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EXAMPLES AND THEIR SOLUTIONS

HISTORIC ORNAMENT  
ELEMENTS OF ORNAMENT  
PRACTICAL DESIGN  
APPLIED DESIGN

SCRANTON:  
INTERNATIONAL TEXTBOOK COMPANY

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## PREFACE

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The International Library of Technology is the outgrowth of a large and increasing demand that has arisen for the Reference Libraries of the International Correspondence Schools on the part of those who are not students of the Schools. As the volumes composing this Library are all printed from the same plates used in printing the Reference Libraries above mentioned, a few words are necessary regarding the scope and purpose of the instruction imparted to the students of—and the class of students taught by—these Schools, in order to afford a clear understanding of their salient and unique features.

The only requirement for admission to any of the courses offered by the International Correspondence Schools, is that the applicant shall be able to read the English language and to write it sufficiently well to make his written answers to the questions asked him intelligible. Each course is complete in itself, and no textbooks are required other than those prepared by the Schools for the particular course selected. The students themselves are from every class, trade, and profession and from every country; they are, almost without exception, busily engaged in some vocation, and can spare but little time for study, and that usually outside of their regular working hours. The information desired is such as can be immediately applied in practice, so that the student may be enabled to exchange his present vocation for a more congenial one, or to rise to a higher level in the one he now pursues. Furthermore, he wishes to obtain a good working knowledge of the subjects treated in the shortest time and in the most direct manner possible.

In meeting these requirements, we have produced a set of books that in many respects, and particularly in the general plan followed, are absolutely unique. In the majority of subjects treated the knowledge of mathematics required is limited to the simplest principles of arithmetic and mensuration, and in no case is any greater knowledge of mathematics needed than the simplest elementary principles of algebra, geometry, and trigonometry, with a thorough, practical acquaintance with the use of the logarithmic table. To effect this result, derivations of rules and formulas are omitted, but thorough and complete instructions are given regarding how, when, and under what circumstances any particular rule, formula, or process should be applied; and whenever possible one or more examples, such as would be likely to arise in actual practice—together with their solutions—are given to illustrate and explain its application.

In preparing these textbooks, it has been our constant endeavor to view the matter from the student's standpoint, and to try and anticipate everything that would cause him trouble. The utmost pains have been taken to avoid and correct any and all ambiguous expressions—both those due to faulty rhetoric and those due to insufficiency of statement or explanation. As the best way to make a statement, explanation, or description clear, is to give a picture or a diagram in connection with it, illustrations have been used almost without limit. The illustrations have in all cases been adapted to the requirements of the text, and projections and sections or outline, partially shaded, or full-shaded perspectives, have been used, according to which will best produce the desired results. Half-tones have been used rather sparingly, except in those cases where the general effect is desired rather than the actual details.

It is obvious that books prepared along the lines mentioned must not only be clear and concise beyond anything heretofore attempted, but they must also possess unequaled value for reference purposes. They not only give the maximum of information in a minimum space, but this information is so ingeniously arranged and correlated, and the

indexes are so full and complete, that it can at once be made available to the reader. The numerous examples and explanatory remarks, together with the absence of long demonstrations and abstruse mathematical calculations, are of great assistance in helping one to select the proper formula, method, or process and in teaching him how and when it should be used.

Four of the volumes composing this library are devoted to the subject of architectural and decorative design. This volume is devoted entirely to the principles of general design without regard to any specific application of those principles. Considerable space is devoted to the study of Historic Ornament, as a training in what has been done in past ages in the way of creating new ideas and adapting older ideas to more modern purposes. The Elements of Ornament treats of the fundamental elements on which historic ornamental forms are based. Practical Design treats of the reduction of natural and elementary forms to a practical basis wherein they can be applied as ornament to various objects, and Applied Design treats of the necessary alteration in form, proportion, and character that various elements of ornament must undergo in order to conform to the requirements of the material and purpose to which they are applied.

The method of numbering the pages, cuts, articles, etc. is such that each subject or part, when the subject is divided into two or more parts, is complete in itself; hence, in order to make the index intelligible, it was necessary to give each subject or part a number. This number is placed at the top of each page, on the headline, opposite the page number; and to distinguish it from the page number it is preceded by the printer's section mark (§). Consequently, a reference such as § 16, page 26, will be readily found by looking along the inside edges of the headlines until § 16 is found, and then through § 16 until page 26 is found.

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# HISTORIC ORNAMENT.

(PART 1.)

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## INTRODUCTION.

**1. Meaning of "Ornament."**—The term **ornament** in its more limited sense is applied to such elements of decoration as are adapted or derived from natural forms. These differ from what we consider the geometrical elements, inasmuch as they are organic, and suggestive of life and growth. They depend for their expression on the general arrangement of their branches, leaves, and blossoms, while the geometrical elements owe their expression entirely to their geometrical form and arrangement relative to one another. When simply drawn on paper and in no way applied to any object, or used for any purpose other than the expression of itself, one of these elements of decoration may be considered simply as an ornament. It does not become an element of decoration until it is applied to something, and in the abstract, the term *ornament* should not be confused with the term *decoration*, which is distinctly *applied ornament*.

**2. Meaning of "Decoration."**—The term **decoration** signifies the application, or the result of the application, of ornament to objects or surfaces. It does not mean the simple "sticking on" of an ornament to a surface, but conveys the idea of the *adaptation* of an ornamental form to suit the requirements of its position and the purpose of the object to which it is applied.

### § 3

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The elements of decoration consist of geometrical lines, natural foliage, artificial objects, animals, and the human figure. All these may be considered as ingredients or components that may be mixed and applied in various proportions according to certain standard and acknowledged rules termed *principles*. The rule by which any one mixture is accomplished determines the style or class of the design.

**3. Principles of Decoration.**—The principles of decoration, considered separately and distinctly from the elements that are used to make up the design, are dependent on, and in harmony with, the rules of architectural proportion. This may be illustrated by considering the subdivision of a wall surface into three horizontal bands—the *dado*, the *swell*, and the *frisc*—in the proportion of the pedestal, column, and entablature of an architectural order. True, there are styles of design where these proportions are at variance with any architectural order; but, with few exceptions, these will be found to exist in styles or periods of historic art wherein the orders of classic architecture were unknown or misunderstood, as will be considered hereafter. This general division of a wall surface, however, may exist by the simple placing of horizontal lines to mark the heights, this subdivision being purely geometrical. The decoration may be extended by applying to the subdivisions such natural foliage as leaves and running vines; artificial objects, such as the hieroglyphics of the Egyptians; or animals, and the human figure, as seen in the Gothic and Renaissance work; or a combination of these forms. In each case, however, the main subdivisions are in accordance with general rules; and the surface covering, though governed by less restrictive rules, is, at the same time, subservient to a definite proportion of ornamented to plain surface, different under different circumstances.

**4. Elements of Decoration.**—Whatever the theme of decoration—whether it be the expression of the invention of a new idea, or only the arbitrary adoption of some familiar

form—two elementary conditions will always be found to exist: *first*, a decoration produced by an arrangement and joining of dots and lines, or by a combination of geometrical figures in accordance with the laws of rhythm, regulation, and symmetry; and *second*, a decorative effect arising from the attempt to represent objects from the external world.

The elements nearest at hand for imitation are found in organic nature with its plants, animals, and the human form; but inorganic nature also furnishes models, as in the forms of crystallization, such as snowflakes, and various phenomena, as clouds, lightning, waves, etc.; besides which there are rich resources open in artificial objects fashioned by man himself, as vases and utensils of daily use.

**5. Combination of Elements.**—It may now be more readily understood how all kinds of elements may be combined. Geometrical may be united with natural forms, and details and ideas suggested by natural forms may be combined with creatures of the human imagination to form eccentricities that do not really exist in nature, but that man has always delighted in adopting as representative of some higher or supernatural power. Illustrative of these, we have the sphinx, so identified with Egyptian art; the centaur and the mermaid in classic art; and the animal bodies with human heads, and the combination of beasts or fishes with the wings of birds, or with plant life and foliated terminations, prevalent in many details of Gothic and Renaissance art.

**6. Symbolic Devices.**—In heraldry and armorial bearings, with which the decorations of the Middle Ages and following centuries are replete, there are a number of devices with definite names that depend entirely on the combination of different characteristics, borrowed from different classes of animals, in order to combine in one figure the attributes of several natural beasts. For instance, we have the dragon, with the body of a serpent and the head of a carnivorous bird, and the wings of a bat, combining in the one animal the stealth and treachery of the snake, the cruelty and

passion of the vulture, and the uncanny and silent secrecy associated with the nocturnal habits of the bat.

On the other hand, we have a variation of the form or characteristics of an individual animal, in order to emphasize those characteristics for the purpose represented. In many of the armorial devices of Great Britain is found a representation of a lion—never in the true form of the lion, as we are in the habit of thinking of him in the jungle, but a lion with a long attenuated body, generally with one or both fore paws raised from the ground, and always with his mouth open and protruding tongue and teeth. The lion is indicative of power and strength, and, consequently, of sovereignty. The attenuation of his body increases the feeling of liteness associated with animals of the cat tribe, while the expression given his face and forefeet is indicative of firmness, and power for aggressiveness, offensiveness, or defensiveness, as the case may require.

**7. Influence of Architecture.**—Decoration is applied art, and the forms used in decoration become varied according to the purpose for which they are used. Decoration, as applied to architecture, consists of the ornamentation of the structural features of a building—of the variation in color, or proportion of different surfaces that are adjacent, and of the introduction of familiar symbols, or objects, to convey a definite historical or religious idea.

To a certain extent, all decoration partakes of the same characteristics as architectural decoration. Wall decoration is architectural, and consists of the variation in color or proportion of adjacent surfaces, or of the same surfaces divided. The decoration of silks and tapestries, either in the weaving or printing, is a variation of surface that must be further considered in its architectural relation, when they are hung on the walls, over the doors, or around the windows, and seen, not as plain surfaces, but in folds. The treatment of furniture is an architectural decoration, both in the ornamentation of its structural features and in the application of symbols to portions of its surface. In fact, in all periods of

art, it will be found that any attempt at ornamentation is governed directly or indirectly by the prevailing tastes in architecture and the sister arts.

**8. Conditions Influencing Architecture.**—Though ornament and architecture have been steadily progressive from the days of earliest Egypt to the close of the nineteenth century, there is little resemblance between the characteristic ornament or architecture of any two periods, except where there has been a deliberate revival of a certain style of art. Where the artists of a nation or locality have been left to their own devices and originality, they have produced a style of ornament suitable to their purpose, their period, and their relations, that is in no way connected or suited to other surrounding conditions. Although the influences that have affected the style and character of the ornament of different periods are many, the religious and geographical influences are probably the strongest. Political influences determine, to a certain extent, the character, according to the government and relations of the people, and also the profusion and elaboration, and, to a certain extent, the quality of execution, of ornament; for the richer a nation becomes, the more she expends on her monuments of public utility and beauty, and the more elaborate her citizens become in the taste and decoration of their households. In fact, we find no art progress in any country until it begins to show signs of amassing wealth.

**9. Influence of Religion.**—The effect of religion in ornament can be traced through all periods, and those nations with whom religious belief was more closely intermingled with the civic and domestic duties of the day, expressed in every detail of their ornament some tribute to a superior being. During the laxity of morals and general religious fervor toward the close of the Renaissance period, we find few religious forms woven in the fabric of any class of ornament, except the pagan forms that were borrowed in ignorance from an antique religion and an ancient art.

This free use of symbolic forms, both ancient and modern, gives us an unlimited field for combinations in ornamental design, which, though practiced through fifty centuries, has not exhausted the possibilities for originality.

**10. Decorative Art.**—All decoration and decorative art, whether carved, painted, or modeled, is the expression of the wants, facilities, and sentiments of the age in which it is created. All products of decorative art should possess fitness, proportion, and harmony of both form and color, in order that the result may express what we term *repose*; and beauty results from that repose that the mind feels when the eye, the intellect, and the affections are satisfied, and free from any sense of want. As in architecture, construction may be decorated, but under no circumstances can decoration be constructed. Decoration must always form a part of the purpose or object with which it is associated.

It is useless to try to deceive the eye and intellect by carving a natural vine on a stone tablet. No right-minded person will ever take the imitation for the real vine, and the highest tribute that can be paid to it is that the carver was skilled with his chisel and hammer, and the designer had failed to understand and appreciate his material. If the vine is to be a stone vine, let it be reduced to a form that is suitable in stone; if it is to be a woven vine in a fabric, let its form be reduced to the limitations of results obtainable from the loom; if it is a vine to be painted on a wall surface, let it be a painted representation of the characteristics of a certain vegetable growth, and not a picture or portrait of an object that if real would be highly out of place where represented.

**11. Conventionalism.**—This proper representation of a familiar form according to the position it is to occupy, or the material in which it is to be executed, is called **conventionalism**, and is the first detail of applied art that the designer must learn to comprehend. An old axiom states, "That which is beautiful must be true," and we may add

to it conversely, "That which is true must be beautiful," and on this axiom depends all the beauty of ornament in architecture, decoration, and the allied arts.

Ornamental design is not portrait painting—it is not the faithful portrayal of the details of nature for purely pictorial purposes. The skill of the artist in this branch of art is applied to making something of simple utility an object of beauty; whereas, the portraitist is engaged in rendering on canvas, or other surface, an absolute portrait of the subject before him.

**12. Consistency in Designing.**—The decorative designer must have in mind the construction or fabrication of a useful article, with the value and utility of which he combines his art. The figure portraitist, landscape portraitist, or floral portraitist, if we may so distinguish them, has before him a subject that he intends to translate in paint to a surface that shall have nothing associated with it in the mind but the figure, the country, or the flowers it represents. If the decorative designer takes the same subject, he does not represent it with the same fidelity, because it is applied to a utensil, and the object of the utensil must not be lost sight of; and if he decorates the surface of a utensil or dress material with a design that claims to be an absolute portrayal of the flower or other device itself, he states in his decoration that this is nothing but the representation of a flower and he draws the mind away from the fact that it really is a utensil; this is not true, and, according to the foregoing axiom, the result cannot be beautiful.

**13.** If, in the weaving of a carpet, or other floor covering, the designer attempts to portray natural bunches of roses and rose leaves, he is suggesting to the observer that this is a picture or portrait of a bunch of roses, executed entirely to please the senses as a portrayal of the flowers themselves, which is not true; for, if it were, we should hang it near the level of the eye, separating it from any sense of utility, other than the conveying of a feeling of

satisfaction and delight to the affections and to the intellect; whereas, as a matter of fact, it is a floor covering decorated with an out-of-place design.

**14. General Rules.**—In the decoration of a surface, the general form is first cared for and subdivided or ornamented by general lines; the interstices may then be filled with ornament and may themselves again be divided and fully enriched for closer observation. But all ornament, no matter how minutely carried out, should be based on a geometrical system of construction, as a true proportion will be found to exist between all members so based.

In all surface decoration, a rule to be observed is that all lines should be traced back to their branchings from a general parent stem, so that each detail of the ornament, no matter how distant, can be traced back through its branch to the root. This makes the design rational, but the connection with the parent stem and root must not be so marked as to dominate the spirit of the design. Another rule requires that all junctions of curved lines with other curved lines, or of curved lines with straight lines, should be so made that they are tangent to each other at the point of junction, if they are intended to express parts of the same design. And a third rule says that flowers and other natural objects should not be used as ornaments in their natural forms, but should be conventionalized or reduced to geometrical principles that convey the idea of their representation without purporting to be a likeness of the original, for the reasons heretofore set forth.

**15. Color** may be used to assist in the development of a form or idea, or to distinguish objects or parts of objects, one from another; or color may be used to assist light and shade, helping undulations of light and form by the proper distribution of several different tints. Color should never be used, however, where the exigencies of the case do not positively require it. Every design should depend for its intrinsic beauty on its form and its proportion, and these



may be enhanced by combinations and relations of color; but the design is a poor one that depends entirely on color for its attractiveness and beauty.

With this understanding of the facts, let us now consider what has been done by our predecessors in the field of ornamental design.

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## ANCIENT ORNAMENT.

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### PRIMITIVE ORNAMENT.

**16.** Under primitive ornament, we will consider those efforts at ornamental design observable in the works of the savage tribes. These peoples had no written history of art from which to draw ideas, no theory or rules of proportion to govern their conceptions, and, consequently, the expression of art as exhibited in their decorated utensils can be considered pure and untrammelled.

**17. Influence of Nature.**—From the testimony of travelers in but partially explored countries, it would appear that there is no place on the face of the earth where some attempt is not made at ornamentation, no matter how crude a state of civilization the people may be in. The desire for ornament is present in every race, and it develops and increases in importance directly in proportion to their progress in civilization. Man appears everywhere impressed with the beauties of nature that surround him, with the mysteries governing the growths and phenomena that he cannot understand; and he seeks to imitate, within the limitations of his power, some of the works of his Creator. The earliest instinct of man is to create something; no matter how powerful he may be as a warrior, how distinguished he may be as a tribal leader, or how wealthy he may be in the possession of earthly goods, he recognizes his inability to explain the phenomena of nature, and naturally attributes it to a being higher than himself. It is at all times

apparent that this being, whom he in his primitive way may worship as a god, creates, by some undefined power, developments and appearances that inspire him with mystery and awe. Consequently, he endeavors, in his own simple way, to call into existence creations of his own that shall impress those fellow men whom he considers his inferiors as much as he is impressed by the works of his mysterious Supreme Being.

**18. Origin of Tattooing.**—In some savage tribes, this desire is expressed in the attempt to increase the facial expression by which he expects to strike terror to his enemies, rivals, or inferiors, or to create what appears to him a new and mysterious beauty. This he accomplishes by tattooing, or sometimes merely with paint. It is a remarkable fact that hideous as this practice renders his visage, it is, in most cases, exercised with the greatest care that the lines shall be so placed as to *increase* the facial expression and *develop*, to the greatest extent, the eccentricities of his natural features. Trivial as this detail may at first appear, it lies at the bottom of the fundamental principles of decorative design. The savage warrior does not obliterate his own expression and cover his face with paint and tattoo marks to create a new one, but simply arranges the lines to emphasize the details of severity that he already possesses and with which he expects to inspire an impression of terror.

**19. Origin of Set Styles.**—It can be clearly shown throughout all history that in certain periods, an individual mind, stronger than those with which it is surrounded, will impress itself on a generation and carry with it a host of other minds of inferior power. These inferior minds imitate what they know to be better than what they can create, but do not imitate so closely as to destroy their own individual ambition to originate. It is to this tendency that we owe the birth and the modifications of styles.

The efforts of the people in the earliest stages of civilization are like those of children, though lacking in power of

expression, they possess a grace and originality rarely found in middle age, and never in manhood's decline. The same may be found in the infancy of any art, which we will endeavor to point out as we go along. When art struggles for an existence, it succeeds by creating for itself new forms and new ideas, but, when reveling in its own successes, it fails.

**20. Effect of Traditional Styles.**—The pleasure we receive in contemplating the crude attempts at ornament of the most primitive tribes arises from our appreciation of a difficult accomplishment. We are interested in the evidence of the intention, and are surprised at the simple and child-like rudeness by which the result is accomplished. In fact, what we seek in their work of art is the evidence of mind—the evidence of that desire to create to which we have already referred. This evidence of mind, strange to say, is much more readily found in the rude attempts at savage ornament than in the innumerable productions of a highly advanced civilization.

When art is manufactured by a combined effort, instead of being originated by the efforts of an individual, the true instincts, which constitute its greatest charm, are lost. By this we mean that the art of the present day is the result of the combined efforts of artists and artisans through centuries of development, whereas the art of the savage tribes is the expression of the mind of an individual warrior, untrammelled by tradition.

**21. Expression of Taste in Savage Ornament.**—In Fig. 1 is shown a reproduction of a cloth pattern, the original of which came from the savage tribes of the Samoan Islands. It is made from thin sheets of bark stripped from a peculiar species of tree, and is beaten out and united so as to form one long parallelogram of cloth. Certainly nothing could be more primitive as a method of manufacture, yet the pattern shows the existence of taste and skill, and an ingenuity of design rarely found in many of our woven fabrics of the

present day. The pattern is executed by means of small wooden stamps, and the work, though rude and irregular in its execution, conveys the intention at every point. There is a skilful balancing of the masses and a judicious avoidance of

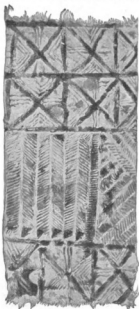


FIG. 1.

lines that would tend to cause the eye to run in one direction. This is done by opposing each set of lines with others of opposite tendency. There are many styles and patterns of this work, all of which show positive genius in their arrangement and development.

## 22. Decorative Theory Exhibited by the Savage.—

The next development in this primitive art is found in the attempts at wood carving, and the most likely place to look for it would be on the weapons used for the defense of the tribe, or in the chase of animals for food. The bravest or the most skilful of the warriors or hunters would desire to distinguish himself somewhat above the others by the possession of a weapon, not only more useful, but, in his eyes, more complicated, and more beautiful. The best shape for the weapon he has already determined by experience, and the enriching of its surface by carving naturally follows.

The eye of the warrior being accustomed to the geometrical forms and details of the stamped cloths, his hand attempts to imitate them in the handles of his wooden utensils by means of knife cuts, and the paddle shown in Fig. 2 illustrates how faithfully this representation has been carried out.

This instrument is from New Zealand, and the taste exhibited in its carving would bear favorable comparison with the art

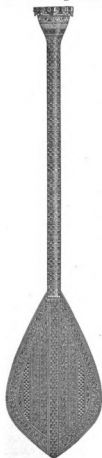


FIG. 2.

works of the highest state of civilization. There is not a line on its surface misapplied; the general shape is most graceful and elegant, and the decoration is applied everywhere to best develop the form.

The New Zealander's instinct taught him that his paddle should be strong, not only in reality, but in appearance, and his ornament is so disposed as to give an appearance of strength greater than it would have had if the surface had remained undecorated. The band in the center of the length of the blade is continued around both sides, binding the border that extends around the edge, and this latter appears to hold in place all the other bands. Had these bands run out like the center one, they would appear to have a tendency to slip off, as the center one is the only one that can occupy its position around the end of the paddle with repose.

**23. Value of the Study of Historic Ornament.**—These few facts have been pointed out in the preceding pages, so that the student may fully appreciate that beauty of ornament does not depend on the fidelity with which ancient ornament can be copied. The natural tendency of the mind will produce good results in the application of ornament in nearly all cases, if it is allowed to work

logically and without influence from stereotyped or historical forms.

The study of historic ornament is practiced to familiarize the student with what has been done heretofore, to point out to him such parts of the ancient works as have been done well, and to show him why they are considered to be done well, and also to render him familiar with other works of celebrated art periods which, though they may be beautiful in themselves, are not, as a matter of fact, as high a grade of art as our New Zealander's paddle, because of the lack of expression of mind in the designs, and the tendency to imitate the works of what was believed to be a superior mind, rather than to develop a new style along new lines.

**24. How to Study Ornament.**—From what has already been said, it will be easily understood that the ornament of a people carries in itself the characteristics of that people. It must be interpreted, however, by the aid of the history of the people as expressed in their monuments. The subject of historic ornament should therefore be studied, not only with regard to its grace and beauty, but as a key to a portrayal of the qualities, characteristics, and disposition of the people to whom it belonged.

In the consideration of the ornament of a country, we must first investigate all the details that are likely in any way to affect the art, in order that we may better understand why certain characteristics exist in the ornament of one people and are entirely absent in that of another.

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#### EGYPTIAN ORNAMENT.

**25. Influence of the Nile on Egyptian Ornament.** It seldom or never rains in Egypt, except in the delta at the mouth of the River Nile, and nature has provided for the fertilizing of the land by an annual overflow of the river that brings down mud and alluvial soil from the mountain regions, and deposits it on top of the old soil, thus enriching it. For three months the water slowly rises in the Nile

Valley, and, for three months following, the river slowly subsides and then remains a narrow stream for the rest of the year, bordered by green fields of cotton and grass. The phenomenon of this yearly inundation of the Nile, Fig. 3, slow, majestic, and munificent, naturally impressed the early Egyptian with a feeling of mystery and awe. In fact, in this inundation lies the key to the wealth of ancient Egypt.



FIG. 3.

Dwelling during the dry season on what would appear to be a barren plain, the Egyptian saw the provision of a Supreme Being working for his good when the waters of the Nile gradually overflowed, fertilized the soil, and then slowly subsided, leaving him to plant his seed. It is not strange, therefore, that the Nile and everything associated with it should be sacred. In all Egyptian ornament, we find some symbol or detail that reminds us of this great beneficence of Providence and favor to the Egyptian. The Egyptian was an appreciative mortal, and in his art and architecture everywhere placed some reminder of the fact that he could do nothing and would be nothing without the care and watchfulness of this supreme power.

**26. Antiquity of Egyptian Ornament.**—In studying Egyptian ornament, however, we cannot begin at the

beginning, as we can with other styles, inasmuch as we have no historical records of any beginning. A peculiarity of the Egyptian over all other styles is that the more ancient the ornament, the nearer perfection is the art. Architectural monuments, erected 2,000 years before the Christian era, are built of stones taken from the ruins of much more ancient buildings that were really more perfect. We are therefore compelled to study Egyptian art during a period of its decline, but can accept the style as absolutely original, inasmuch as we have no record of the existence of an earlier nation from whom they could have borrowed it.

In Egyptian art, there are no traces of infancy, nor of foreign influence, and it is safe to infer that the Egyptian artist drew his inspiration directly from nature. The types of his ornament are few but perfectly natural, and in the earliest period of Egyptian art, the representation is but slightly removed from the type; but the later we descend in history, the more we find the original types receded from, until it is difficult, in many cases, to discover from what original idea the ornament, by successive mental efforts, has been developed.

**27. Influence of Religion.**—Although the Egyptians decorated every article of utility that was in any way associated with their civil, domestic, or religious duties, we depend for examples of their ornament almost entirely on the designs and writings executed in connection with their complicated form of religion.

The temples, tombs, and other sacred monuments of the most ancient inhabitants afford us the most rational and progressive examples of ornament, and it is from these that we derive nearly all the information that we have of the manners and customs of the early Egyptians. In the temples are preserved certain stone tablets and other devices, on which are records of certain ceremonies in connection with their religion, and these records are always executed in their peculiar form of hieroglyphs. The word *hieroglyph*, being literally translated, means sacred writing, but in its specific



sense is used to indicate the peculiar pictured descriptions of the Egyptian religious ceremonies that are found carved and painted on the walls of their tombs and temples.

**28.** The **Egyptian temple** consisted of a small sanctuary, or *sekos*, as it was called, that was reached through a large columnar hall known as the *hall of assembly*, or sometimes the *hypostyle hall*, the latter term meaning covered over on columns. In front of the hypostyle hall was a large open court, surrounded by high and massive walls and



FIG. 4.

entered between two tower-like front walls, called **pylons**. Each of these parts was varied slightly in different structures, some having two courts in front of the hypostyle hall, known as the outer and inner court, and in many of the temples the *sekos* was surrounded by a number of smaller apartments. On the outside of the temple, the entrance was approached through a long avenue—often a mile or more in extent—lined on each side with colossal sphinxes, and occasionally