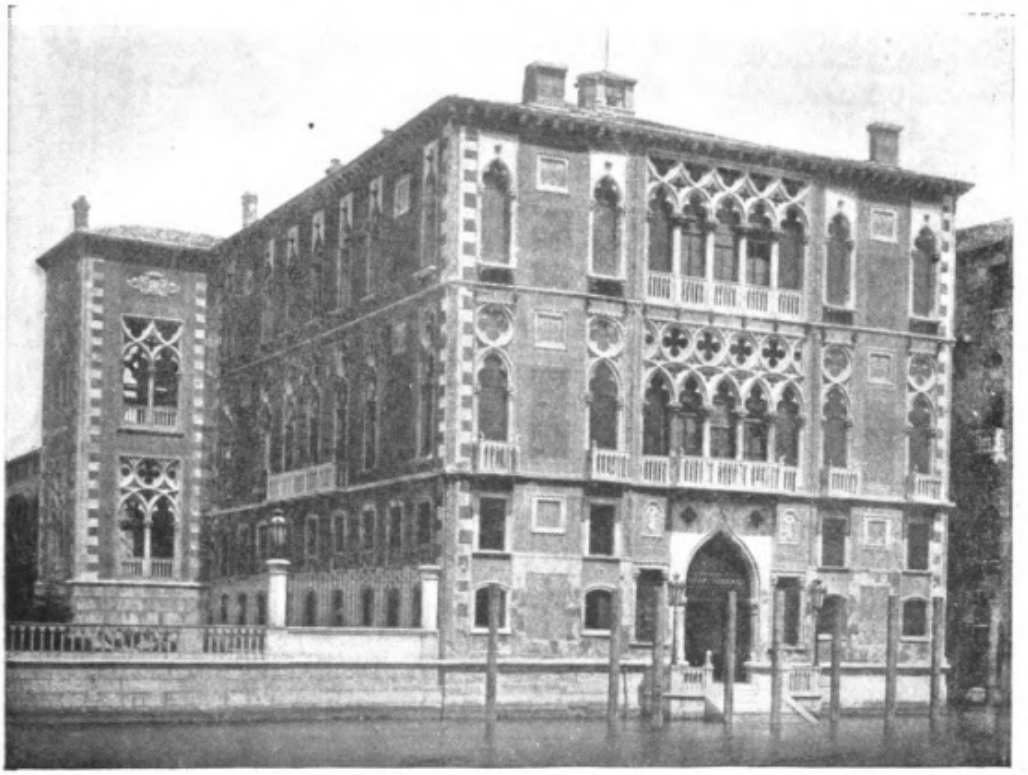


Fig. 133—Franchetti Palace, Venice.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig 134.

wall pictures in the earliest Christian (Byzantine) churches of Southern Europe. The later churches contained windows which were often of immense size (the east window of Gloucester measuring thirty-eight by seventy-two feet), leaving but little available wall space, hence the color was applied to the windows.

Inside the church all decorations show the same long vertical lines. The columns are not usually one round piece, but are groups of shafts (Figs. 136 and 137). This emphasizes the height of the interior, as all the lines lead upward. Many of the capitals were realistic representations of the



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 135

leaves of trees, such as the oak, maple and beech; or of shrubs and plants, as the holly, raspberry-bush, laurel, grapevine and rose. Others were conventionalized representations of these natural forms (Figs. 138 and 139).

The crusaders saw much in the East that was beautiful in statuary. The Greek and Roman statues emphasized the physical perfection of mankind. The Goths, however, wished to make prominent the spiritual, and their first statues were thin, stiff and ungraceful, in order that the spectator might dwell upon the intellectual face rather than be impressed with the beauty of the form. Hundreds of niches were left by the architect, both on the outside and inside, for the reception of these statues. See Figs. 140–142.

The subjects chosen were religious—saints, martyrs, apostles, Christ, Mother and Child, and scenes from the Old and New Testaments. In the door of the Cologne Cathedral may



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

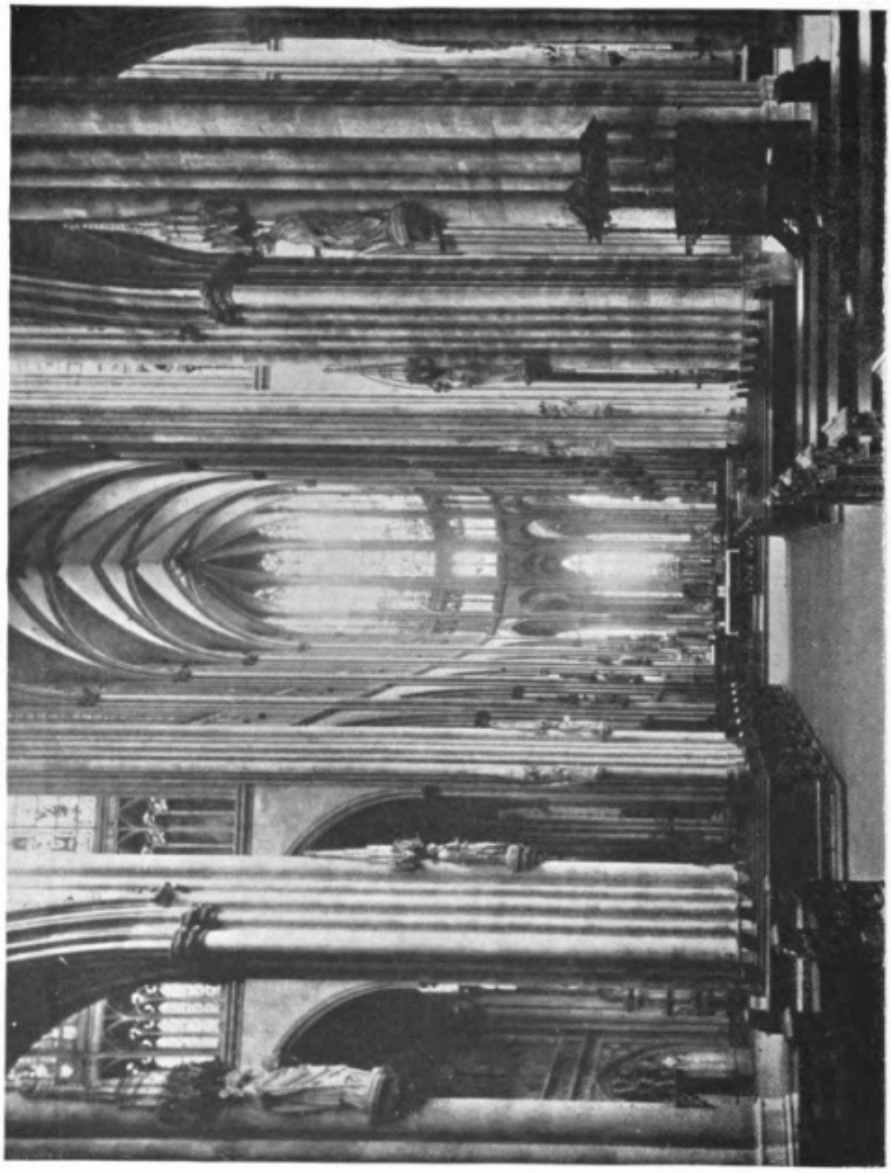


Fig. 136—Cologne Cathedral, Interior.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

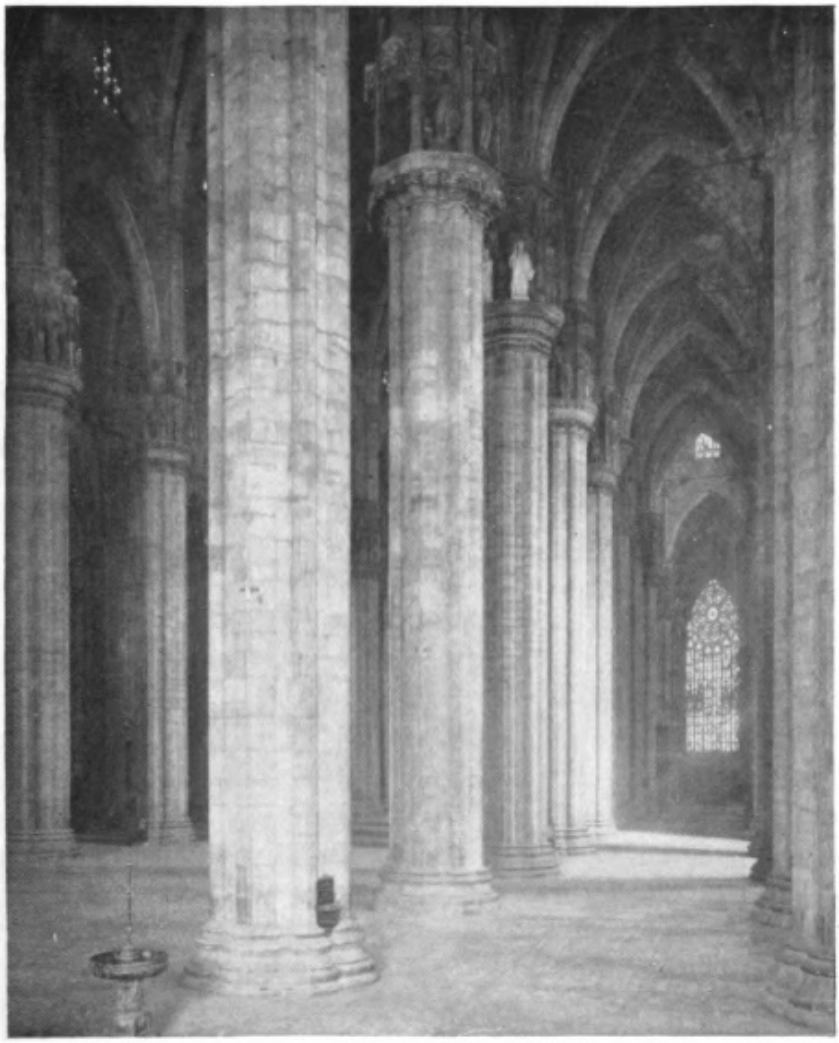


Fig. 137—Aisle, Milan Cathedral.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

be seen over eighty single statues and many groups. "Over and above the solemn shadows of column and vault, so full of religious repose, the light spring of pointed arch, heavy climbing shaft, the sky-tipped spire, the enduring lessons of carved stone and brilliant fresco,—to all these spiritual delights he added rays of heaven-tinted light, streaming through rainbow-hued windows alive with saintly and angelic forms, and filling the whole interior of the sanctuary with a soft effulgence that soothed the soul, and by its magnetic harmony lifted thought and feeling through all their earthly gradations up to their God."

Another method of proclaiming the purpose to which the churches were dedicated may be found in the symbols used in the ornament. (Fig. 143.) The two triangular forms and the trefoil are significant of the Trinity; the circle represents eternity, having neither beginning nor end; the quarterfoil, the four Evangelists; one circle surrounded by four others, Christ and the Evangelists; the fleur-de-lis stands for purity. The last three foils in the top row are elaborations of the first and second. In the lower line are some of the crosses, used by different religious orders, and a gargoyle, by some believed to be an evil spirit turned to stone by a good spirit. Tradition tells us that these grotesque images were placed on cathedrals to drive away the devil. Two other gargoyles are shown in Fig. 144.

The illustrations in Fig. 145 are interesting as presentations of naturalistic and conventionalized ornament. We have no difficulty in recognizing a familiar leaf in the drawing at the right. The other conforms with all the laws of natural growth; it is an idealized interpretation of nature, a composite photograph, rather than a reproduction of a single plant. It shows us the best type of Gothic ornament.

Westminister Abbey (Fig. 146), London, Milan Cathedral, Notre Dame, Paris, and many other churches and palaces (Fig. 147) of England, France, Germany and Italy are world-famous examples of Gothic architecture. There need be no hesitation in distinguishing a Gothic building; see how the characteristic Gothic elements are used in the churches and palaces illustrated in this chapter. Supposing we have before us a building, say Fig. 147, and we wish to know to what



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

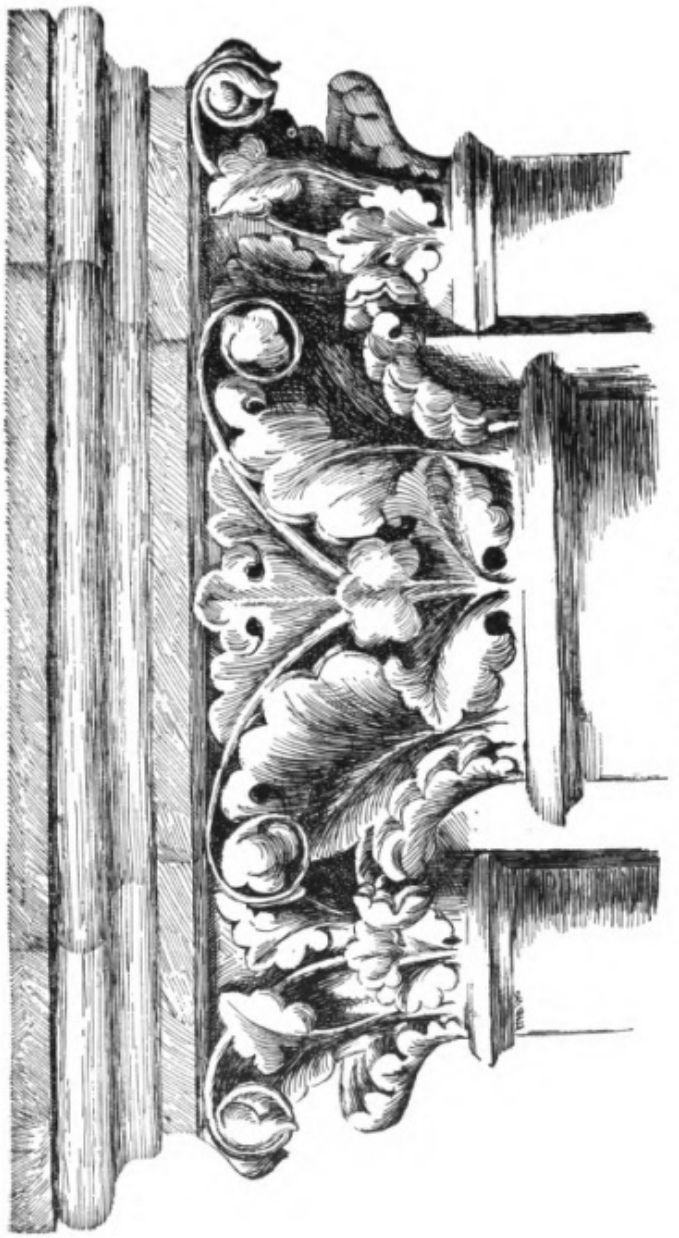


Fig. 138—Gothic Capital.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

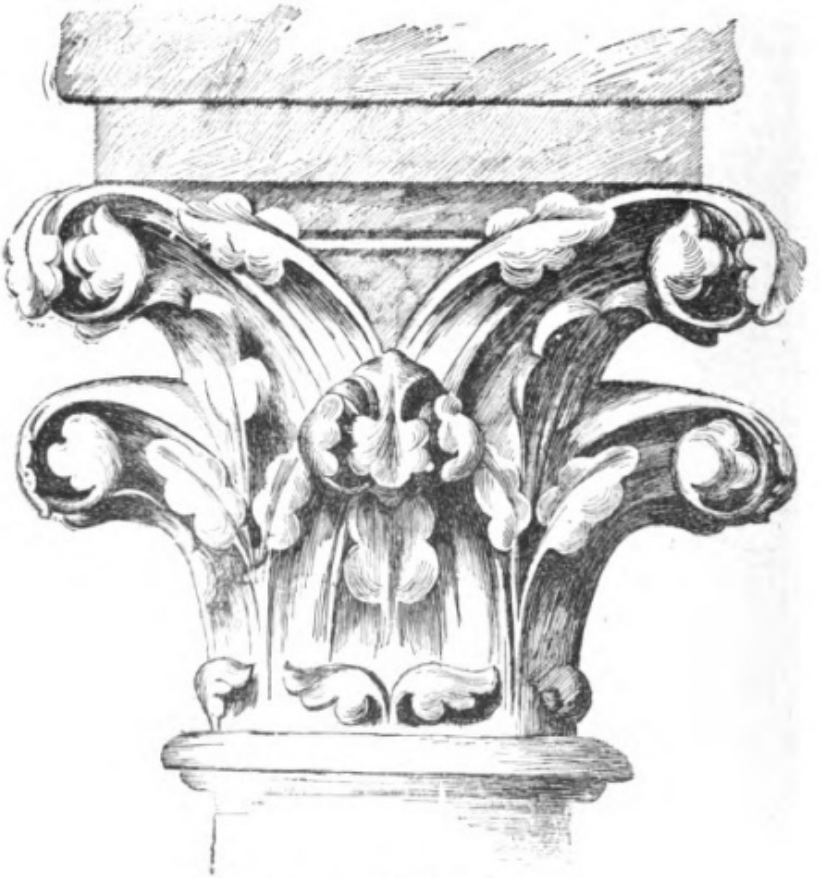


Fig. 139—Gothic Capital.

school of architecture it belongs. Let us see what elements of design the architect has employed. First, we notice numerous pointed arches; pointed arches were used occasionally by the Moorish or Saracenic architects; they are a prominent feature in Gothic architecture. These arches are supported on columns and capitals entirely unlike the Saracenic (Fig. 123), but very similar to the Gothic capital seen in Fig. 139. At the corner of the building are several statues. The Saracens never used sculpture (with one exception, the Court of Lions in the Alhambra) in connection with their architecture; the Gothic designers habitually left just such niches as these and in them placed similar statues. Then we may see the circle containing the quarterfoil between every two arches in the upper tier, also repeated in the form of small windows near the top of the building. On



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

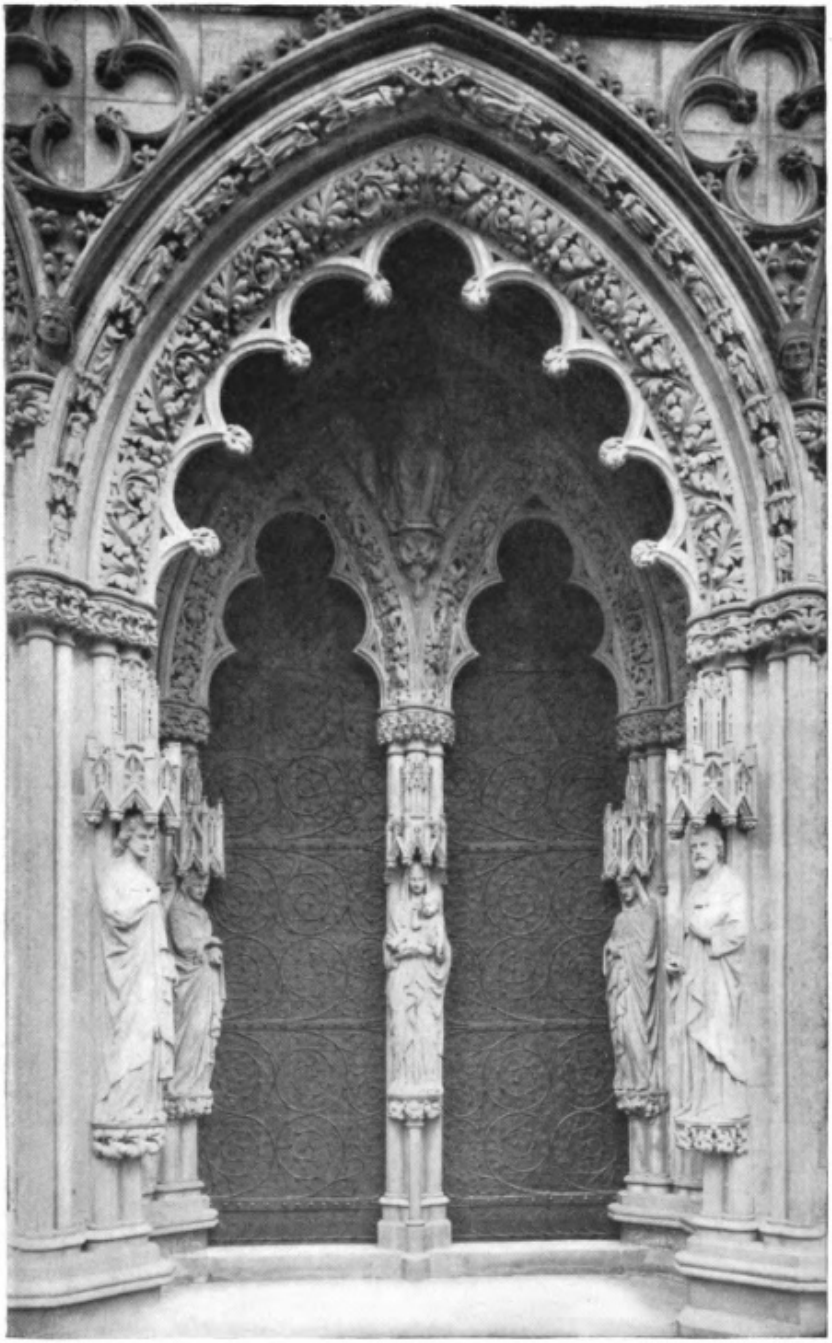


Fig. 140—Portal, Litchfield Cathedral.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

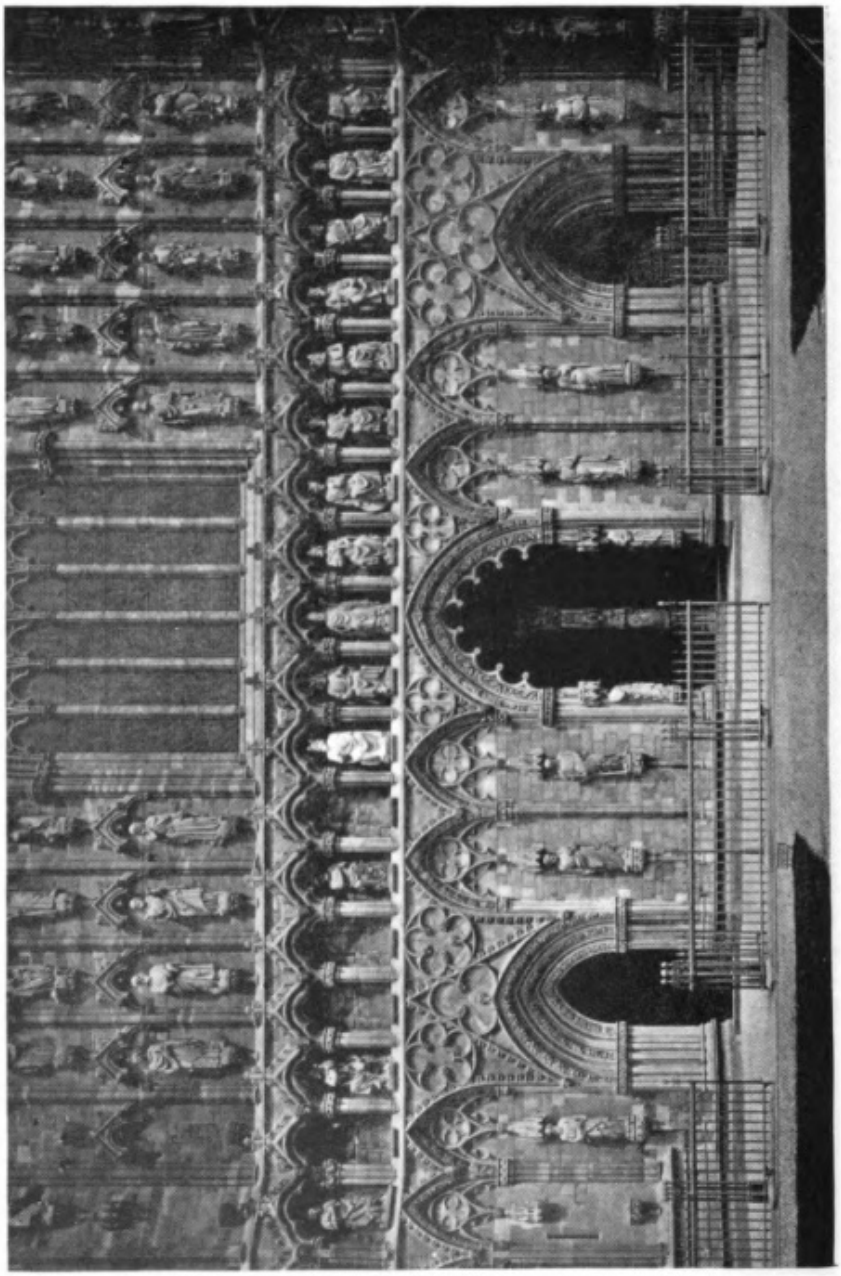


Fig. 141—West Front, Litchfield Cathedral.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

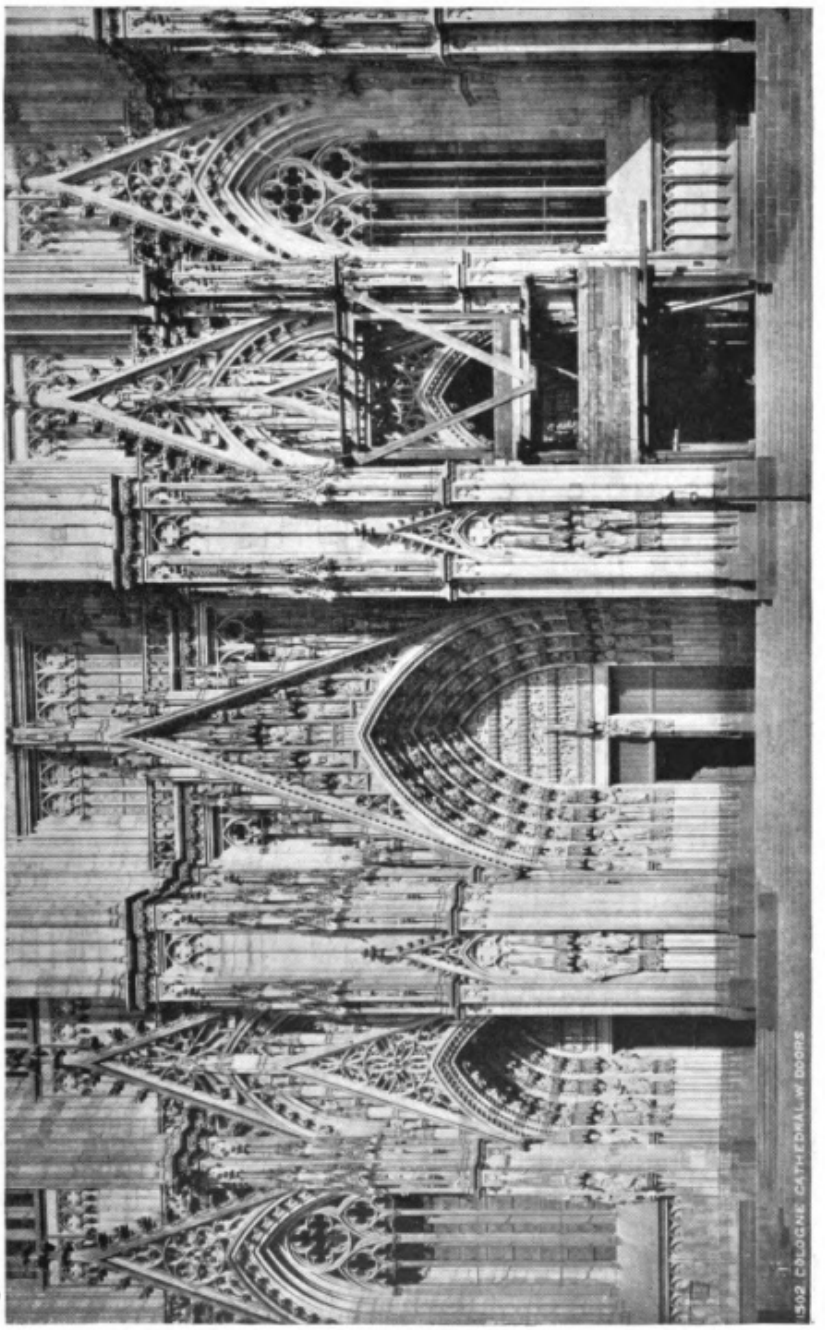



Fig. 142—Portals, Cologne Cathedral.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 143.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Fig. 144—Gargoyle, Notre Dame, Paris.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

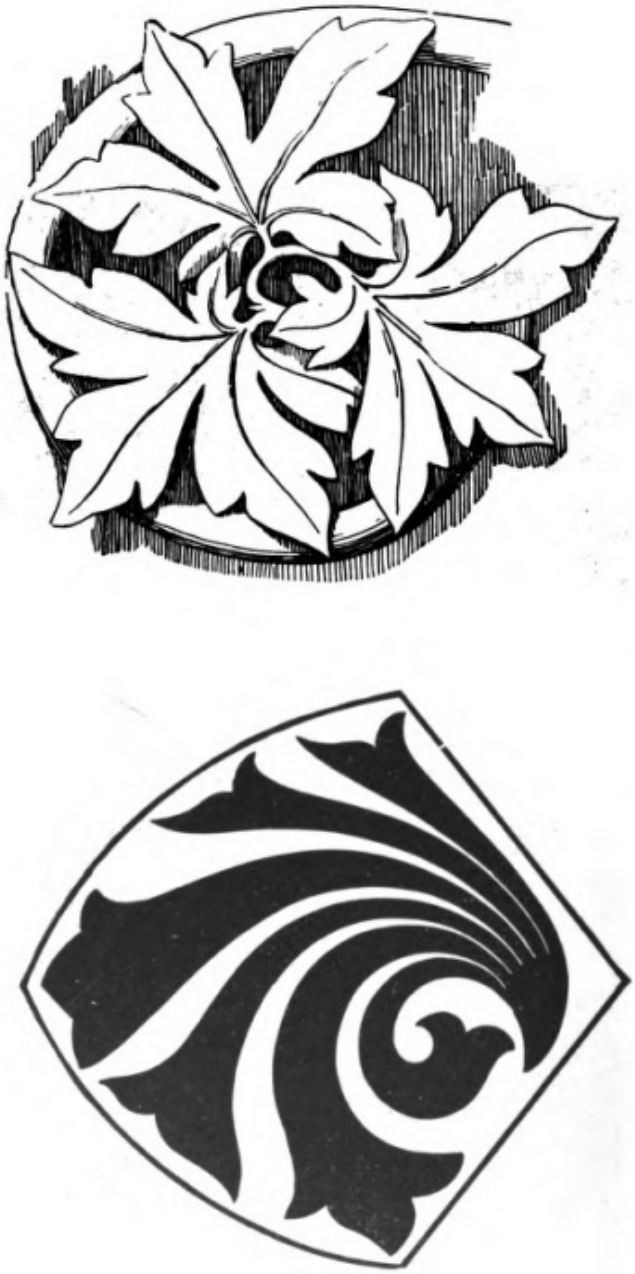


Fig. 145—Gothic Ornament.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

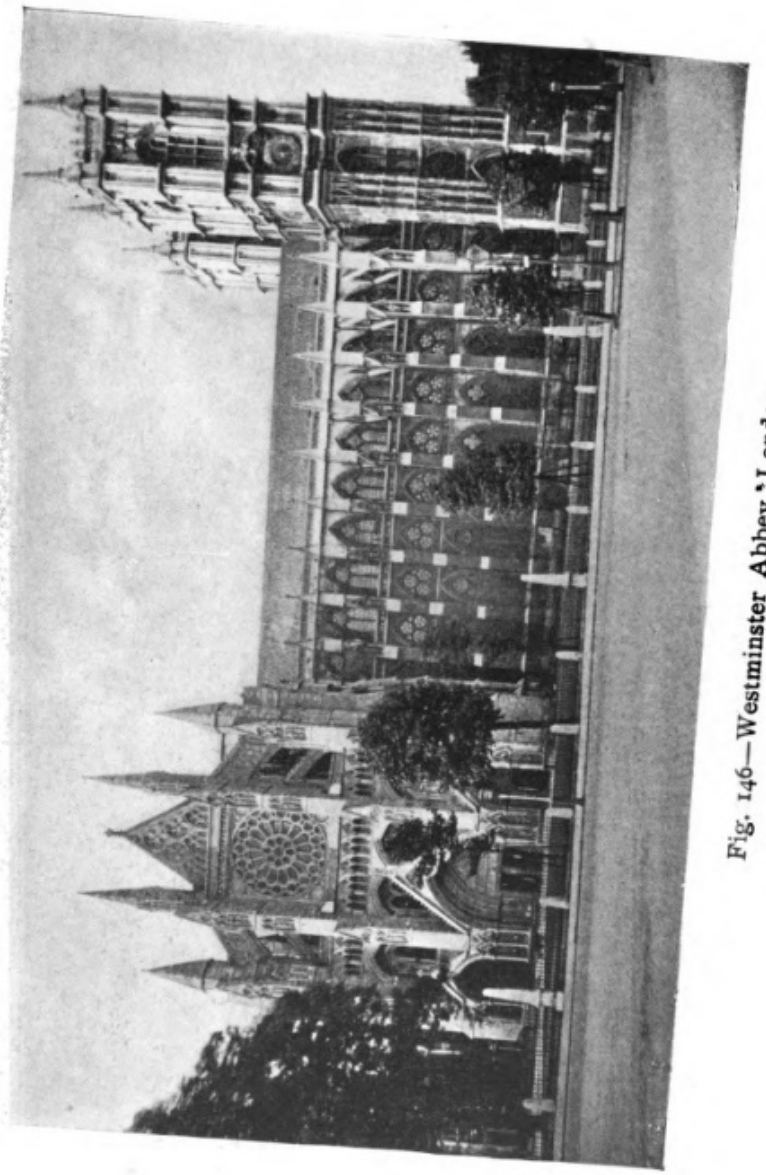


Fig. 146—Westminster Abbey, London.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

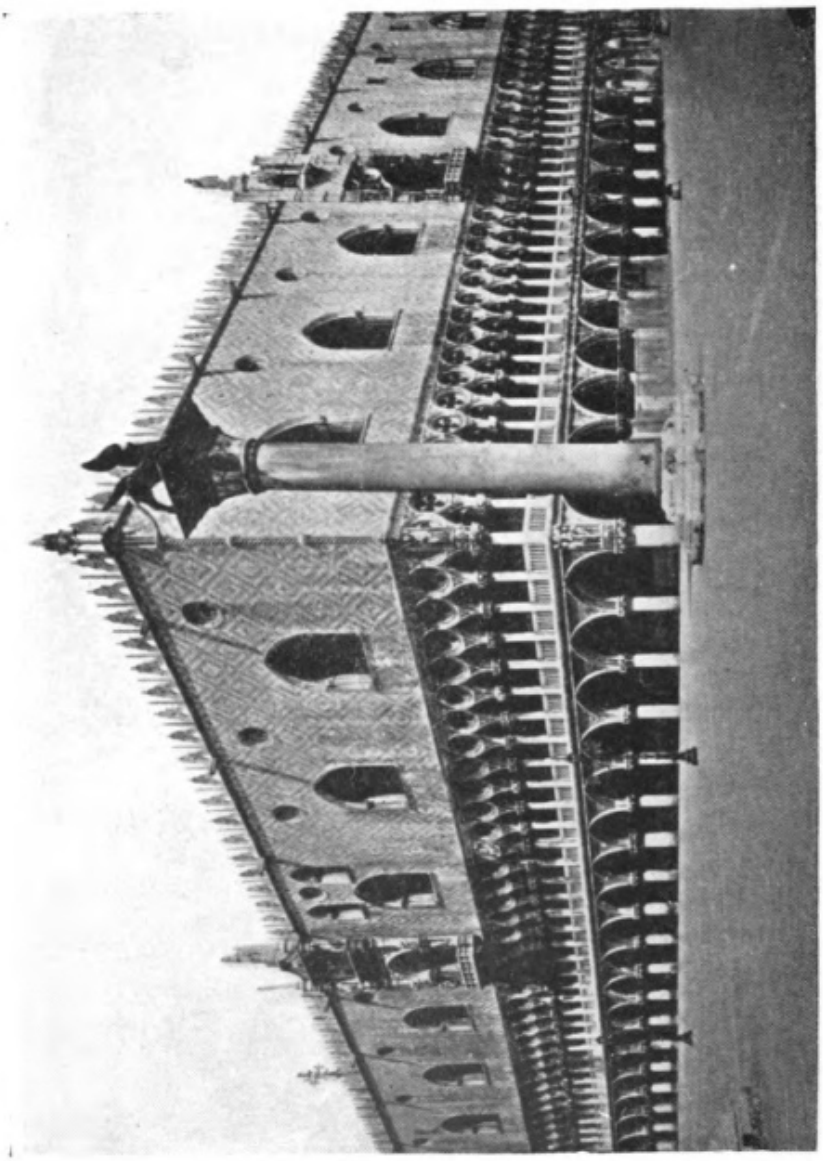


Fig. 147—Ducal Palace, Venice.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

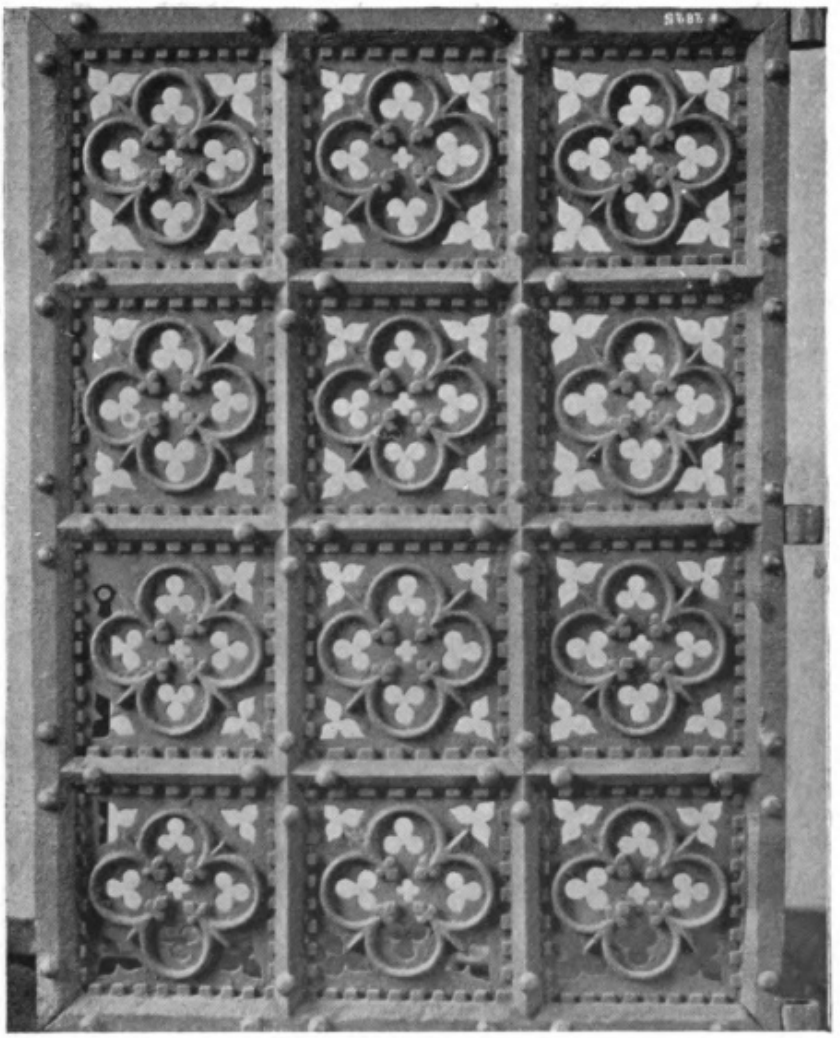


Fig. 148—Wrought Iron Detail, National Museum, Florence.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 149—Gothic.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 150—Gothic.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

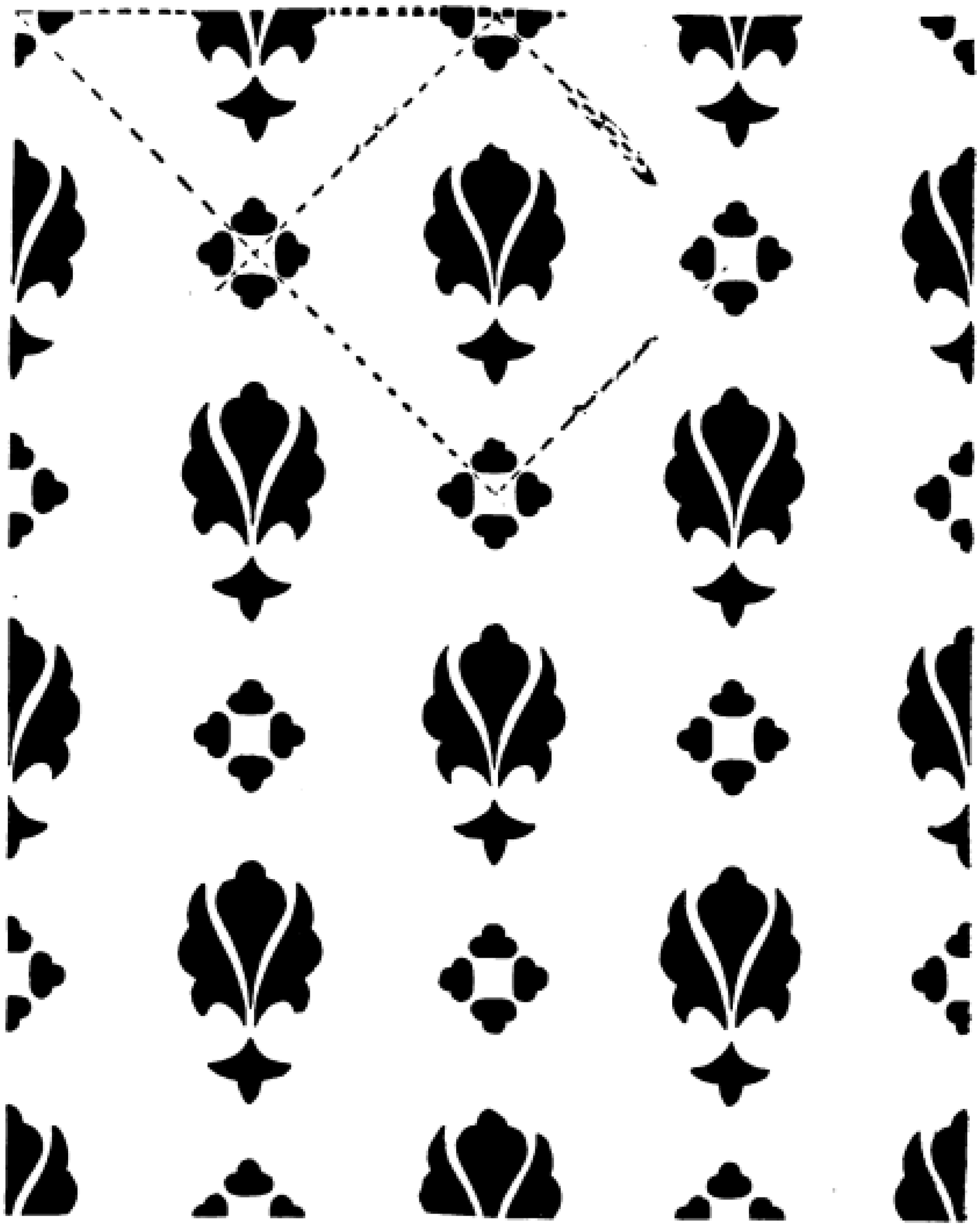


Fig. 151—Gothic.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

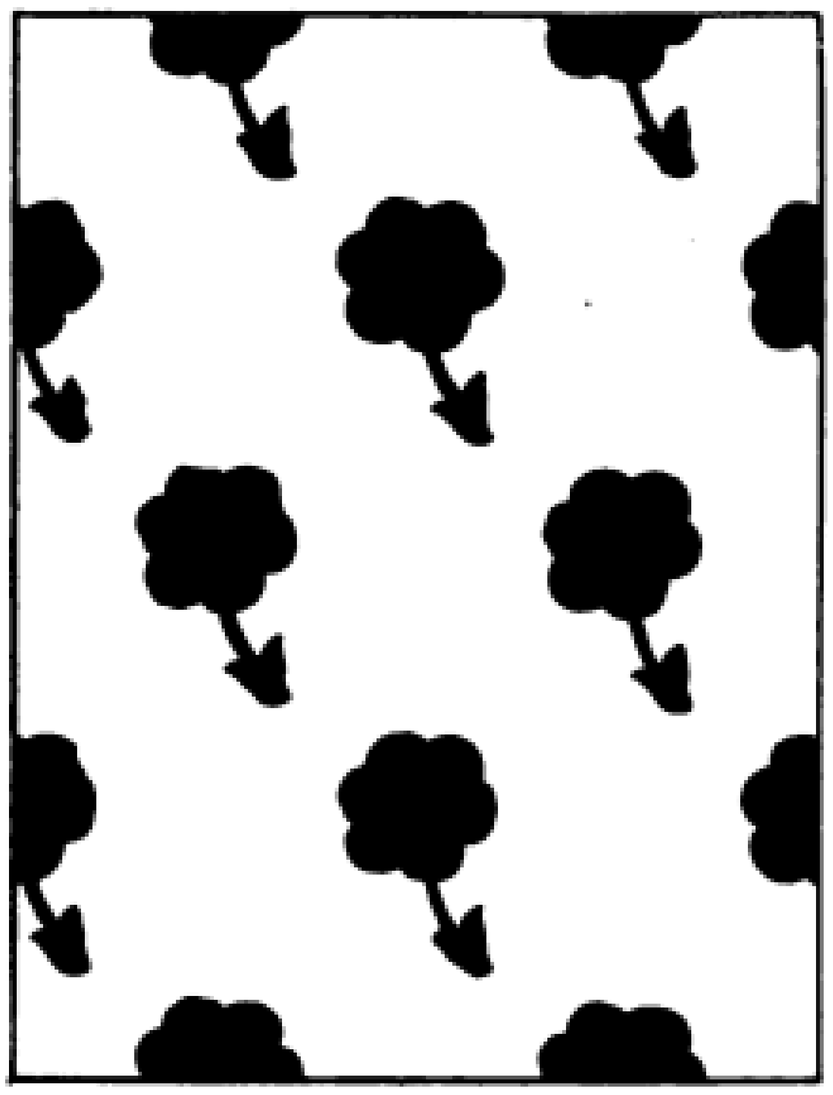


Fig. 152—Gothic.

the roof is a series of spire-like forms. Thus we find an abundance of Gothic elements in this palace and may be sure that it is a Gothic structure.

In much the same manner one can assign such an example of ornament, as Fig. 148, to the Gothic school.

We are now ready to intelligently interpret the symbolism if Figs. 149–152. These surface patterns have been selected because of their beauty, simplicity and symbolism. In Fig. 149 we see the trefoil, emblematic of the Trinity, to which has been attached a graceful well-balanced stalk adding to the beauty of the unit.

In Fig. 151 we have the fleur-de-lis, with the lower part suggesting the Trinity. The alternate unit *may* be translated as the four Evangelists, each from the form of representation suggesting association with the Trinity. Fig. 152 shows the sexfoil, which was a development of the trefoil. Fig. 150 is made from the fleur-de-lis.

The influence of Gothic architecture is very noticable in all Christian lands. Indeed there are comparatively few churches in this country which do not display the essential features of the Gothic buildings of the 12th–15th centuries. In modern decoration the crosses, foils, fleur-de-lis, etc., are as common as are pointed arches and rose windows in our churches and other buildings.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

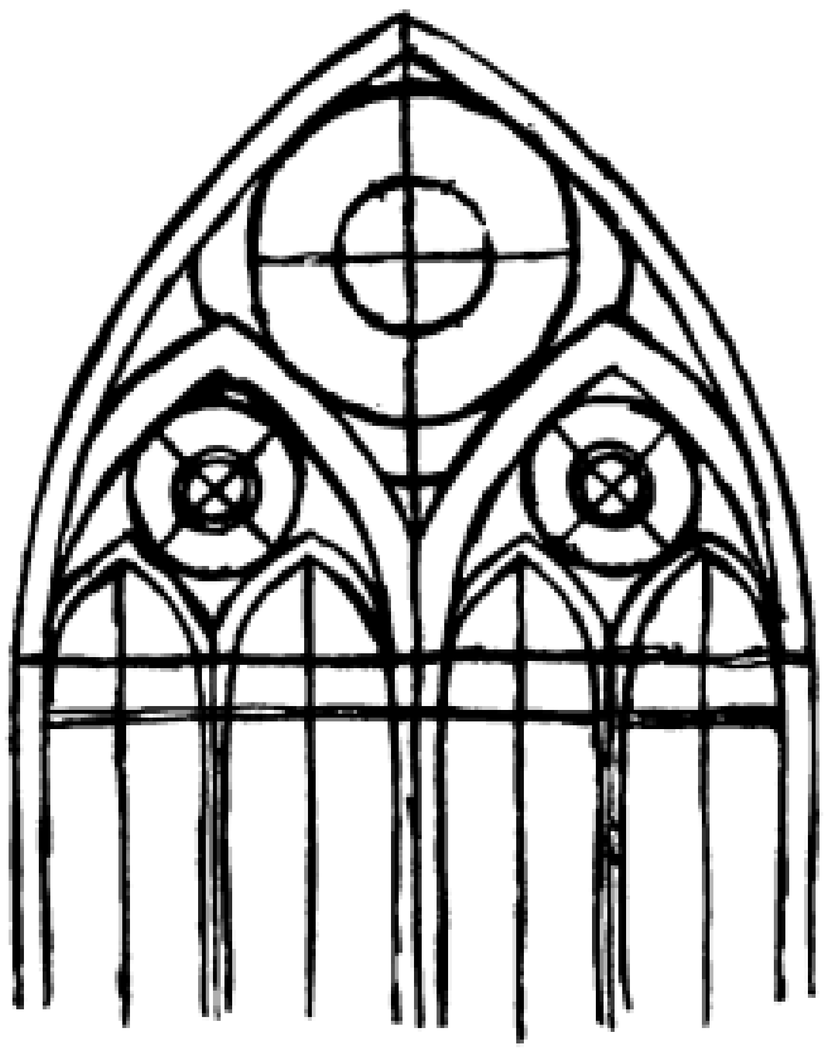


Fig. 153.

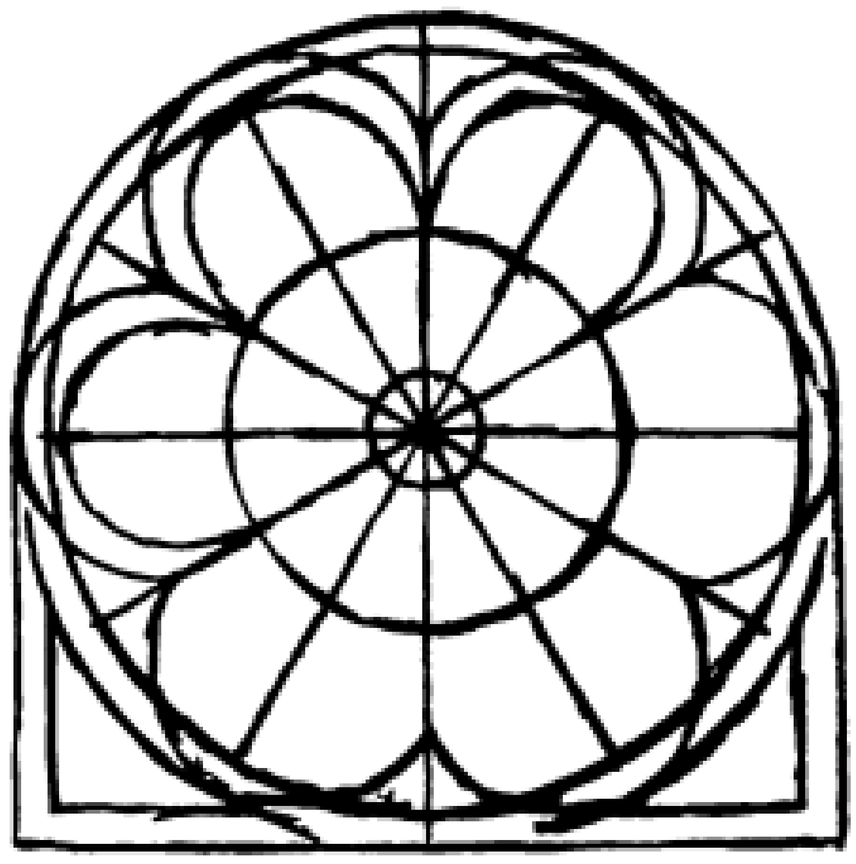


Fig. 154.

## Teaching Gothic Ornament.

**An outline of the work is suggested, as follows:**

**1. Talk on Gothic ornament; Gothic cathedral; characteristics—vertical tendency, pointed arches, rose windows, capitals, statues, by whom built and where; ornament considered as to its symbolism and beauty; influence on later art.**

**2. Sketches of Gothic elements, such as foils, crosses, circles, triangles, fleur-de-lis, windows and capitals.**

**These sketches may be made with a pencil, or with ink and brush, or both. It a is good plan to label them. Let each pupil draw those which most interest him. The method of beginning drawings of the pointed arch and rose window are in Figs. 153 and 154; large forms first, details last.**

**3. Mounting collected illustrations of Gothic elements, such as pictures of Gothic capitals, windows, crosses, triangles, foils and fleur-de-lis forms. (Some of the latter elements are common in dress goods, draperies, wall-papers, etc.) (Fig. 155.)**

**4. Analysis and careful drawing of one of the Gothic surface designs.**

**The use of the ruler, tracing paper and any other mechanical aid is allowable in drawing the surface design. Allow individual pupils to choose which surface pattern they will**



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

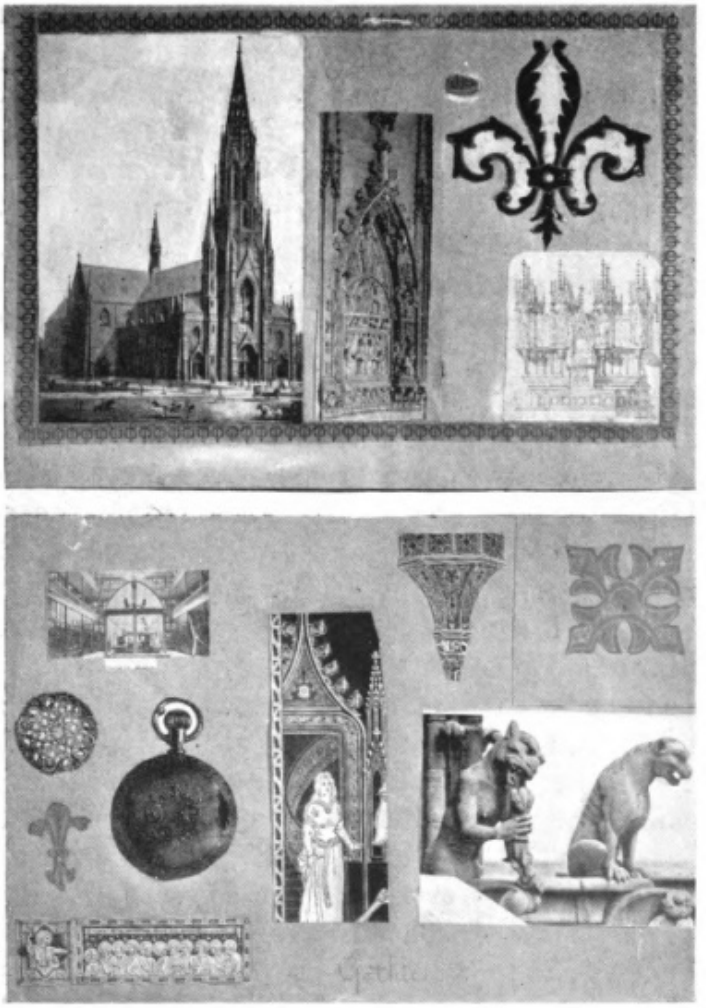


Fig. 155.

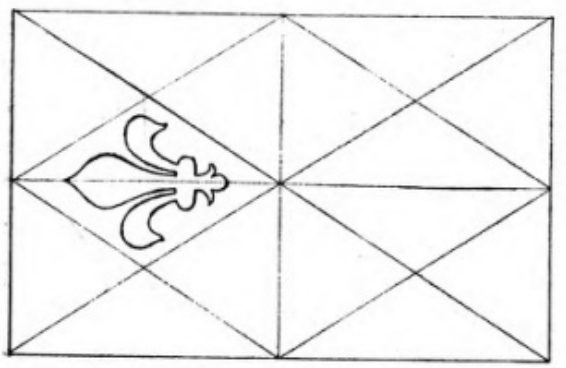


Fig. 156.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

draw; decide upon the shape of the space which holds one unit and space off a large oblong on the drawing paper to hold the same number of units as are represented on the chart; then a careful drawing is to be made of one unit, which may be traced and transferred to complete the design. (See Fig. 156.) The drawing may be finished by inking in the units after the style of the chart, or by coloring, if an illustration of the original coloring can be used to work from.

5. Interest the class to look for pointed arches, rose windows, Gothic capitals, etc., in neighboring buildings. If there is a church near the school which is built in the Gothic style, arrange to visit it after school hours with those members of your class who desire to go. As a preparation for such a lesson the teacher should carefully study the church in regard to its construction and ornamentation. It is surprising to see how much interesting material the pupils will find. Recently, after studying Gothic ornament, about forty pupils of the fourth and fifth grades with three teachers visited one of the best Gothic churches in the city. The spires, pointed arches, rose windows, steep roofs, trefoil and quarterfoil forms were noticed on the exterior and their origin and meaning discussed. In front were found several fleur-de-lis designs. Then all entered the church and noted the familiar single and clustered columns with oak leaf and acorn, or maple leaf, or conventionalized capitals, the stained glass windows and the very free use of foils and crosses, each of which now had a meaning to every child. A half hour later the class came out of the church and one boy discovered a weather-vane representing a rooster. For some time no one could think of any reason for placing such an object on a church. Finally some one remembered the story of the denial of Christ by Peter, and then the symbolism of the rooster was apparent.

Children of foreign parentage can often obtain at home much additional information regarding the European cathedrals.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

France: Notre Dame, Paris, 1163, (additions) 1235, 1257. Chartres, 1170, 1194, 1210, 1506. Reims, 1212, 1380, 1420. Rouen, 1202, 1280, 1507. Amiens, 1220, 1288. Bordeaux, 1260.

Great Britain: Canterbury, 1175, 1378, 1500. Lincoln, 1192, 1250, 1 60. Litchfield, 1200, 1275, 1325. Salisbury, 1220, 1263, 1331. Glasgow, 1242, 1277. Westminster, 1245, 1269 King's College Chapel, Cambridge, 1440, 1508. Gloucester, 1457.

Germany: Cologne, 1248, 1322 (towers finished 1883). Strasburg, 1250, 1277, 1429.

The Netherlands: Brussels, 1226, 1280. Utrecht, 1251. Antwerp. 1352, 1422.

Italy: Campo Santo, Pisa, 1278. Orvieto, 1290, 1310, 1330. Campanile, Florence, 1335. Milan, 1386, 1895.

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

# CHAPTER XII.

## ORIGINAL DESIGN.

"From the historical records of art we gather the results of experience, and see the interpretation of natural laws. From nature we get inspiration and material for our practice."

PIN up some of the pupils' drawings of historic ornament and lead the class to see how these units and designs were all suggested by natural forms, although sometimes the latter are much idealized—that is, the plant presented certain lines and combinations of lines which the designer called beautiful. Natural forms are seldom without a flaw of some kind; *it is the work of the designer to seek out the beauty*, to transform the features which are not pleasing, and to combine all into one harmonious unity.

The most beautiful designs are not those which literally copy nature, but those in which the *spirit* of nature is grasped and its facts *idealized.*

Our study of historic ornament shows us that designers have used three methods of work. At the right in Fig. 145 is a realistic representation of nature; it is a *naturalistic* design. Figs. 39, 40, 43, etc., are *conventionalized* designs in which the typical growths of the plants are retained. Figs. 71–77 are *idealized* designs in which no attempt has been made to portray the growth of any one species of plant. In Saracenic ornament (Chapter X.) it is impossible to say definitely that any design was made from a certain plant form. The idea seems to have been *to obtain beautiful forms from any source and to so combine or arrange them that the result is not a violation of our ideals of life and growth.* These forms were seized and arranged as nature arranges elements, to express *growth, radiation, rhythm,* etc.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

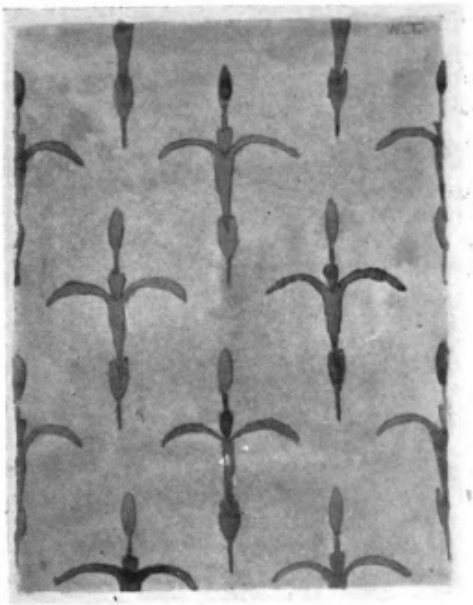


Fig 163.

Fig. 164

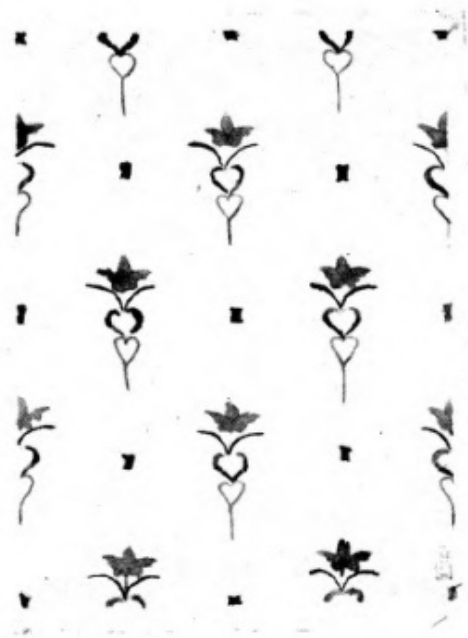


Fig. 165.

Fig. 166.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Fig. 167.

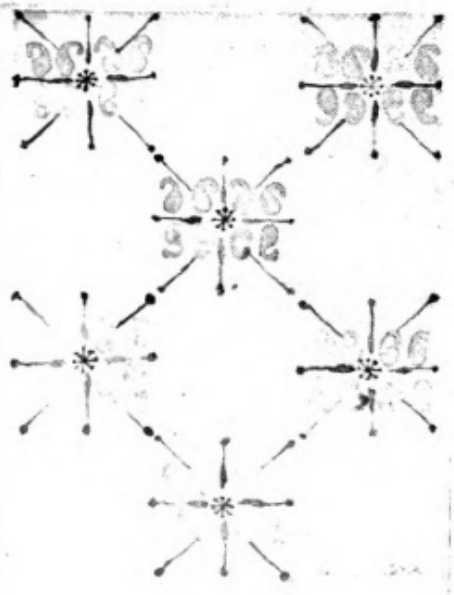


Fig. 168.

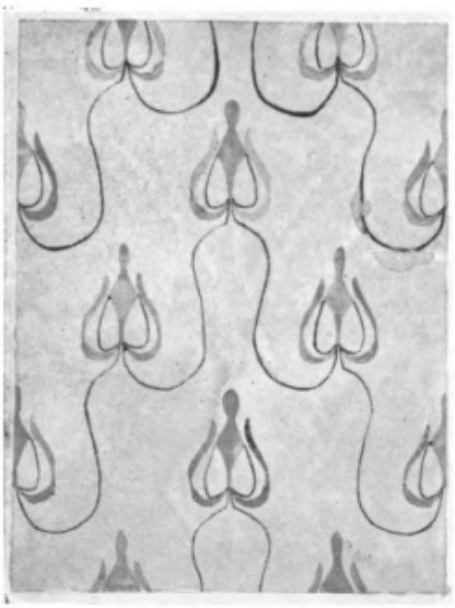


Fig. 172.

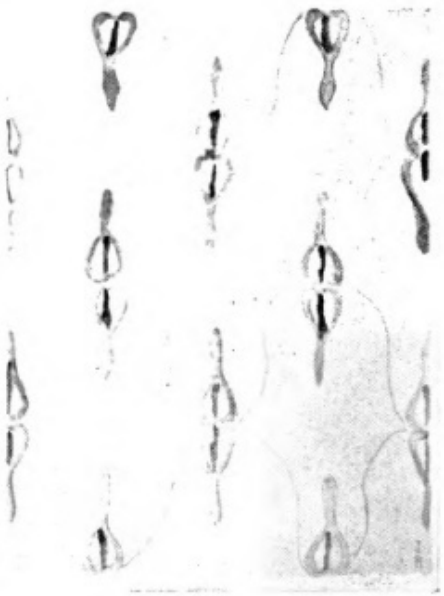


Fig. 171.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Two steps are necessary in making a design: First, to obtain a satisfactory unit; second, to repeat this unit to form a surface pattern. The beauty of the design depends upon the beauty of the unit employed. Designs may be made from any natural forms, but it is wise for pupils to choose plants which seem to be rich in beautiful lines and masses. Every detail must be beautiful in a beautiful design; the larger the detail, the more beautiful it should be. Good drawing bears the same relation to design that good singing or playing does to a musical composition.

Fig. 159—"Dont's."

With pencil, or better, with brush and ink, each pupil is to make a sheet of units from some plant; *drawing it, from all points of view, as a whole and any details which are interesting.* Remember that these units are worthless unless they express ideas of beauty.

The drawings in the upper half of Fig. 157 are studies made from the dandelion; those below are conventionalized units suggested by the upper drawings. (The dandelion is chosen for several designs in this book because it is so abundant in many localities.) In Fig. 158 we see the skeleton lines of these drawings. These lines must be graceful and well composed. No amount of foliage will hide or redeem a design in which they are weak or awkwardly arranged, as in Fig. 159.

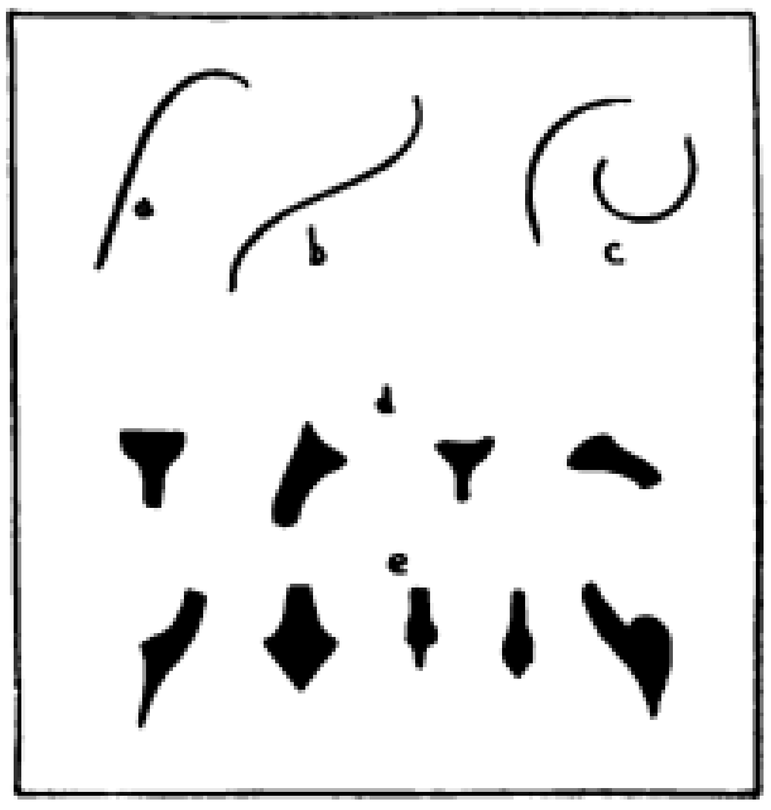



Fig. 160.

Studies may be made of the various joints found in the plant. Fig. 161



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

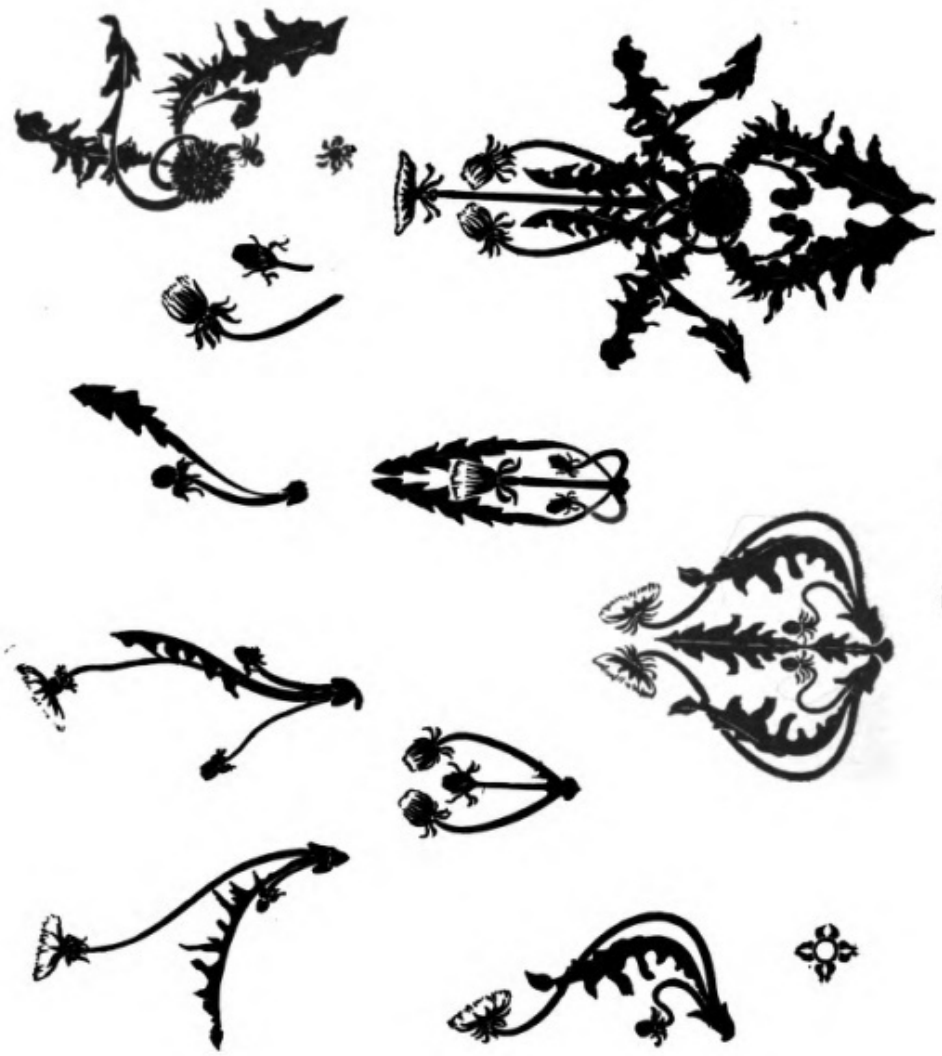


Fig.—157.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

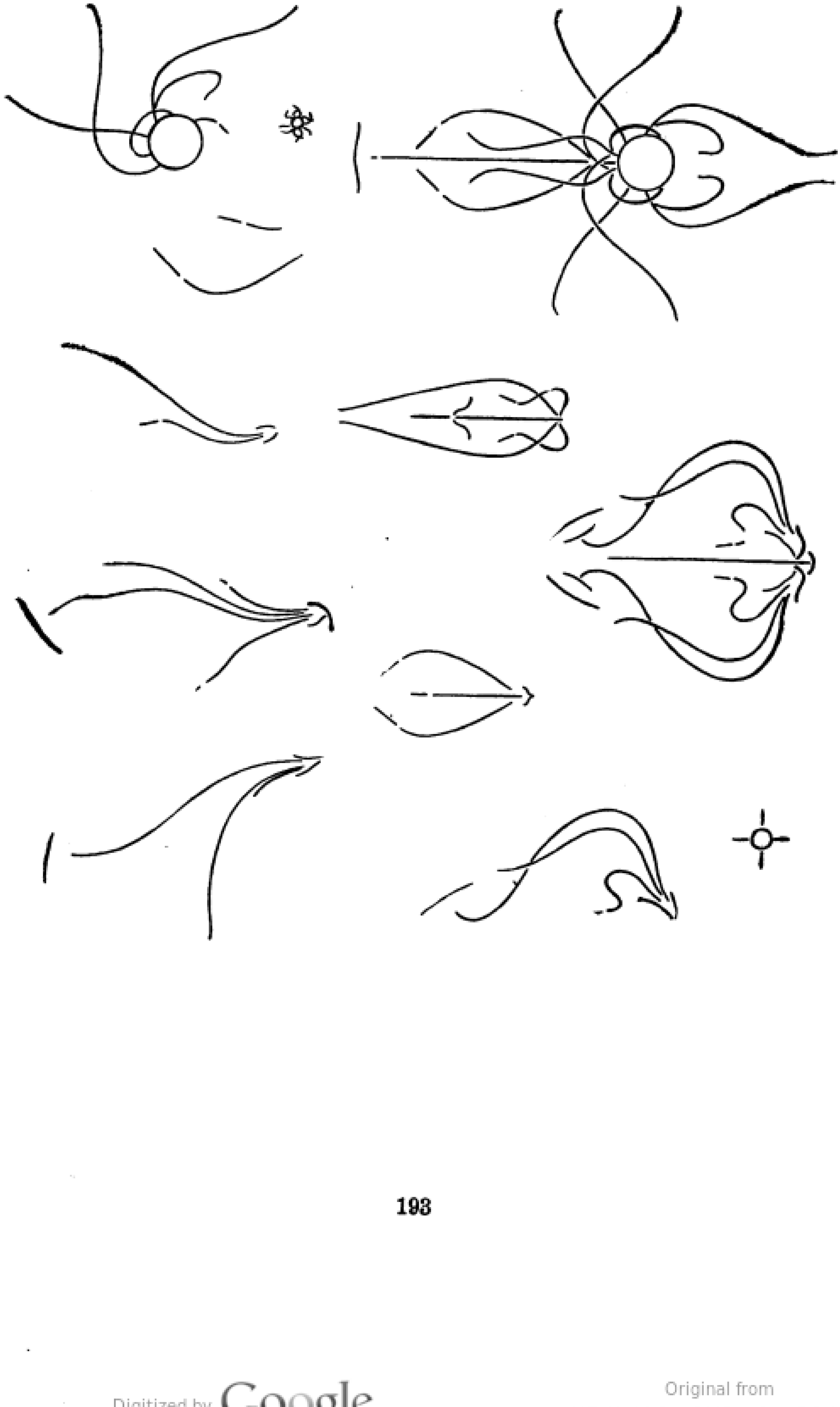


Fig.—158.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 161.

illustrates some methods of joining stems to flowers and buds. All are idealized.

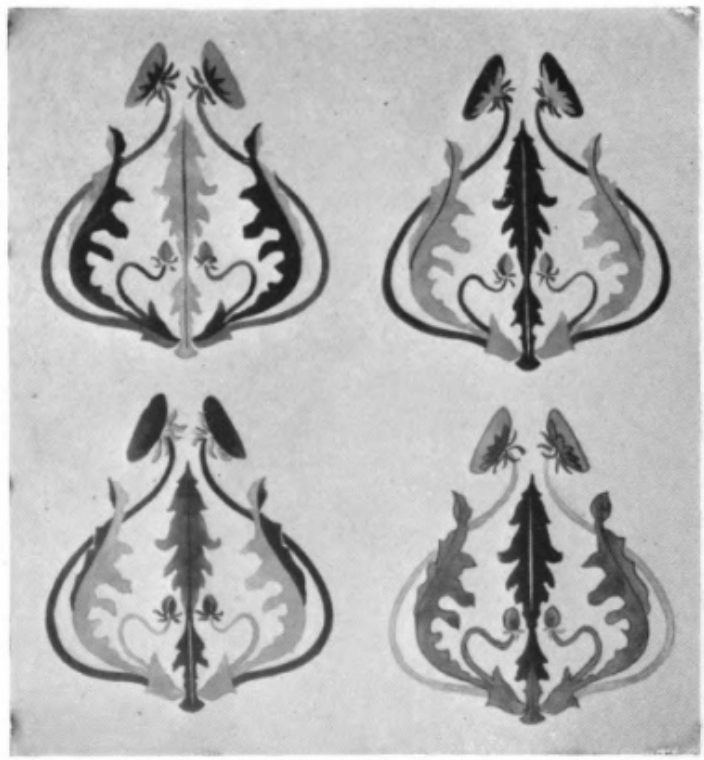


Fig. 162



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

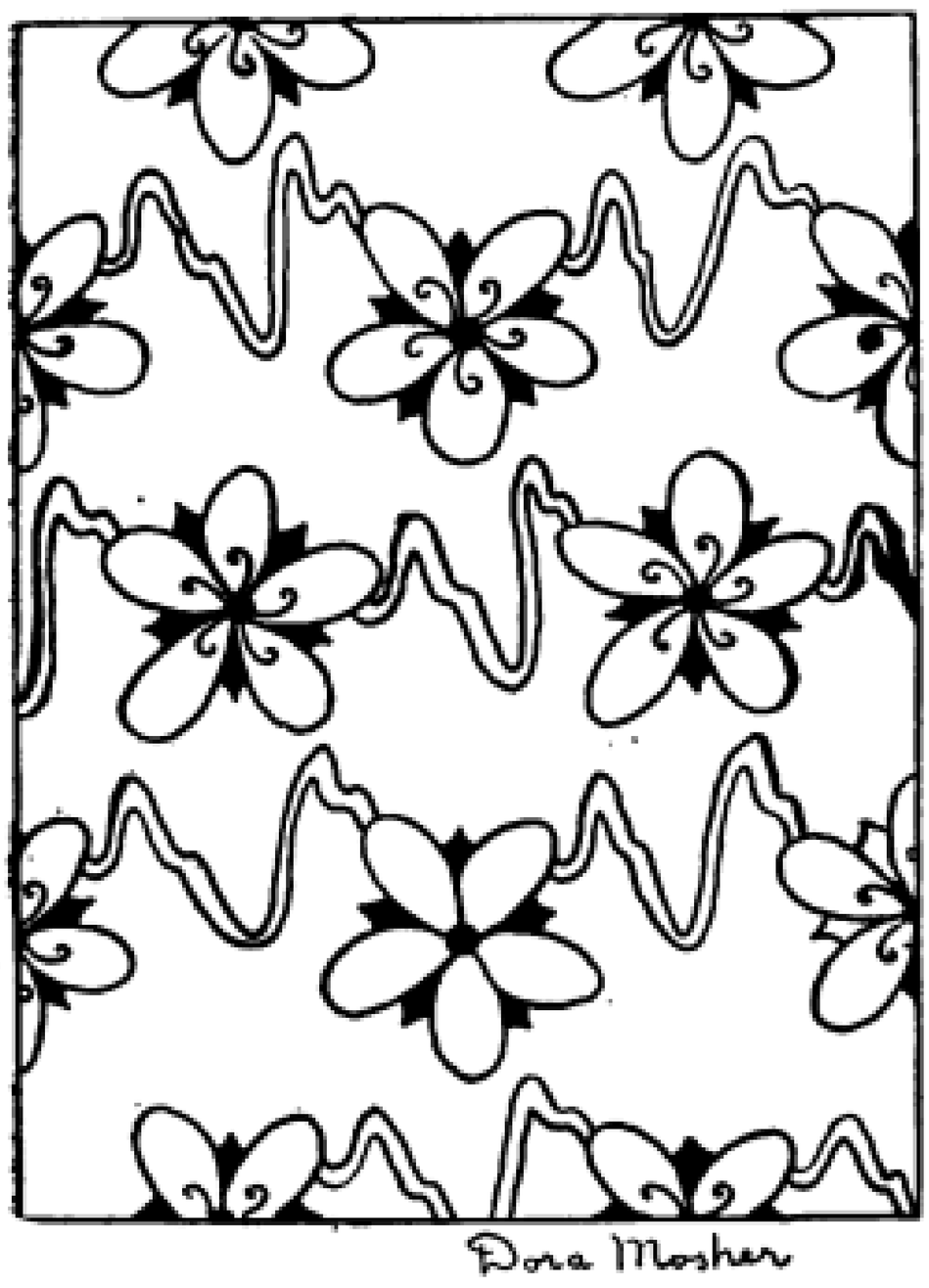



Fig. 169

his best unit and reproduce it or three tones of ink (Fig. 162).

Four methods of finishing a background for a design are shown in Fig. 162*a*.

Show the pupils how nature suggests the principles of design—"Nature is the source of all that is possible in art" (Chapter IV.)—and how *bilateral* and *balanced* units may be obtained from any plant form. Let every unit have a *growing point*, a place from which all the leading lines spring to form a framework.

So far as public-school designing is concerned, we have been considering the more difficult part of the work. The second step is comparatively easy. Let each pupil select and

Fig. 160 is a sheet of units made from a hydrangea. In these drawings the curves, principles and methods of jointure suggested above are used. A few of the units are comparatively naturalistic while others belong to the idealized type of design, — some would never be recognized as belonging to the hydrangea, although they conform with the growth of many other plants. See also page 30.

It is an excellent plan to have each pupil select several times, using two

Fig. 170.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Fig. 180.

arrange the unit which he considers the most beautiful after the manner employed in the example of historic ornament which he has copied.

The illustrations Figs. 163–172 are from designs made by pupils in grades 4–9. The originals were all worked out in water-colors. Figs. 163–166 show the influence of Gothic ornament, Figs. 167 and 168 of the Egyptian surface patterns.

Oftentimes, as in Figs. 169–172, a design may be made more interesting by connecting the units.

Give some definite subject for which to make a design; a book cover, silk for a sofa pillow, or a curtain, a rug, table mat, plate, burlap, portière, border for a curtain or vase decoration, etc.

Each pupil should consider for what purpose his design is to be used, for some designs as Figs. 163–166 are especially adapted for a vertical surface; others which look equally well from any side (Figs. 167 and 168) can be satisfactorily applied to horizontal surfaces, as ceiling or floor coverings.

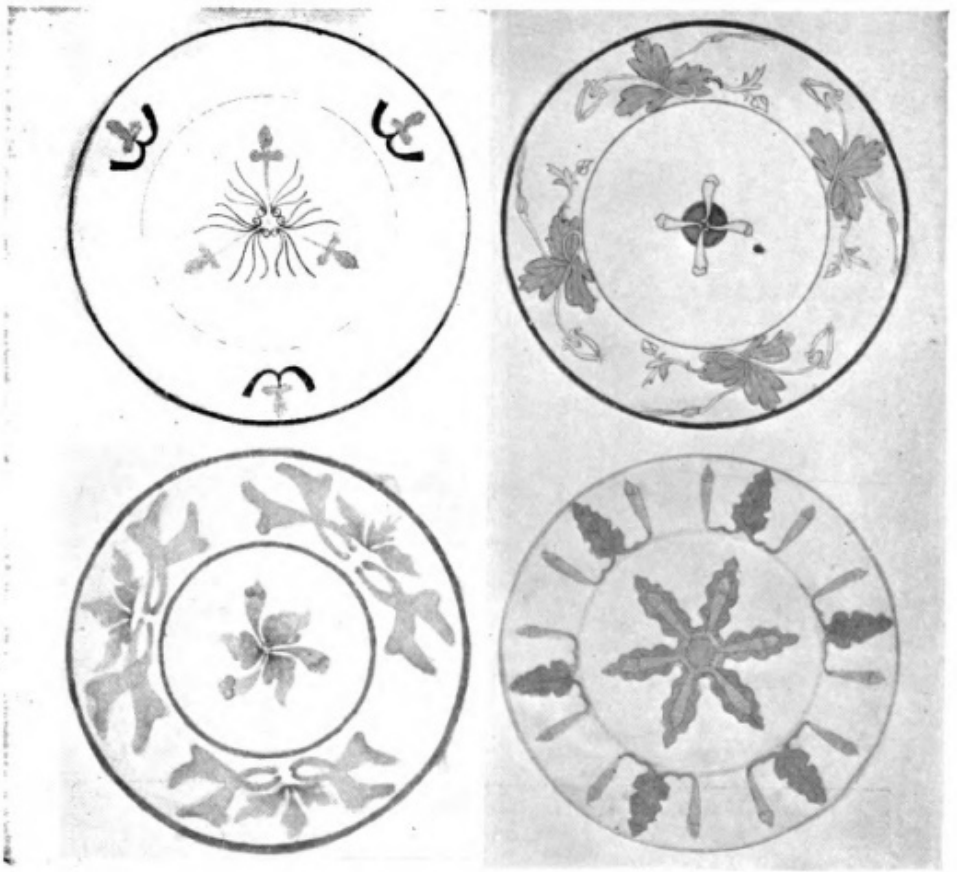
A part of one lesson may be devoted to planning a repeat for surface designs, using the square, circle, triangle, rhombus, hexagon, etc. The pupil should choose that form which best encloses the selected unit.

### Border Designs.

All that has been said above regarding the obtaining of units applies to border designs. From the borders the pupil has learned how to repeat a unit. Draw the construction lines for the border as in the ornament (Fig. 80). In one



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY



Figs. 181–184—Plate Designs

space, each pupil is to carefully draw *his* best unit, trace and repeat, afterwards filling in all the units, using brush and ink or color.

Figs. 173–180 were made by pupils in grades 8 and 9. Compare these original designs with the Greek borders (Figs. 73–76).

### Initial and Book-Cover Designs.

One additional suggestion may be made regarding these designs. The lettering must be well done. Pupils' attempts to design original letters are, in the main, failures. The Roman letters have been accepted for two thousand years. It is quite useless for the average boy or girl to try and make improvements. Let the class copy the desired letters from a good plain alphabet: A B C D E F G H I



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

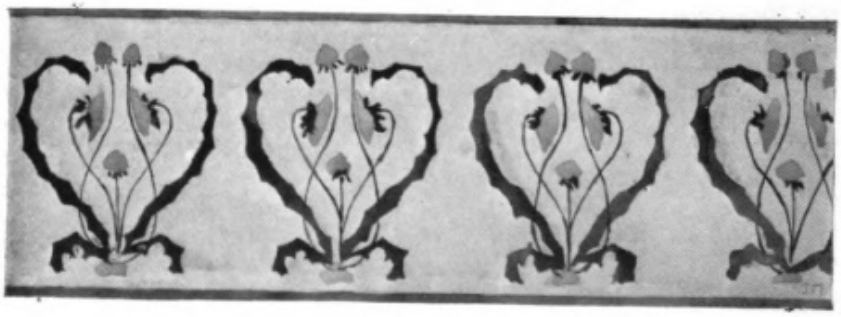


Fig. 176.

Fig. 177.

Fig. 178.

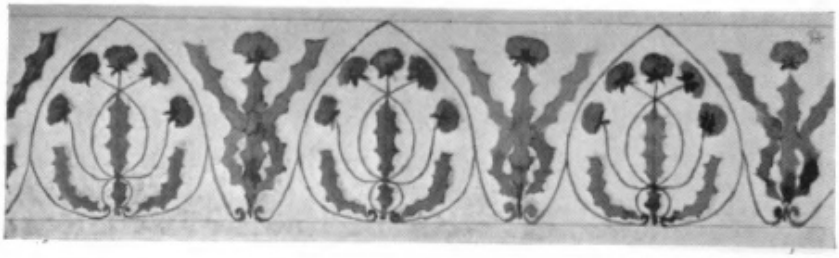


Fig. 179.



Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

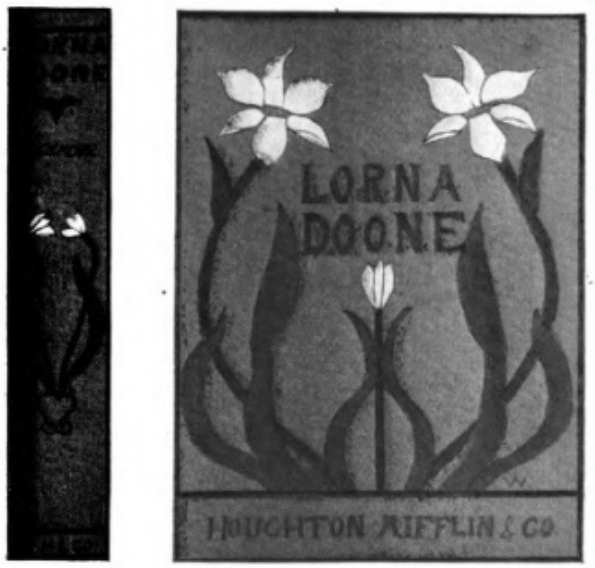



Fig. 185.

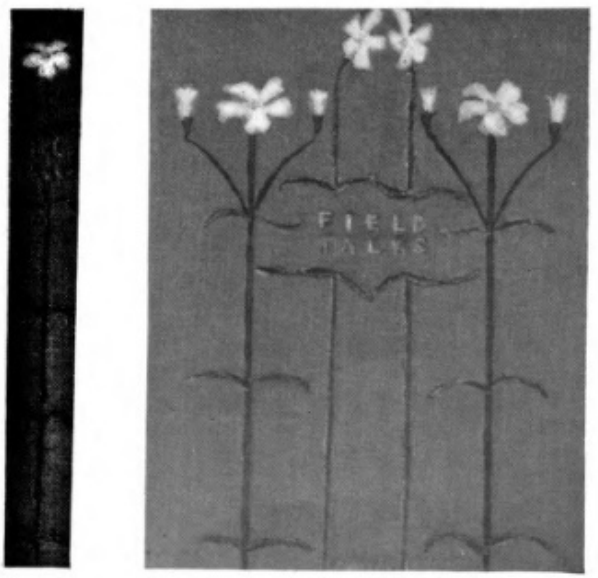



Fig. 186.

Book Cover Designs.



Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google

Fig. 187.

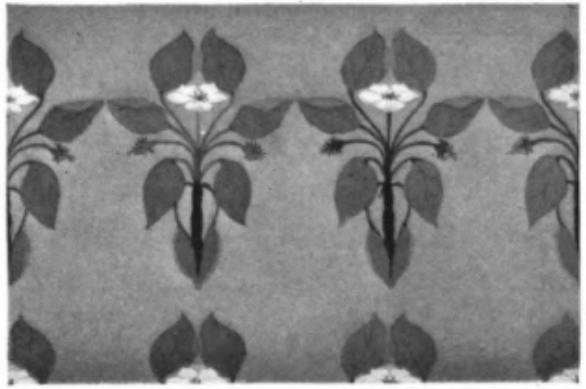


Fig. 188.

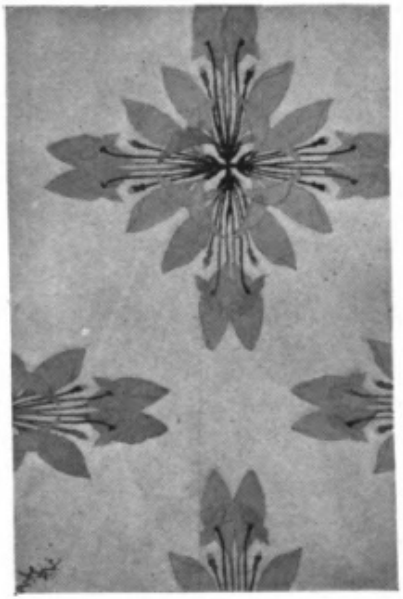


Fig. 189.

Designs for Draperies.

Original from NEW YORK PUBLIC LIBRARY

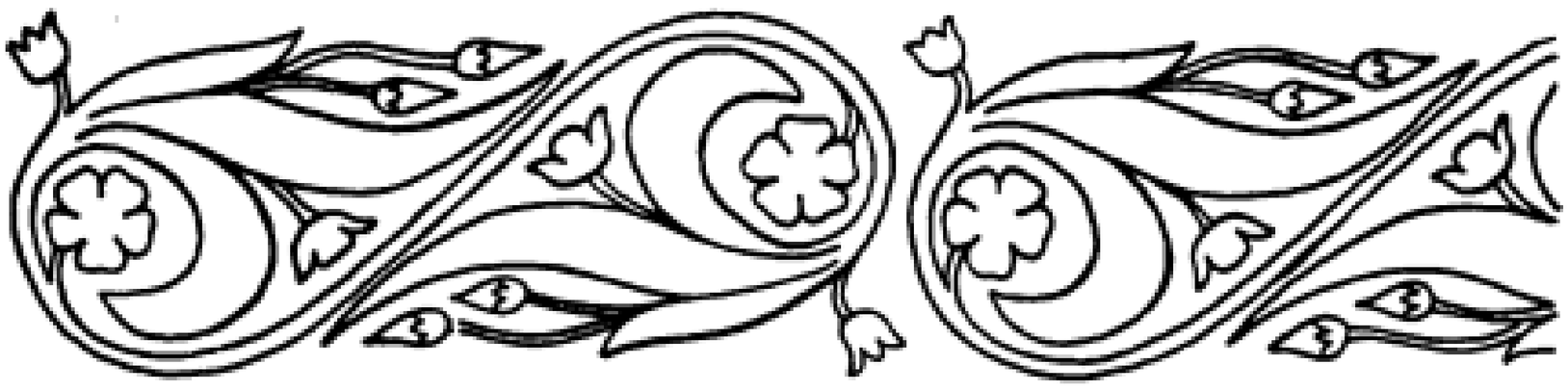


Fig. 173.

Fig. 174.

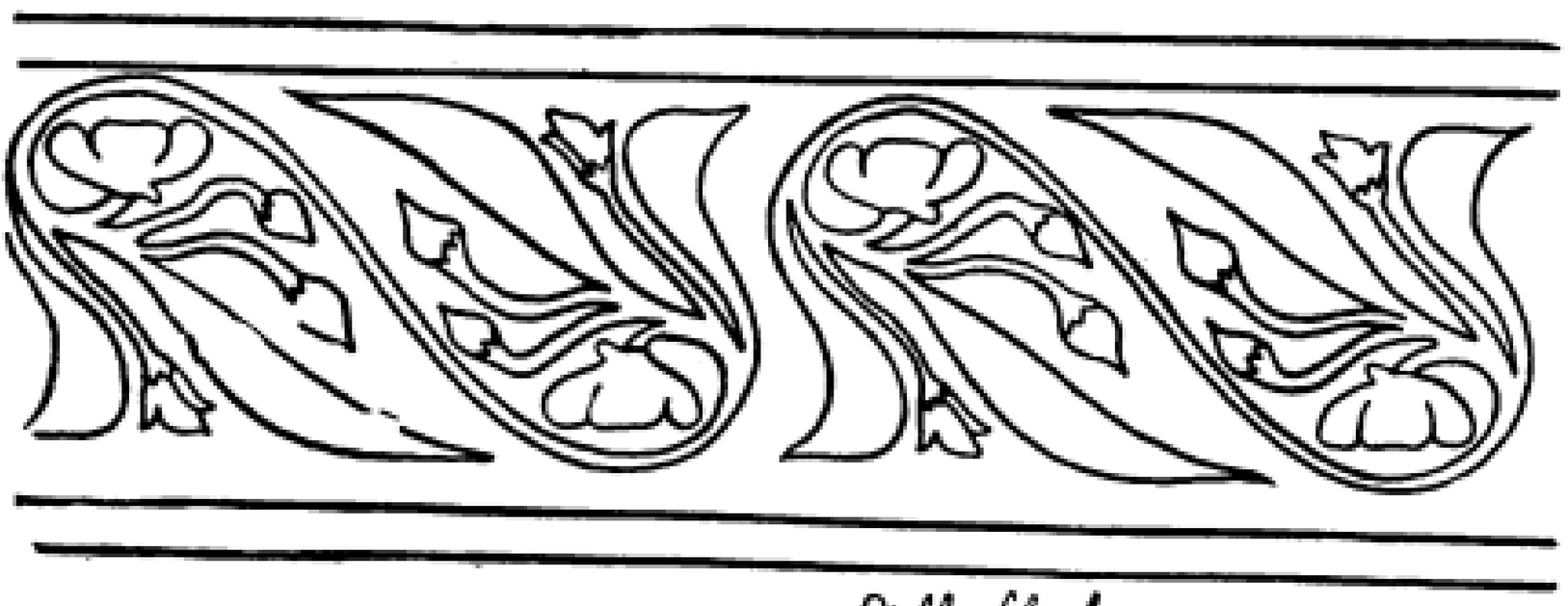


Fig. 175.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

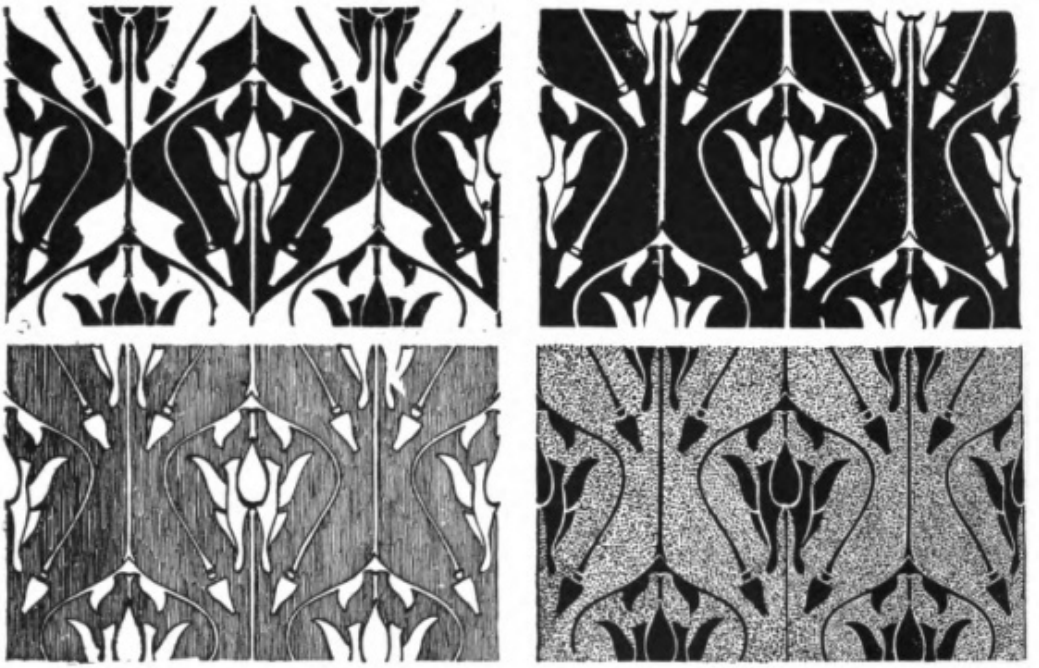


Fig. 162*a*.

J K L M N O P Q R S T U V W X Y Z, and devote its energies to the decoration of the remaining surface.

The initials in this book may serve to illustrate the correlation of nature and historic ornament and design.

But little has been said regarding the many principles of design. Generally too much attention is devoted to rules and not enough to individual expression of ideas. It is well to keep principles in mind, to use as a dictionary, in correcting or suggesting arrangements. No person ever became a writer through the continued study of a dictionary. Ideas are the fundamentals of all the arts. Nature will suggest the ideas and historic ornament may suggest the grouping of these ideas to express the thought in the most beautiful language.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# CHAPTER XIII.

## COLOR.

"If we have learned to look for color, to image a standard tone, as we image the letter O, to love color and rejoice in its purity and loveliness, our lives have become by so much richer and more nearly whole. The best we give our pupils cannot be weighed and numbered and percented. The best is spiritual."—*Henry T. Bailey.*

DRAWING supervisors are not of one mind as to when the theory and harmonies of color should be presented,—if at all. Whatever plan of color study may be pursued the aim is the same; an enjoyment of color which will result in a thoughtful consideration of its use in business and social life and an appreciation of its manifestation in nature and art.

The child loves strong contrasts of color. He should be allowed to produce them. The life and sparkle of brilliant coloring appeal to him because such color is an echo of his own nature. To confine his color creations, in the lower grades, to this or that sober harmony seems as unwise as to make him play chess for recreation. "All nature is creation's picture book," and many of the most beautiful pictures involve the brightest of complementary colors. In art we find the same to be true. No one can say that dull or graded or quiet colors are always more beautiful than the pure colors. Beauty is not confined to one scheme of coloring any more than to one sentiment in music. If we teach any theory of color let us make it conform to child nature, at first, romping, boisterous games (or colors), then the quieter. In the grammar grades may come specific work in the color harmonies. This *can* be given to pupils in the primary rooms, but it generally tends to crush individuality.

In many schools the pupils in the fifth or sixth year classes



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

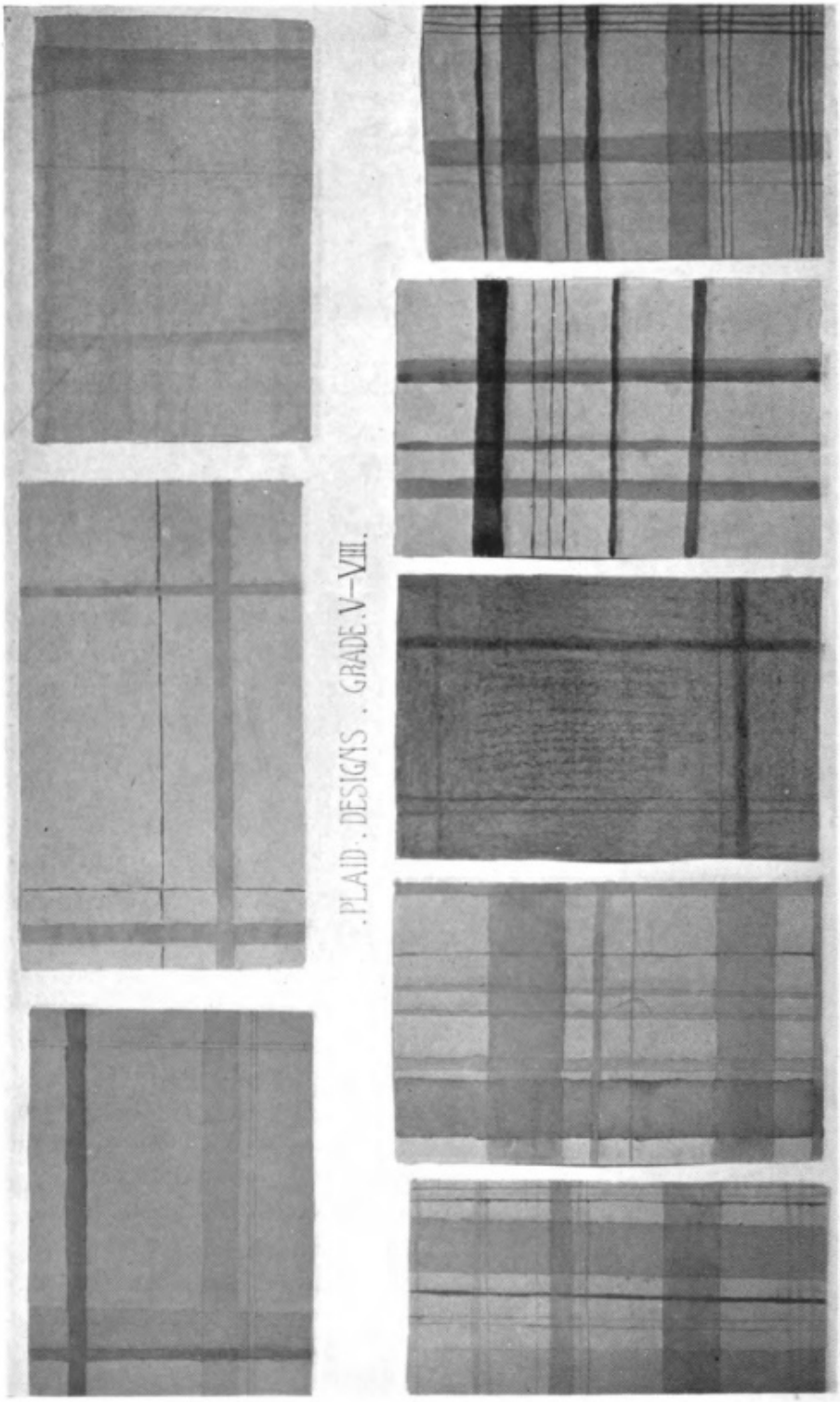



Fig. 190.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

commence to study the color harmonies, generally taking up one or two each year in the following order:

*Contrasted:* one tone of one color with one or more neutrals (black, white, gray, silver and gold).

*Dominant:* different tones of one color.

*Analogous:* tones from neighboring color scales (as found in the rainbow).

*Complementary:* tones from two scales which are complementary to each other. (The spectrum colors and their complementary colors are red and blue-green, orange and green-

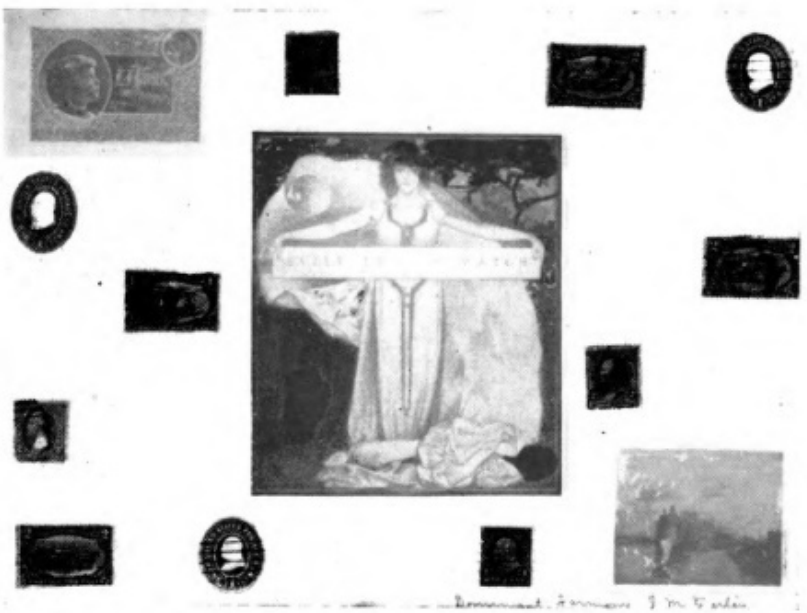


Fig. 191—Collected Illustration of Dominant Harmony.

blue, yellow and violet-blue, green and violet red, blue and orange-yellow, violet and green-yellow.)

*Perfected:* a combination of two analogous harmonies, the one being approximately complementary to the other, or, of one color and an analogous group of which the key tone is complementary to the one color.

Neutrals are not colors and may therefore be employed in any color harmony.

If, in the fifth year, the class is studying contrasted and dominant harmonies, have each pupil collect illustrations of each and mount them on a sheet of drawing paper. (Fig.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

191.) The making of simple plaid designs in the color harmonies studied each year is excellent practice. These plaids should be original designs. Notice in Fig. 190 the variety in the (1) spacing between the stripes, (2) the width and (3) strength or depth of tone in the stripes, and (4) that, as in nature, the large masses are more delicate in tone, the narrow lines being strongest.

Any plan for the consideration of color as an element in design ought to be based on a study of nature and art. A step in the right direction will have been taken if the pupils can be led to obtain from nature these three generalizations:

1. Standard (primary or normal) colors are generally used to cover small surfaces. (For example, insects, flowers, birds, gems, but not mountains )

2. The primary colors are usually found on the upper parts of objects; the graded, on the lower.

3. Natural forms are sometimes emphasized by an outline of a lighter or darker tone. (Often caused by light and shade effects.)

In coloring an original design made from plant forms the pupils ought to utilize the knowledge of color harmony which they have obtained through collecting and studying illustrations and the designing of plaids.

Throughout all this work the teacher should constantly refer to nature and art. An appreciation of color harmony and of the charm of the quiet colors can gradually be acquired in this way.



Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google
Original from
NEW YORK PUBLIC LIBRARY

JAN 5 - 1931

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

Digitized by Google

Original from
NEW YORK PUBLIC LIBRARY

# THE TEACHING OF ORNAMENT

*By* FRED H. DANIELS, Director of Art Education, Public Schools, *Buffalo, New York*

THE J. C. WITTER COMPANY
123 Fifth Avenue, New York City

F.H.
[1900]
Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

# THE TEACHING OF ORNAMENT

*By* FRED H. DANIELS, Director of Art Education, Public Schools, *Buffalo, New York*

THE J. C. WITTER COMPANY
123 Fifth Avenue, New York City

F.H.
[1900]
Digitized by Google
Original from NEW YORK PUBLIC LIBRARY