Preface

JOHN RUSKIN, an English author of the Nineteenth Century and a professor of Fine Arts at Oxford University wrote: "He is the greatest artist who has embodied in the sum of his works the greatest number of ideas."

One might paraphrase that to apply to salesmanship, "He is the greatest salesman who has embodied in his work the greatest number of ideas."

The greatest objective in becoming a successful salesman is developing the ability to cultivate ideas. This requires intelligent reading, a constant search for materials, and the effective use of these materials to cultivate ideas that will interest the prospective customer.

The study of design and art as applied to memorialization is a part of the information needed by a successful salesman. It is often neglected because of the lack of material specifically applicable to the subject. It often requires research through countless pages of books to find a small amount of material on art, design, and symbolism usable in designing or selling a monument.

Realizing the need for material on the subject which could be presented in a condensed form and be understandable to the layman, I searched for someone to write the articles. It was only natural for me to turn to someone who had worked with me in Sales Institutes and other educational programs in the discussion of this subject.

As a result of the presentations made by this nationally-known designer, J. B. Hill, I requested him to write some articles for MONUMENT BUILDER NEWS. These articles, "Good Design and You," were so well accepted by the readers that many requests were received for a complete set that would be available for study by salesmen and other interested people.
Mr. Hill taught art in the Vocational Department of Georgia Tech. His choice of words puts force and life into his writing on a subject often considered dry and uninteresting. A study of these articles and the application of the knowledge available will help the reader to cultivate more ideas and result in the sale of better memorials that will beautify our cemeteries and elevate the salesman in the esteem of his customers and the industry.

We are all very grateful to Mr. Hill for sharing his time, effort and knowledge in the effort to create more interest in better memorialization.

-A. L. Green, Executive Vice President
Monument Builders of North America, Inc.
Evanston, Illinois
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Introduction

THIS BOOK OF VARIOUS ELEMENTS of memorialization has been written with the belief that there is a need for a simple and practical presentation of information which is essential in memorial sales efforts. It is written mainly for the retail memorial dealer and his salesmen with the desire to make some contribution to better and more complete knowledge of memorial design. Good design, in form or ornamentation, invariably has historic derivation which can be traced. It has greater significance if its origin and the structural and artistic reasons for its use can be explained and understood. In every industry the dealers and their salesmen are feeling the need of a more thorough knowledge of correct design as a part of their sales equipment. In no industry is this more keenly felt than in the monument industry.

In recent years there has been a general improvement in public appreciation of art. This comes in part from the increase in wealth with the resulting leisure and opportunity for travel, and in part from the increased commercial activity and cultural exchanges with other nations. The American of today makes his purchases with a keener appreciation of true beauty and good design. To tell him that a design is good and rich in symbolism is not enough; he must have the reasons explained to him thoroughly.

The purpose of this book is to illustrate and briefly explain some of those things which are so important in the retail selling of memorials. All of the information herein has a practical application to the memorial field and has been acquired over the years from study and experience.

The public does not buy quarry blocks as memorials; therefore there are many facets and phases to our business of memorialization. There is more than quarrying—there is more than cutting, carving, setting and bookkeeping. There
must be sales before these things are needed, and to make sales, designs must be developed in a manner permitting effective presentation to the customer.

If you would improve your office or accounting system, there must be sales. If you would improve your shop facilities, and display, there must be sales. Sales are made of designs. For this reason, it is imperative that we should know as much as possible about every design and be able to describe it to the complete satisfaction of the customer. Material, finishes, proportion, ornamentation and symbolism, as well as the lettering, are all important parts of the finished memorial.

To be successful in presenting a design to a customer, the successful memorialist must know his product and must be able to describe each detail of the design to the customer’s complete satisfaction. He should be able to intelligently discuss and explain finish, proportion, carving, symbolism and lettering—he should be able to sell love, memories, and sentiment; and by his description be able to supply a proper memorial to fill the needs and desires of all people who want to be remembered and want their name recorded for posterity.

Historically and traditionally people are well acquainted with memorials (monuments) and consider them as proper means of memorialization. Great expanses of green lawn, flowers, and beautiful trees, assets of the country club golf course do not constitute memorialization, and most people know it.

Traditional memorialization is not an adverse influence on the American way of life. Ninety per cent of all people will agree that we need memorial art as a visible exponent of our civilization. The susceptibility to, the taste for, and the genius which enables people to enjoy and have pride of ownership of, fine art in memorials are the advantages the memorialist should be able to use to great advantage. Whether he does, however, depends upon his ability to properly present and describe memorial design and through his description, adapt the design to meet the requirements of his customer.

The dealer and his salesman need not be creative designers or artists. Everyone in the memorial industry should have an appreciation for memorial art and should be able to paint word pictures giving a complete description of every design or every memorial he has in stock. In other words, the memorial—the only "once-in-a-lifetime" purchase the customer will ever make—should not be sold by size, like a rug; nor by weight, like a sack of potatoes; but should be sold as tangible evidence of love of family, and respect for, and pride in, the family name.
Our art is no innovation—it is as old as civilization itself. Each age and each
country has made its valuable contribution. What the ancient masters did with
a chisel in days or weeks, we can now do in a matter of hours.

Even so, the idea and the ideal of design must be present. While we are
putting more and more dollars in better and faster machines, we must also put
into every memorial the ideas of the designer-artist and the ideals of fine
craftsmanship, or we will not be worthy followers of our art.
Chapter I
Composition

THE MONUMENT, while a tangible thing, is usually sold by the person who can best describe and illustrate its intangible qualities—its sentiment and symbolism, its graceful lines and pleasing proportions and its adaptability to the customer's requirements. How best to evaluate the design and how best to effectively describe it, together make the prime object of every lecture or article on design.

Ability to create designs or even to make thumbnail sketches is not a secret that nature has entrusted to a select few. It is as much a matter of persistent work as inherited ability.

We study design to stimulate the imagination and to develop original ideas, to strengthen judgment, and above all to acquire power to express ourselves through the terms and materials used in a way that shall be clear, coherent and interesting. So, we must start at the beginning—composition.

An analysis of composition is generally negative. This results from the fact that while a design is not necessarily good because it complies with all of the generally accepted laws and practices of construction and ornamentation, it surely will be "faulty" if it contradicts them.

At first glance, one should be able to "disassemble" a design—take it apart, line for line, in an attempt to identify what lines, angles, curves, etc., make up the design.

To begin with the initial parts of a design, we have lines, which when combined with other lines, become angles; find still more lines make up quadrilaterals (rectangles). The die is usually a rectangle, horizontal or vertical, setting on one or more rectangles which are the bases. These elements make
up the front elevation of most of the monumental work in our cemeteries. The third dimension, thickness or depth, is governed by the sizes and proportions of the front elevation.

Basic straight lines are illustrated in Figure 1–horizontal, vertical, right oblique and left oblique.

By changing the angle of the oblique lines, we can batter the ends of the die as shown in Figure 2.

Straight lines can be combined to make many planes. Some of these are shown in Figure 3.

To further realize the importance and potential of these various shapes and forms, some have been combined into front elevations or dies in Figure 4. Pleasing arrangements of planes can be effectively accomplished in granite by combining polished and steeled surfaces.

If our age is to produce a definite style of design by which posterity will remember it, perhaps this so-called machine produced, straight line design will be our contribution. Beauty in contour, proportion and ornamentation is assured by the orderly arrangement of all of these elements and most of the designs of this type produced today are good. They are, at least, a far cry from the oval or serpentine tops and concave or convex ends so common for at least 25 years prior to World War II. To many people, our contemporary designs are a welcome relief from monotony.

The likes and dislikes, the requirements and demands of people are numerous. There are
those who object to the contemporary, clearly defined, sharp lines of designs of the modern school as shown in Figure 5a. They like the flowing soft lines suggested in Figure 5b. Subconscious emotions govern these demands and requirements. Many memorialists discourage the use of this type of design without realizing that with the modern wire-saw, these forms can be easily produced.

The combinations and uses of curved lines are unlimited. Concave and convex ends, oval and serpentine tops, graceful moldings and panels of ornamentation may be produced by the use of curved lines.

For all practical purposes, curved lines are derived from circles and ellipses. Portions of the circumference of one or the other usually produce the curved or flowing lines used in memorial design. Figure 6 shows some of the lines from the circumference of a circle and in fact, the circle in its entirety. Figure 7 shows some of the uses of the elliptical form.

There are many forms and styles of designs-colonnades, exedras, ledgers, balustrades, etc., but a very large per cent are basic in form. They are made up of triangles, squares, rectangles, cylinders, circles, ellipses or of portions of these forms. Perhaps 90 percent of all monuments are of the horizontal form-die and base.
Taking for granted that forms are more or less predetermined, it must also be a predetermined fact that how we combine the lines forming the contours and what we add as ornament either makes or destroys the beauty of the completed monument design.

Logic and rightness are found in consistency and harmony – in an orderly arrangement of things. The law of adaptation is the fundamental law of design just as it is the fundamental law of nature. The monument design is addressed specifically to the sympathies, the faith and good taste of one or more people. It must be an orderly arrangement of lines, angles, and planes and it should be easy to explain in complete detail to a customer.
Chapter II

Proportion

IN CONSIDERING shape, size and proportion, it is very convenient to use terms like "rule" and "law," but it should be remembered that in matters of design there are no laws, as such. There are theories, based upon traditional forms and practices which have been found to be pleasing. The indefinable, personal "sense of beauty" must pass final judgment upon all aspects of good or bad design.

In the final analysis, shape and size are not too important if all of the parts of the design are in proper relationship with, and in proper proportion to, each other. The most magnificent and beautiful memorials – small and large – are pleasing because of what was done with and within the contour of the design, not only because of the actual sizes or shapes. Shape (or contour) may be practically anything: square, rectangular, elliptical, round or a combination of two or more of these shapes; and sizes may vary from a small headstone to the most magnificent and pretentious memorial.

There is a big difference between proportion and dimensions. Proportion is the comparative relationship of the various dimensions and the various parts of the design to the design as a whole. Each part must be like an instrument in an orchestra—it must be in complete harmony. This makes for an orderly arrangement, and the end result is a beautiful design.

Regardless of what the designer or memorialist thinks about proportion, there are two things which govern proportion (and size) over which they have little or no control. The first of these is environment. People who live in crowded, metropolitan areas see only tall buildings and homes and find that about the only way to expand is up. To these people, who usually have small
cemetery lots, a vertical tablet is the preferred form and is in keeping with the things they see and live with. People who live in suburban and country districts, on the other hand, see great expanses of rolling meadows, forests and hills. To these people the preferred form in memorial design is that which is long and low.

The second governing factor is cemetery regulations. There are too many cemeteries which regulate not only length of bases but actual height, and in some instances, the area of the face of the memorial as compared with the rest of the lot. This is regimentation of the worst kind which not only restricts the right of choice of the lot owner, but penalizes the future beauty of the cemetery. The answer to this is design—good material and expert craftsmanship. Unfortunately, in the past too few memorialists have considered these things important enough to use them to combat unreasonable cemetery regulations.

Proportion of the conventional type memorial—a die with one or more bases—cannot be determined or measured by a set rule or regulation. However, becoming familiar with the methods of proportioning which have survived criticism for centuries places the memorialist in the enviable position of having a reason for the sizes proposed.

Ancient Greeks used what they called "the golden rectangle" as a guide for proportioning pieces of stone used in their many buildings and memorials. If this method were universally used, it would be an improvement but would not and could not be the ultimate answer because of the problems of environment and regulations. Figure 8 illustrates the method generally believed to have been the method used by the ancient Greeks to secure the golden rectangle. It starts with a square A B C D. With the diagonal line AC as a radius, an arc is inscribed to the base line at X. It can be extended again by drawing the vertical line XY and with the radius AY inscribing the arc to Z. This form can be extended many times and in so doing almost any proportion can be arrived at. It can be broken down into feet and inches as shown in Figure 9. With the height predetermined, the process has been followed five times, and actual measurements are shown on the drawing.

![Figure 8](image-url)
Even with their "golden rectangle" and their many beautiful buildings and memorials, the Greeks were nonconformists. Along the old roads and in the burial grounds of ancient Greek cities, examples of their craftsmanship have been found which did not conform to some of these proportioning principles. Urns have been found which are 1-3 in diameter and 8-0 high, set on bases which were 2-0 square and 2-0 high and tablets which were 1-8 wide and 11-0 high.
Proper and pleasing proportion is a principle which does not apply to shape only. It also applies to ornament and lettering panels, and to panels created by the use of different finishes. Too many polished monuments have lettering panels just large enough for the lettering, and ornament panels placed here and there on the face of the die. These are like a series of first aid plasters and in most cases are not in proper proportion or in harmony with the design at all.

Figure 10 illustrates some of the advantages of proper paneling. A, a square, requires little or no imagination to create. B is slightly longer than it is high but still is without any clearly defined form.

C is twice as long as it is high, but is not as interesting as D, because D has enough contrast to present an unknown relative proportion of length to height. E is the same proportion as D except that it has been divided into four equal parts. This uniformity causes the figure to be of less interest. F is more interesting because of the unequal, yet related, parts. The areas of G are not related and are not in harmony with the proportions of the overall figure. In H there is a return to the related and harmonious parts. These examples are given to illustrate the restraint and care which must be exercised in the treatment of the faces of dies and tablets.

With no attempt at problems of geometrical drawing or drafting, there are, nevertheless, phases of construction, "tricks of the trade," which are important to proportion and which can be of great assistance to the memorialist. For example: there are many ways of increasing or decreasing size while keeping the same proportion, but the simplest is the diagonal line method. In Figure 11 we have a die which is 5-0 by 2-4 and which we want to increase to 6-6 in length.
The diagonal line AC is extended and the base line AB (5-0 to scale) is increased to 6-6 at D. The vertical line DE is extended to the diagonal line AC and ADEF will be the overall size of the increased die: 6-6 by 3-0-12. Any size can be determined by measuring the length on the base line and extending a vertical line to the diagonal.

Methods of determining what has been generally accepted as good proportion of screen or wing type memorials are illustrated in Figures 12 and 13.

Figure 12 shows the horizontal type center die, sizes of which have been pre-determined. A diagonal line AB is drawn and from C, a diagonal line parallel to AB is drawn. Point D can be located at any place on this line but is usually governed by the desired wing height.
Figure 13 shows a vertical center die. A diagonal line is drawn from A to B and line AC is extended at right angles to AB. Point C can be located anywhere on the line and is usually determined by the desired height.

Base heights vary and, in contemporary design, are usually unrelated in proportion to the die. Figure 14 shows a vertical die with the base height determined by an old and accepted principal. A diagonal line, AB, is drawn and AC is extended at right angles to AB. The vertical line from B is extended until it meets the line AC at C. Usually base heights determined by this method have moldings to offset the height somewhat.

Proportion is a "phobia" with some and an unknown quantity to others. Since all matters of design and its component parts are matters of personal likes and dislikes, we are led to wonder, "proportion to what?" when we hear criticism of the proportions of a design. If ornament, lettering and moldings are applied with restraint and in an orderly manner, proportion will take care of itself to a large extent.

Proportions of various forms of memorial design, such as the obelisk, cross, etc., will be considered in later chapters dealing with these styles of designs.

There are many problems and examples of geometrical drawing and construction which, while they are important, do not necessarily apply to

![Figure 15](image)
proportion. Illustrations for this chapter are few, but are important. Proportion in design, being somewhat regional, does not necessarily require much more than fundamental principles for application.
Chapter III

Form

FORM OR SHAPE (contour or silhouette) is of great importance to the appearance of the individual monument and to the cemetery section, when viewed at a distance along with other monuments as a portion of the "cemetery skyline." Henry Ford was no more obstinate in his credo, "A color so long as it is black," than the monument man who persists in the practice of making most of his monuments with serpentine or oval tops. As a practical measure, there should be as much of a change in the monument business as there has been in the production of Ford automobiles.

A progressive and effective step was taken by the Monument Builders of North America some time ago when they contracted with Edward R. Peterson Studios to produce a series of contemporary designs. In this beautiful collection of designs, there was not a serpentine or oval top. Some of the shapes are shown in Figure 15.

Carborundum and contour machines, saws and wire saws make it possible to do in an hour the things that the old time stone cutter took a week or more to do. Regardless of production time and evidence of automation and machine work, there is no less evidence of the ideal of the designer. With modern production machines and processes, it is still possible to produce memorials which are beautiful and interesting because there is evidence of thought and feeling, and which, by orderly arrangement of inscription and ornamentation, tell their story for posterity.

There are several forms or shapes which actually require no ornament to complete the design. The Cross, the urn and the obelisk are among these, and
each is distinctive in form and proportion, but not beyond the means of the average purchaser of monumental work.

If the three styles or types shown in Figure 16 require no ornament for completion, there are other forms which do require certain types of ornament and lettering.

This is particularly true of those shapes which are patterned after windows and doors of ancient Gothic cathedrals. Figure 17 is an example of this style. Lombardic style lettering is particularly effective with this style.

Designs patterned after the ancient Greek Stele, Figure 18, require a horizontal molding which separates the crest from the main die. There are usually two rosettes above the name, which should be in classical letters.

There is a marked similarity between the styles of the vertical Gothic tablet and the Greek stele. The Gothic style, however, usually is flanked by set-backs with the tracery in a long, vertical pattern while the ornament of the Greek stele usually consists of rather ornate carving on the crest.

There are subconscious emotions which make and affect impulse buying. These emotions, weighed down by tradition and the inheritance of centuries, are strong enough to govern the likes and dislikes of various shapes and even colors of materials. Basic reactions to simple lines, and the change of reaction afforded by the change of direction of lines, are applicable to monument design. It is the effort on the part of the monumental designers to control the reaction
of the customer's subconscious mind that accounts for so many shapes in designs. Psychologists generally agree on these reactions and if a customer insists upon a straight topped monument, their advice would be to furnish the customer with what he desires. Some of the reactions and their applications are shown here:

Figure 19, the straight top represents the horizon and suggests safety from concealment.

Figure 20, action is provided by tilting the straight top. This adds a great deal of interest to the design.

Figure 21, eruptive action is provided and interest is increased by this zigzagged line. It suggests lightning and is mysterious.

Figure 22, this irregular or broken horizontal line becomes the solid earth under our feet. The fear reaction, and mystery of Figure 21 are lost. It suggests the parapets of ancient castles and gives a feeling of security and protection.

Figure 23, further action is provided by a curving line-soft and reminiscent of rolling hills and distant mountains. It has a comforting feeling, adaptable to all the things we like.

Figure 24, reactions to the convex curve, the curve of force which ends with a portion of a volute, may vary, may be pleasant or unpleasant, but in any
event, we find that portions of the circle or ellipse-soft continuous, flowing lines-make pleasant contours or forms.

Figure 25, the circle has many uses in monumental art -columns, vases, and urns. Just as the sun and moon have always been a comfort to man, the complete circle is a comfort to most people. There are no unpleasant emotions to detract from the focal point-the circle itself. Even the "roll marker" is beautiful because it is comforting and suggests eternal rest.

These illustrations are not given as scientific formulae, nor as a panacea to solve all designing ills, but as selling aids. The principles of "reaction to form" do exist, but like theorems in geometry, each principle is basic only and must be tempered and adapted to the problems at hand.
Chapter IV

Ornament

BEAUTY IS WHERE WE FIND IT or where we make it. If beauty is indefinable, we may at least learn something of the various ways in which it manifests itself. Just as a man is known by the character of his associates, so we may be able to recognize beauty in design through the associations with which it is always found.

The beautiful design is invariably restrained and orderly in arrangement, clear in expression, and straight-forward in the acceptance of all the conditions imposed by appropriateness, environment, construction, materials and processes. These things we are able to analyze individually. We are able to reduce them to simple terms for the purpose of study and by this process establish definite principles for guidance. Through comparison and experiment we hope to express ourselves in an orderly and consistent way-trying for order and hoping for beauty.

Memorialists are constantly striving to master the principles of proper memorialization. They attempt to develop shapes, forms and combinations which will be attractive and at the same time retain the dignity, harmony and grace necessary to proper memorialization. However, to too many, the development of a design is simply more and more ornament, reducing to the absurd the very things that make a memorial.

We should consult nature for principles of construction. In all of nature, there is no arbitrary law of proportion—unbending model of form. Logic and rightness are found in consistency and harmony – in the orderly arrangement of things. The law of adaptation is fundamental in creative designing just as it is in nature.
Meaningless decoration is the curse of the memorial business. In most cases it is an instinctive effort on the part of the designer or the memorialist to disguise incompetence or as an antidote for lack of imagination and creative ability.

In all of nature, there is no such thing as meaningless decoration. There is always beauty and function in nature and it can also be applied to memorial design. Ornament is added to a design to create or add beauty and through proper application we are able to express symbolism.

All mankind likes ornament or decoration. It is natural but should be controlled or guided by a sense of fitness and reason. A reasonable and reasoned use of ornament is a sure indication of the good taste of the user. A savage is extravagant in his use of ornament and this same feeling for decoration leads the uncritical and the untrained to admire richly decorated things which are poor in form and faulty in structure and proportion. The person with a real feeling and appreciation for beauty is restrained in his use of ornament – not because he cares less for beauty than the untrained savage, but because he cares for and appreciates it more.

The choice of ornament is a complicated problem and it becomes more so as time progresses. We have no traditional style or ornament in this country, or in this age for that matter, and may pick and choose from the entire range of historic ornament for a motif and a method. Craftsmen of every period-Greek, Roman, Romanesque, Middle Ages (the Gothic period), Renaissance-followed a slowly changing, and established custom: every man doing what had been done by his immediate predecessor with just the slightest variation. Differences in the styles of ornament, which are so obvious to us, were developed so gradually over such long periods of time that there was no conscious recognition of it at the time.

Without becoming slaves of "historic ornament," we should be able to reshape it to conform to our present day needs and methods of production. In the use of decorative details, we must be consistent in that the various styles are not combined in the same design.

Ornament is a language which speaks loud and clear and must be used with the same consistency as we use our language. We would not write or make a statement beginning with our own language, and switching around from English to French, to Spanish, to German. And yet this is not any more unreasonable than some of the combinations of details which are frequently found in monumental designs. One of the most common mismatches is using classic Roman letters on a monument which has been ornamented with Gothic tracery panels; or the Celtic cross with a Roman torch; or the mausoleum with four Ionic
columns on the portico, gabled roof and other things which stamp it as at least an attempt at a classically designed building with bronze doors which are heavily ornamented with Gothic tracery, and the name on the frieze in Old English letters.

There are memorialists and their designers who become so enamored of some particular style or a fragment of some ancient order that they attempt to use it for every purpose. Thus details from some ancient Greek temple become details for monuments, colonnades and mausoleums whether they are adaptable or not. From the picture of some ancient Corinthian cap, the acanthus leaves are traced or copied and become ornament for every kind, style and shape of monument, whether they can be fitted into the space or even whether they are compatible to the design. This is misguided designing, something like "translation of rhetoric into stone-a process often fatal to the rhetoric and always fatal to the stone."

From their works, master craftsmen of every age can teach us plenty but let us learn principles, not copy shapes and details; let us imitate them like men, not ape them like monkeys. We should create and decorate without substituting novelty for propriety and orderly arrangement. The systems and principles of designing and ornamentation cannot be acquired in a day. It requires science and much training to be able to properly design a monument—add the grace and poetry of symbolic ornamentation. Each process—composition, proportion, and ornamentation—requires special study and all together require a lifetime of study and experience. There is much more than combining lines into planes, planes into solids and then adding ornament and lettering. Above all, there must be orderly arrangement to make things into a monument.

Monuments should be beautiful in form, compatible with the environment, and ornamented symbolically with a motif which is also compatible with the environment. From under our feet and at our finger tips we find beautiful things which are readily adaptable to memorial art. Chances are, a person knows and appreciates the beauty and symbolism of the dogwood, yet never saw a wild rose; knows the beauty and significance of ivy, yet never saw an acanthus and wouldn't recognize it if he did see it; never saw a palm or laurel, yet has pine and oak trees growing on his own lawn. There is much more intimate appreciation of ornament close at hand which makes the monument a part of the area in which it is erected. In other words, we should use what we have and what we see every day: oak, pine, buckeye, dogwood, poplar, ivy, etc...
The History of Ornament

A STUDY OF STYLES, periods and methods of ornamentation is so complex and all-inclusive that it becomes a profession within itself. Many books have been written on the subject, and while some knowledge of the various styles and their application is a great asset in designing and selling monumental work, we are aware of the fact that most contemporary design has reached the point that it would be hard to classify it in any other manner than "Contemporary American."

Good books on ornamentation do not refer only to styles or periods with some historical background and many illustrations, but classify the natural from the conventional, illustrate the uses of various panels and shapes, etc. One of the best of these books is Myer's "Handbook of Ornament," and another is "Styles of Ornament," by Speltz. These books should be on the shelves of every monument dealer or salesman as reference books because they will furnish many ideas and sales aids.

Styles of design and ornament in antiquity were named for the people or country which developed them. In this period there were Egyptian, Babylonian, Persian, Hebraic, Indian, Greek, Etruscan, Roman, Pompeii and Celtic styles of ornament. Each succeeding style depended greatly on the preceding style. This is particularly true of the Greek which used some of the features of the older Egyptian style, and the Roman which used Greek ideas and motifs. For instance, when Rome overran Greece, the Greek styles of architecture and ornamentation were taken over, modified and made more elaborate, becoming in the process, Roman.

By the time of the Middle Ages, each country began to express itself and as a consequence each country contributed to each style of ornament. The styles of the Middle Ages, Early Christian, Byzantine, Romanesque, Mohammedan and Gothic reached the point of perfection of form and production, so it was no longer possible to refer to style only, but it needed specific identification as French Gothic or German Gothic, etc...

Impulsive emotionalism, religious mysticism and the desire for a more intellectual development animated the people of Europe late in the 13th century. From this unrest evolved the Gothic style, based at first almost completely on rearrangement and use of Romanesque features.

This new style, begun in northern France, spread all over Europe with every country having its own adaptation of this "subordination to form" style which was ultimately regarded as an expression of pure German style.
Gothic was more than a style of ornament or building, it was a way of life, being developed at the height of religious interest throughout Europe. Great cathedrals were built in every city and are standing today, and Gothic style is often referred to as "Church Style." These old Gothic churches were ornamented with leaf moldings and panels of plant life selected from native flora. The Gothic style is important because it introduced into ornament local things-organic and inorganic, animate and inanimate-and because it always kept ornament in strict subordination to form.

The Gothic or Medieval period lasted approximately 200 years and these two centuries are often referred to as the Dark Ages because of universal illiteracy, making the period one of parable, allegories and symbolism. A revival of letters, so to speak, in Italy in the 15th century made the Italians realize that they were descendants of those who had produced the grandeur of ancient Rome. They realized that the art of construction and ornamentation should not follow the lines of an importation like Gothic, but should be their own conception.

There were other things which were important to civilization: reformation in religion and the printing press, both of which contributed new requirements and a new interpretation of classic art. These new things belong more to the history of the Renaissance than to the actual results of the period.

The Renaissance began in Italy and this revolution in the arts spread like wildfire to every country in Europe. This release from the influence of the Gothic style resulted in the virtual flood of over-ornamentation with little attention being given to the structural design of a building, its setting or classical proportions. Buildings, shrines and tombs were overloaded with ornament until the latter part of the 16th century.

Reaction by theorists and designers led them to formulate the traditions of classic art on fixed principles and to establish rules for the employment of purer architectural forms. This was the period of the "Later Renaissance" and was influenced by the discovery of manuscripts of Vitruvius which had been written about 25 B.C. Since there were no illustrations with the manuscripts, the Italian artists and authors developed orders of their own, based upon the monuments of the first three centuries in their own country, and not those of Greece as were described by Vitruvius. At any rate, Serlio published a work on the orders in 1542, Vignola in 1563 and Palladio in 1570. These three works constituted a standard, universally accepted as Italian Revival, but which was generally known as Later Renaissance in every country except Germany, in which it was Barocco. Vignola's manuscripts and drawings of the orders and ornament are considered to be about the finest ever made.
Rococo is the name applied to the decadent forms of the Later Renaissance. From the 11th century there had been a rivalry between two schools of thought in ornament. Michelangelo used a free-flowing style of ornamentation which had a following in every age until about 1715 when it was generally adopted. In France it was known as Louis XV but in most countries as Rococo. As a style it was completely separated from, and independent of construction and its lines run in free flowing curves with no symmetry. It was short-lived in France, lasting only about 35 years but was used extensively in England and Germany until the end of the century. In England, the chief exponent of this style of ornamentation was Chippendale.

In the last quarter of the 18th century, Greek art began to exert its influence on the Rococo style, resulting in a phase which is generally known as the style of the Empire. Although unable to supersede entirely the forms of the day, it did create a demand for ornamentation of better class, and architectural forms were introduced in place of the Rococo scroll work. The Greek fret, palmette and acanthus, the egg and tongue, and other decorative details came into fashion and extended from furniture and other accessories to decorations for tombs, monuments and buildings.

Colonial style in the United States was a combination of the various classical styles which were common in Europe. Notwithstanding the European influence in the 18th century, the artistic creations of the United States possess certain characteristics of their own.

While not one in a thousand customers will demand a certain style of design or ornamentation which would be found in the classical, it is nevertheless a great asset to know at least something of the background from which certain forms and styles come. In other words, it should be possible for everyone to classify Gothic or Renaissance even if it is not possible or necessary to nationalize the styles by calling them German Gothic, French Gothic, etc...

**Types of Ornament**

ORNAMENT ADDS BEAUTY, character and symbolism to what otherwise might be just a piece of granite or marble. It can more easily identify and classify the design than size and shape, even though the ornament itself might be difficult to identify.

Ornament which depends upon light and shade for proper effect is plastic. Shape carving and relief carving are plastic. Ornament which depends upon contrasting colors is chromatic. Granite designs with polished areas in combination with sprinkled, steeled or axed areas used as ornamental features
are chromatic. Lithochrome applied to darken etched or lightly sunken surfaces or lines makes it possible to produce beautiful and effective chromatic ornament at a fraction of the cost of shape or relief carving.

It is possible to apply surface ornament in several ways-traced, shape carved, or carved in relief. In any process of application, all ornament can be divided into three categories:

1. Naturalistic – Ornament which is carved in a natural form, such as roses, lilies, books, lambs, etc., is naturalistic. See Figure 26.

2. Conventionalized – Ornament of any kind or shape, floral or otherwise, which is "streamlined" or controlled to make it fit into a given space or area, or to make it comply with given practices is conventionalized ornament. See Figure 27.

3. Geometrical or Conventional – Ornament which is a combination of lines or forms which are based upon geometrical patterns, such as Greek frets, Gothic tracery, Celtic ornament, etc., is conventional or geometrical. See Figure 28.

The ornament in Figures 27 and 28 can easily be divided into three further classifications:

1. Continuous bands, as shown in Figure 29

2. Enclosed spaces, triangles, squares, rectangles, circles, etc., as in Figure 30.

3. All-over pattern, or diaper pattern;

this method of ornamentation is seldom used in monumental designing, but is followed in designing rugs, draperies, tapestry, etc...
All of these classifications of ornament apply to surface treatment and often are combined with structural ornament, such as caps, cornices, balusters, tracery, scrolls, brackets. Structural ornament will be a part of future chapters dealing with construction.

A breakdown of ornament into styles or periods will be confined to those styles or periods which have been commonly used for, and are easily adaptable to, monumental design.

**Egyptian Ornament**

MYTHOLOGY, MYSTICISM and superstition played such an important part in most ancient ornamentation and proper interpretations of the symbolism were so vague that it was not until the Egyptian period that any definite interpretation could be given to the various motifs and forms used.

The Land of the Nile was the birthplace of historic civilization and while the oldest monuments of Egypt point to an established precedent, those sources have been lost in the mists of antiquity. The Nile was a source of endless symbols and cosmic-religious ideas and ideals. The religion, grossly idolatrous in
its lowest and most popular forms, and pagan by Christian standards, nevertheless, possessed many lofty spiritual conceptions underlying its externally complex mythology. Ideas of death and immortality were conspicuous making sepulchral art the most important form of design next to temple architecture. Primitive fetish-conceptions never wholly disappeared and every Egyptian ornament was a "talisman," symbolism characterizing every detail of decorative art.

The Egyptians employed geometrical and natural forms, the latter always being conventionalized-magical and symbolic- with very little effort being made to reproduce natural forms realistically. Their ornament was characterized by a rigidity and formality which permitted very slow evolution with very little change ever being made from its rise to its decline. It was predominately an art of surface decoration done mostly by the use of colors, with a very limited number of architectural or structural motifs. In the blazing sun with its black shadows, delicate relief carving and subtle molding would be lost. Strong and bold relief carvings were necessary out-of-doors, and in the dim interiors, color was required for effectiveness.

Animal forms were used generously in Egyptian ornament even though the kinds used were limited for the most part to three: the vulture, the cobra, and the beetle. The vulture (Figure 31) with widespread wings symbolizes protection and maternal care. Wings flanking a disc (Figure 32) symbolized Ra, the Sun God. The cobra used on the same feature symbolizes death, hence the royal power of life and death. The scarabaeus or beetle (Figure 33) is the symbol of creation and life, and is frequently found in tombs and on mummy cases.

Of the plant forms, the lotus, the sacred flower of Egypt, was most frequently used. This product of the Nile, this water lily, thus symbolizes the life-giving and wealth-bestowing river and its solar divinities which gave the river its fertility and life-giving powers. The lotus figures in practically every phase and form of ornamentation and is considered by some as the parent of practically all historic ornament. Figure 34 shows both the natural and

![Figure 33](image1.png)

![Figure 34](image2.png)
conventionalized forms.

Papyrus, a sedge found in dense clumps in the mud flats along the banks of the river Nile, is an important motif of ornamentation. Without any known significance, except that it is the product of the fertile soil, it was probably used extensively as ornament because of its abundance. Figure 35 shows the natural and conventionalized forms.

The two plants – lotus and papyrus – were the two most used motifs of ornamentation, which made these ancient craftsmen the first and greatest users of what they had at hand, no matter how conventionalized or geometrical the end product was.

Geometrical and conventional forms or motifs were used with consummate skill, sometimes alone but very often with flower forms. Zig-zag patterns (Figure 36) were used extensively and are very often associated with chevron forms.

The circle was the basis of a great number of patterns. Rosettes of unlimited varieties are found, such as shown in Figure 37. The spiral was not as important to the Egyptians as to the Greeks, but is nevertheless found in many linear and all-over patterns.

Palmette is the name given to an ornament found in all of those countries bordering the Mediterranean (Figure 38). It is found in many forms, but the Greek anthemion is the most important derivative.
Architectural forms were few and simple. There was no system of uniform orders as the Greeks and Romans had. One type of cavetto cornice (Figure 39) was universal.

This was usually ornamented with vertical fluting, derived from the papyrus stalk, and had a bead or torus molding at the bottom. Columns had shafts of three styles-cylindrical, clustered and polygonal-all bound at the top by five or more bands (Figure 40). Column caps could be classified in two classes: the bud cap (Figure 40a), and the bell-shaped or campanuform, as shown in Figure 40b.

![Figure 39](image)

All in all, Egyptian ornament is interesting and is easily adaptable to monumental design. This style was used extensively in this country a number of years ago in mausoleums and fine monuments, and for a richly ornamental and structural style, it could well be used again.

**Greek Ornament**

THE ANCIENT GREEKS had imagination, creative genius, and ambition to make the most of their opportunities. They were blessed with the ability to create and develop beauty and suitable materials in which to work. Greece was the hub of the Mediterranean – the educational, industrial and artistic center of the various cultures – having access to the best of all of its neighboring
Greek aptitudes enabled them to assimilate all they had borrowed from older civilizations and endow those things with a completely new elegance and refinement.

Greek art in its appreciation and use of natural things, its vivacity, charm and elegance, gracefulness and refinement of proportions, delicacy and restraint, is not only vastly superior to the arts that preceded it, but unsurpassed by any that have succeeded it. Greek art was not only the application of ornament to simple things and forms, as was the case with the Egyptians, but the forms or contours were developed for beauty first, ornamented with graceful moldings, columns, pilasters, balusters, urns, and then ornament was effectively used to further enhance the beauty of what was perhaps already beautiful.

The Greeks followed the methods of the Egyptians to a certain extent in that they built their temples, shrines, and buildings with solid stone walls. If necessary to decorate the interior walls, they would carve or paint ornament right on the walls and in some instances would use marble slabs for wainscoting and ceilings. This method or principle was discarded by their successors, the Romans, in that they would build a masonry wall and veneer it on the inside and outside with marble and alabaster.

The history of Greek ornament began about 775 B.C. and reached its greatest era, the Periclean age, during the last half of the fifth century B.C. From that time a period of decline began which reached its climax in 146 B.C. with the conquest by the Romans. Even the decline produced many beautiful and noble things, and after the Roman conquest, the Greek artists worked for Roman masters and fused a new element into Roman taste and art.

The Greeks were the first to delight in pure beauty of form and line movement apart from symbolism and representation of conventionalization. Their art was continuously progressive and this gave their works a freshness of beauty and vitality of interest. In every example, the idea of the structure is in evidence, but there is always a logical relationship between the structure and its

![Figure 40](image-url)
ornamentation. Restraint is an unfailing quality with which their artists and artisans were familiar. They knew just when to leave a space blank or plain, and when not to elaborate upon a motif or pattern. The qualities of their ornament give it a distinction which sets it apart from any other decorative style of any country or any age.

Examples of Greek art consist chiefly of two classes: architectural ornament, which was carved for the most part; and pottery, for the most part, painted. The greatness and beauty of their ornament lies not in the number of motifs they used, but in the variety and originality of the combinations of the few fundamental forms which they did use. Variations are so numerous and effective that duplication was practically unknown. Even such basic things as column capitals, egg and dart, moldings and frets were seldom duplicated.

![Figure 41](image1)

![Figure 42](image2)
Basic Greek ornament is grouped into three classifications: geometric, natural, and structural.

Geometric motifs (Figure 41) are frets (a), scrolls (b), spirals (c), the S-curve (d), rosettes (e) and the guilloche (f). There are many variations of all of these forms.

Natural forms (Figure 42) are the lotus and lotus bud (a), the palmette or anthemion (b), the vine (c), and the acanthus (d) from the plant world. From the animal world came human heads or masks, heads of animals, paws, wings, griffons and sphinxes. Most pictorial reproductions of men and animals, however, belong to the sculptured art.

Architectural motifs (Figure 43) are moldings (a), flutings (b), dentils (c), egg and dart (d), bead and reel (e), scales (f) and rinceau or branching scrolls (g). Of all of the common forms or motifs, the lotus, palmette and the egg and dart can be traced to Egyptian origins. The fret, guilloche, rosette and wave (S-curve), also appear occasionally in Egyptian work.

The spiral was a common form in every style of ornament but it was the Greeks who first used it with the S-curve, developing the combination into what was perhaps the most important single contribution to their art. The development of the acanthus further indebted succeeding ages to the Greeks.

The rinceau which is a combination of the S-curve, the spiral, the vine and the acanthus, contributed greatly to the elegance of Greek ornament and to the splendor of Roman, medieval and even modern art which followed.

Some elaboration is necessary on those motifs commonly used in modern monumental designing: the fret, anthemion, acanthus and rinceau. The adaptability of these motifs to monumental designs is so great that they are constantly being used in some form or other.

The fret (Figure 44) is flexible enough to fit into practically any space or shape of panel. It may be single, double, or slanted and may be square raised or sunken sandblast.

The anthemion (Figure 45) is the most beautiful and flexible motif of Greek ornamental forms. Patterned somewhat after the lotus and lotus-palmette motifs which had been used by the Phoenicians, Assyrians and Egyptians, the Greeks elaborated upon these ancient forms and took artistic liberties with their uses in ornament. They developed many forms, double and single, opposite and alternate and almost always with a contrasting motif based upon lotus forms, in combination with the S-curve. This can be used as a border, in a panel or as a single unit as the heading for a vertical panel.
Stele crests were for the most part forms of the anthemion as were antifixae and acroteria.

The guilloche (Figure 41f) was used extensively as ornament for the torus mold, and also in bands and borders. In some examples of the later Greek period, the guilloche was elaborated to the extent that it had two or even three

![Guilloche Variations](image1)

**Figure 43**

![Anthemion Variations](image2)

**Figure 44**
rows of eyes with braided interlacings.

The egg and dart (Figure 43d) appeared frequently on the lips of vases and on moldings. There are many variations of this type of ornamentation, water leaves and even individual acanthus units being used m borders instead of the "eggs."

The acanthus, a common plant in Greece and Italy, was conventionalized and adapted to practically every form and shape of carving. With the conversion from painted to carved ornament, it became more important and more and more elaborate, being used almost always with the volute or spiral scroll, and chiefly applied to one of four uses: the anthemion band, the Corinthian capital, carved steleheads, and the rinceau.

The rinceau, a foliated scroll, was first used as a painted ornament but was later developed into a carved band. The acanthus in the Greek rinceau was a rather simple form and flat with the scrolls or rolled acanthus ending in a sharp point.

The ancient Greeks had an instinctive and intimate appreciation for beauty, and energies which developed motifs of ornamentation which every age and country have enjoyed, appreciated, and used.

**Roman Ornament**

WITH ROMAN ORNAMENT came an entirely new chapter and method of development in the history of art. Roman art was the first to be the direct result of conquest. Growing wealth and power following a long career of conquest caused the Romans to develop, rather late in their national life, a taste for luxury and splendor.

The Romans were a nation of builders and engineers, and decoration of all kinds concerned with personal comfort and luxury was carried to an extreme degree of elaboration. While their ornament lacked the refinement and restraint of the Greeks, it was, nevertheless, more varied and flexible. If for no other good reason, it was well worthy of study because of its elegance and versatility.

Before conquest introduced Greek art and Greek artisans into their national life, the Romans had depended mainly upon the Etruscans for such forms of art as their modest demands called for. Those singular people possessed a style all their own which was remotely related to the Greek style, but was crude and undeveloped.
The conquest of the Greek colonies in Southern Italy and Sicily in the Third century B.C., and of the states of Greece proper with the seizure of Corinth in 146 B.C., not only made the Roman conquerors familiar with the magnificence of the Greek cities but brought to Rome countless treasures of art and scores of Greek artists and artisans.

Roman art and architecture underwent a gradual transformation. As a result of this process of education and refinement, the Etruscan city of Rome became the Greco-Roman city of stone and marble. Greek orders of architecture and styles of ornament were modified, combined with the Etruscan forms, and the Roman style was rapidly developed to a high degree of excellence.

New requirements, applications and uses were created. To meet these new requirements, they devised new methods and new processes-combining brick, rubble, concrete, stone and marble—all of which had never been attempted before. Their genius for organization asserted itself in that with great numbers of unskilled laborers they built great structures of coarse materials, all of which required a decorative covering on the exterior as well as the interior, such as stucco, stone, marble. This was a radical departure from the Greek and Egyptian methods in which stone was the only material used and temples were the chief subjects of design. Solid masonry of cut stone afforded the only opportunities for the Greek system of building (and later for Gothic) in which construction and decoration or ornament were inseparable.

Too, time was no object in the building of the Greek temples. The Romans, however, were by nature an impulsive people and in order to control the hordes of slaves, peasants and soldiers, it was necessary to keep them busy. Great structures were started and the rough construction portion of the work was completed in short order, leaving the decoration to be done by artists and artisans at some later time. This is the method of construction today.

Principal types of Roman decoration were: (1) use of architectural features, such as columns, pilasters, entablatures, moldings, panels; (2) carved ornament in many forms; (3) figure sculpture, such as groups on pediments, and free standing figures on columns; (4) the chromatic effects of colored marble or granite in columns, wainscoting and walkways; (5) mosaics of glass or marble in floors, walls and ceilings; (6) stucco relief in delicate patterns often combined with (7) mural decorations in vivid colors and (8) bronze grilles and doors, and decorative features such as urns, tripods and candelabra.

The conventional ornament appropriated Greek motifs—the fret, anthemion, rosette, acanthus and rinceau—all of which were greatly modified. Conventional ornament, with its repeated units, enriched the structure without requiring the nearness necessary for sculptured figures, and the Romans developed it to the
highest degree of perfection with appropriate design and rich effects. Moldings were combined and enriched by carving which was always beautiful, retaining at the same time the feeling of dignity and splendor.

In the field of carved ornament, Roman ornament surpassed all previous styles in variety and beauty and many types were originated which are still in general use. The beauty of the Corinthian cap, carved moldings, festoons, friezes, bands and panels-these are the things which are beyond comparison for sheer beauty. The acanthus leaf was worked into every possible detail and in
almost every size and shape.

The acanthus constituted a type rather than a particular form of leaf. As compared with the Greek styles, it is less massive, less pointed and more minutely carved (see Figure 46). It was used as a standing leaf on column caps (Figure 47), on moldings (Figure 48), to form petals of rosettes (Figure 49), and in many, many other ways. The Romans were not noted for their restraint as were the Greeks and this characteristic applied to their use of ornament. If a blank space could be found, they did not hesitate to use some form of the acanthus as ornament.

The rinceau, originated and developed to a certain extent by the Greeks, became the most important of all Roman motifs and as a result, has become perhaps the most prolific of all historic forms. A round stem, from acanthus leaves, branched into scrolls alternately, and each terminated not in a point, as in the Greek style, but in an elaborate flower of leaves (Figure 50). The rinceau was used extensively for friezes and bands, vertically on pilasters, and on flat surfaces in almost every shape and size.

While not used as extensively by the Romans, the anthemion was nevertheless an important motif in their ornamentation. Early examples closely resembled the Greek forms but were finally developed into a new and original ornamental form (Figure 51).

Innovations by the Romans were not confined to the applied ornament field but were just as great and varied in the elements often referred to as the Orders. It is thought by some that the Romans had reduced the Orders to a purely mechanical system of mathematics which formulated dimensions for each and every detail and part. There are those who accept the rules and measured drawings of Vignola and other Renaissance writers as if they represented actual historical practices. There is nothing which could be further from the truth because there are no two examples of any of the Orders from different buildings that are alike.
The beauty and vitality of Roman ornament are largely due to the variety and individuality of the designs of different buildings and of different times and places.

**Early Christian Ornament**

THROUGHOUT EUROPE, except in parts of the Byzantine Empire, the centuries following the fall of the Roman Empire were ones of chaos, upheaval and gradual evolution.

These conditions continued with short and spasmodic interruptions until about the 13th century and were given their start by Constantine in 313 A.D. when he issued his decree from Milan which gave Christianity equal rights with other religions and cults. When ten years later, Constantine himself professed Christianity, it then became the established religion of the Roman Empire. Christians, who up to that time had worshipped secretly deep in the catacombs which also formed their tombs, were now able to hold services openly and freely.

History holds no phenomenon so striking as the rise of Christianity. It spread so rapidly that within a short time it had gone throughout the civilized world. The Early Christian period is generally considered as lasting from the time of Constantine to the rule of Gregory the Great, from 300 A.D. to 604 A.D. During this period, "Ornament for ornament's sake" ceased to exist, and ornament took on a new and greater significance – symbolism.

The early Christians brought with them into the open their motifs and methods of ornamentation. Upon the walls of the catacombs and the sarcophagi, they painted and carved scriptural scenes and symbolic compositions: the Good Shepherd with the lamb on his shoulder, the fish, letters which were abbreviations of Greek words and phrases from the old manuscripts which they possessed and read, the vine and other representations. These paintings and carvings were not so well executed as those done openly and above board, but they more than served the purpose, because while crudely done, they told a story of faith, love, sacrifice and redemption.

During the reign of Gregory the Great (590-604 A.D.), the Latin language and Early Christian ornament as such, the last phase of Roman art, ceased to exist and for the next two centuries art and ornament were practically at a standstill in Europe.
Byzantine Ornament

ONE STYLE WAS EVOLVED from another so gradually that it is impossible to say exactly when or where one ended and the other began. Each felt its way toward the expression of its own ideals, modifying the art of the past to meet contemporary demands and conditions. Art, then, rose and fell with countries and rulers.

Constantine moved the capital from Rome to Byzantium in 324 A.D., the latter being the commercial center of trade between the West and the East. The name was changed to Constantinople. The area had no stone, not even a suitable material for making bricks, but it had been the center from which sculptured and cut stone had been exported to all parts of eastern Europe and Asia. Stone was brought into Constantinople from the producing areas in the Eastern Mediterranean in quarry blocks and was fabricated there. The style was prolific but short-lived.

When Constantine died there was constant bickering among the various Emperors and the Eastern and Western branches of the Church, leading eventually to the separation of the Churches. The Eastern Church (still called the Orthodox Church) maintained that the Spirit proceeded from the Father alone, while the Western (Roman) Church maintained that it proceeded from the Father and the Son.

The iconoclastic movement during the 8th and 9th centuries ended in the admission of painted figures in the decoration of the churches but all sculptured figures were excluded. The Eastern Emperors lost all power and influence in Rome and all of Italy by trying to force upon them their policy of forbidding the worship and even the use of images.

To the world of art and sculpture, this church split was indeed a fortunate thing because some of the most magnificent paintings in the realm of religious art are to be found in the Orthodox churches, just as some of the world’s finest sculpture is to be found in the ecclesiastical carvings in Roman Catholic churches throughout the world.

The Byzantine style of ornament and architecture was carried on until the fall of Constantinople to the Turks in 1453. The city then became the capital of the Ottoman Empire. Byzantine ornament possessed a richness which was in sharp contrast to the poverty of the Early Christian period. The style was developed by Byzantine Greeks of Thrace, Macedonia, Asia Minor and Syria; largely Asiatic, but craftsmen who borrowed freely from the classic Greek, Roman and Asiatic sources.
Their fundamental system of design and decoration was like the Roman in that they used a thin veneer of stone on a structural masonry mass. In decoration they developed an entirely new and original treatment. Classic Roman ornament was carved in high relief, depending on light and shadow for effect. For this the Byzantines substituted a system of decoration in color by using various colors of stone and surface etching, reducing all surfaces as nearly as possible to unbroken planes or curved surfaces without projections or setback areas. This system of carving by incision was rich and highly decorative in spite of its flatness and is the same principle used today in shape carving with the background blown deep and the ornament shaped.

Their patterns were based upon the acanthus and rinceau but leaves and stems were flattened, the lobes were pointed and the points of the leaves were arranged to touch the concaved sides of other leaves or to meet point to point. Leaves were channeled with V-sections and, all in all, their decoration produced an effect of stone lace work applied to another piece of stone. (See Figure 52.)

Artists of the Byzantine era expanded the application of the Greek guilloche motif into a system of interlaced patterns in which squares, lozenges and circles, large and small, were combined in great variety. The most complex examples are to be found in Armenia and Syria.

Whether this is due to the Celtic manuscripts carried into that section of the world or whether the Celtic Cross interlacings of Scotland and Ireland were descended from the Byzantine is not clear. There are examples in both sections of the world, however, which are closely related in form and execution.

**Romanesque Ornament**

THAT "HISTORY REPEATS ITSELF" is true goes without a challenge in the field of creative art and ornamentation. There are extenuating circumstances and it took centuries for it to come about. The Eastern Orthodox Church could not control Western countries and as a consequence could not control their creative talents. In Italy, Rome in particular, a new concept of art and ornamentation was taking shape. Romanesque was the name widely applied to the various
phases of European art in its transition from Latin, Early Christian and Byzantine to the so-called Gothic era.

With the rise of Romanesque, once again the cultural and artistic center returned to Rome, completing the cycle: Greece to Rome to Constantinople to Rome. Out of the chaos of the times, Christian institutions were slowly emerging and it was the Church which first reared its majestic form, claiming supreme authority and divine power. Of its two manifestations, the papacy and monastic system, the latter was nearer the people, visible and tangible, and in the confusion of warring authorities it gained steadily in favor and influence. Uneasy people gave great wealth in land and money to monasteries; peace-loving people fled to them for asylum from wars and oppression. The brotherhoods multiplied their chapters, grew rich, built churches and cherished such arts and knowledge as the church favored. Architecture, decoration and religious sculpture flourished in the monasteries as they grew in wealth.

As in previous centuries, there was a marked difference in the art of the East and that of the West. With the expansion of knowledge, improved travel and communications, each country or each people developed its own style of Romanesque, but in every country the Byzantine influence was discernible. Eventually there were as many styles of Romanesque as there were countries or dialects-Italian, French, Lombardic, Tuscan, Scandinavian, Spanish, English (Anglo-Norman) and German-all clearly related in form and style but all different.

Romanesque was made up of the same motifs as the older styles; acanthus leaf, rinceau and even the anthemion, many examples retaining the classic forms of more ancient times. (See Figure 53). The classic tradition was gradually lost, however, and a sort of naturalism began to appear. Rinceau had round stems with no leaf wrapping, stems were often roughed up to represent bark; leaves were conventional but not at all like ancient Greek and Roman examples.

Figure 52
Romanesque was all done in relief, mostly in high relief, thus returning to the old Roman principles. In the northern countries of Scandinavia and Germany, geometric patterns were used extensively, becoming the forerunners of the geometric forms which were to be developed to the fullest in the Gothic era which was to follow.

Architectural and ornamental styles grouped under the name of Romanesque gradually passed into what are called Gothic styles. The transition was like every other one in that was so gradual that it was hardly discernible; not alone for structural and ornamental details, but of spirit and character. The Gothic styles expressed the new order which came with the establishment of settled institutions – religious, political and social – throughout Western Christendom.

**Gothic Ornament**

ARCHITECTURE HAS ALWAYS BEEN the grand chronicle of secular history, past and present, and in many instances is more effective than the written word. Such is the case with the architecture of the Gothic period, 1150 A.D. to about 1550 A.D.

The Gothic style, evolving as it did as a natural sequence of Romanesque, and during the upsurge of Christianity, was a means by which ecclesiastical panels carved in the stone and stained glass windows could appeal to everyone through symbolism, beauty and intricate stone work.

Actually, Gothic was the result of efforts to build a church of stone with a clerestory to light the central aisle or nave. All details and special forms and styles were incidental to this development: buttresses, pinnacles, clustered columns and shafts, pointed arches, moldings and tracery. The greater part of the ornament in these medieval churches consisted of decoration of these structural features, and whatever decoration was not structural in origin or function, was symbolic or pictorial.

Starting in France, the Gothic style spread throughout Western Europe, every country contributing its own variations of details and motifs. It can be divided into three periods: development, culmination, and decline; or early, developed and florid.

Ornament of the early period, beginning about 1150 A.D., was the simplest and most vigorous with little literal imitation of natural forms. In the developed period, the design and execution are finer; ornament more generously used and more naturalistic with tracery and vaulting the most important elements of decoration. The florid period produced more complex ornament and in many
instances overloaded it. Often ornament, particularly tracery, was thin and strained with technical cleverness and detail replacing the restraint and beauty of artistic design. Ornament varied between the extremes of realism and conventionalism.

Every structural feature of Gothic from the earliest examples was either ornamental within itself-clustered columns, capitals, arcades-or was adorned with carved features such as crockets, finials, gables, buttresses, or foliage and flowers on moldings. In the latter periods certain forms and features originally structural became purely ornamental (see Figure 54).

Figure 53

Wall openings were very plain in the early Gothic period, but as time progressed the jambs and sills became more and more elaborate. From this feature of the style came the idea of tracery panels used in memorial design.

The trefoil and quatrefoil were first used as simple panels to break up large wall areas and at times had rosettes or crosses carved in them. The trefoil was used symbolically representing the Holy Trinity, and in the later and more decorative examples of Gothic, both forms became a part of the decoration in window and door openings.
In addition to the radical departure from the older classical forms, a very significant fact about Gothic is that it removed the center of the creative field far from the birthplaces of the classical Greek and Roman styles. Another fact, perhaps more significant, is that the scarcity of materials in large sizes taught the architects and stone masons of the period to practice economy in the use of stone, using small pieces with thick mortar joints, substituting elasticity and equilibrium for inert stability as practiced by the Greeks and Romans.

In the 13th, 14th and 15th centuries the Gothic masons carried to the utmost the use of stone in building, heaping it up in tall towers that rose from open archways, through lofty roofs of naves and transepts of their churches. They hung it aloft in ponderous vaults, treated in such a manner as to appear to be gossamer webs, incapable of supporting even their own weight. Every vertical support depended upon a buttress for stability and each buttress in turn was weighted down by a pinnacle. Every arch thrust met another to counteract it. These principles led to the development of much novelty in moldings, capitals, columns and piers.

The discovery of the method of making stained glass was perhaps the greatest incentive to the period. Much of the wall space in every structure

Cap and base moldings are rather simple and do not project as much as those of the classic styles.

Column and pilaster caps had no definite shape or size and were usually carved to harmonize with the ornament of the building.
could be filled with wonderful pictorials from the Bible, thus to a certain degree eliminating the necessity for ornamental features to be carved in stone.

As the Gothic period progressed, however, the use of ornament increased and many of the structures of the declining era were overloaded with ornament. Window and door jambs were made up of such a variety of moldings, etc., that it was difficult to see any reason for it all. Columns with their bases and capitals were grouped in such patterns as to practically defy all laws of restraint. Plain wall spaces became mazes of intricate and delicate moldings, tracery panels and even sculptured panels.

Just as is the case with practically every style, decorative carving and ornamentation progressed from the simple to the complex along with structural processes. This change was due in a large degree to the formation of guilds of free-masons who traveled from one place to another to ply their trade, unhampered by restrictions of the church and monastic tradition.

The classical acanthus and its Byzantine modifications, clearly evident in all Romanesque carved foliage, gradually disappeared. Carvers and stone masons began to use the vegetation at hand for ornamental motifs, thus developing an entirely new category of foliage forms. In many instances the time of the year at which the work was designed and laid out played an important part in the style and shape of the carving motifs. If it was in the spring, the artists conventionalized the plants, thick and crisp, suggestive of a new life and the energy of nature. If summer, perhaps the leaves were massive and concave.

Experience, too, played an important role along with the seasons, and as the carver’s skill increased, stiffness and early conventionalisms disappeared. As a result a beautiful style of foliage was developed, still conventional and
thoroughly architectural, but with grace and delicacy of detail. This increased interest and skill led to an ever increasing naturalism, to a more realistic copying of the complex forms of mature plant life, and these were all "wrapped" about architectural features instead of seeming to grow out of them as earlier examples had. Carved foliage, generally naturalistic, consisted of sea-weed, ivy, oak and vines.

Figure sculpture applied as decoration to buildings had become a lost art during the Dark Ages. During the 14th century, however, French artists brought into being an entirely new phase of decorative figure sculpture. The deep jambs and pilasters around doors were adorned with standing figures becoming picture Bibles of stone on the outside just as the stained glass inside had become. Early examples of this type of sculpture were purely architectural, but as time progressed the carving became more realistic with more beauty of form and feature. It was during the middle of the Gothic period that shrines and tombs became elaborate and beautiful adjuncts to the interiors of churches and cathedrals.

Minor architectural features—choir screens, stalls, pulpits, altars, fonts—were designed with the fundamental features of monumental architecture but with
greater richness and minute detail. As the tendency toward minute ornamentation grew and as such minute details were adapted to the works of less magnitude than churches, these minor works became more and more the characteristic masterpieces of the stone carver's art. The most beautiful of these are the French, but there are many other fine examples to be found in Germany, England, and in fact, in every country.

There are differences in composition, proportion and other things to be found in the examples of all countries. These differences in many cases are so minor that it would require an expert to tell whether it was French, German, or from another country. Since the "nationality" of examples of Gothic style is vague to the average layman, we may consider Gothic as Gothic and leave it at that.

Late in the 15th century Gothic style approached extinction before the rapidly spreading art influence of the Renaissance. While Gothic had reached the final limit of structural development and was declining, the ornamental arts were still at the highest point of richness and technical perfection. This splendor of minute decoration, of complex tracery, realistic pictorial sculpture, sumptuous embroidery and showy furniture was, however, the final flare of a dying flame.

The decorative styles long resisted the invasion of the Renaissance but the new style was more than a fashion, it was one symptom of a fundamental change of spirit, from the artistic point of view, of civilization and ideals. By the latter part of the 16th Century, Gothic art, the church style, had passed away.

Renaissance Ornament

TEMPLES, SHRINES, memorials and mausoleums (tombs) had been a rich field for the decorative arts since the time of ancient Egyptian culture. This process of decoration, pagan though it was, had progressed and improved with each succeeding style, unhampered by restrictions until the Gothic era. The enthusiasm for Christianity, through necessity, made the Church not only custodian of the arts, but practically the only means of expression of beauty in design and the decorative arts.

This period came to an end when limitations were placed on the ecclesiastical and civil authorities, and rights were guaranteed to people who had been clamoring for freedom of intellect and conscience. Theology was replaced by classical studies-the church fathers being forgotten in the charms of Virgil, Horace and Homer. Architects and artists no longer went to the great cathedrals for inspiration and ideas but rather they stood by the ruins of ancient
temples and learned again of the magnificence of noble colonnades with imposing entablatures and beautiful porticos with their pedimented splendors.

Men began to realize that man and his achievements before the advent of Christianity were worthy of study. The enlightenment of the mind through study of classical lore resulted in humanism. People realized that Christianity had replaced a magnificent civilization in which laws ruled, heroic men contended for human rights, and great poets and writers recorded the thoughts and hopes of all mankind. The pulsating forces of society were not the faiths and dogmas of the church but the poems and philosophies of Greece and Rome.

Invention and development of the printing press played an important part in the increased demands of the people for more and more knowledge and greater opportunities and freedom. The militant reformation led by Luther, Wickliffe and others triggered the general revolt against the church influence which had retained full sway for centuries.

In the midst of all this upheaval was Italy, an enigma of history, which before the advent of Christianity had been the civil and cultural center of the world. As the center of Christianity, Italy developed an ecclesiastical hierarchy, whose Pope attained world-wide dominion enslaving the minds, consciences and resources of all men. The country lost its enviable position as the "home of the arts" due largely to the fact that the Roman Church no longer had as its weapons the gospels, but the tyranny of the Inquisition and the secret order of the Jesuits.

Italy again restored the literature and arts of ancient Rome to the modern world and thus awakened an era of intellectual freedom, the forerunner of religious liberty. Ecclesiastics and civilization alike shared the enthusiasm for the revival of learning until there was a sudden realization that with the increase of knowledge, there was a decrease in church authority. Princes, not priests, became the actual leaders of the Renaissance.

Since the culture of the new movement was not religious, architecture and ornamentation were not ecclesiastical. Palaces, not churches, were the creation of the time. Medieval Christianity, with its association of enslavement, had become so completely distasteful that all-out efforts were made to keep design of form and ornament as far removed from the appearance of the church as possible.

Many "palace-churches" were built during the Renaissance period-Christian in spirit, pagan in form. The church sought to regain prestige by compromise. W. W. White in his "Manual of Ecclesiastical Architecture," published in 1897, says, "Not being strong enough to prohibit sins; the Church proclaimed
indulgences of them and the price for this new license in conduct was used to erect the present St. Peters in Rome—a Christian basilica in ground plan and a pagan edifice in its elevation.” St. Peters is the most famous of many churches built during the period.

Recognition of the individual in the arts was again proclaimed and the list of the masters of the Renaissance period is perhaps the most star-studded of any period of history. The growing indulgence of personal luxury called for the building and decoration of palaces and gardens. Civic pride and personal vanity stimulated and promoted the erection of private tombs and public monuments. The artists, sculptors and architects of the period were equal to the occasion and the demands, and produced some of the world’s greatest art treasures.

Beginning in Florence, the Renaissance style spread northward over all of Italy and Europe. It was a departure from the orderly evolution based on
nature, necessity and availability of materials. It was practically a worship of style based upon the classical orders-Doric, Ionic and Corinthian, and was practiced by artists and craftsmen who were involved in so many of the arts that critics have referred to some early examples as having been designed by decorators and decorated by architects. No matter by whom it was done, however, there was always a feeling and appreciation for beauty of line and movement.

The patterns of light and shade, the distribution of details in filling spaces, and a highly developed sense of beauty of curves make the Renaissance style beautiful. There was little actual naturalistic reproduction of plant forms, but even in the conventionalized forms, they were always handled with a keen appreciation of the laws of form. Human figures, dolphins, lion's heads, birds, wings, to whatever extent they were conventionalized, they were always true to life in character, structure and proportion.

Italian artists had always used the acanthus, and the Renaissance gave fresh impetus to the use of this most adaptable of all foliage forms (Figure 55). Carved arabesques were freely used and often replaced the flutes on faces of pilasters (Figure 56).

The rinceau, a French name for which there is no exact equivalent, was used in a fanciful manner-springing from a vase, a monster's tail, an infant's torso, or a large and elaborate nest of acanthus leaves.

It is the most prolific, persistent and adaptable of all decorative motifs (Figure 57).

The anthemion was an important motif of ornamentation and varied in form from a close approximation of the old Roman forms to the novel variations, some even having wheat, pomegranates, or other fruit and vegetables in their patterns (Figure 58).

Rosettes, common in all historic styles of ornament, were used in great variety, usually so conventionalized that it is difficult to determine the actual flower. But here again the acanthus, at least in form, is very evident (Figure 59).

Festoons and swags (Figure 60) played just as important a part during the Renaissance as during the Roman period. Natural forms - fruits, plants and even cherubs-were freely used. This type of ornament was not so heavily carved or richly raised as was the Roman style, but more attention was given to details.

Figure sculpture, as such, does not properly belong in the category of ornament, but in the Renaissance, the human figure was used as an element of the decorative pattern and not as an independent work. Artists of the period
were very adept at using the infant form (cherub), and the series of "bambinos" by Della Robbia is considered to be one of the finest works of art the world has ever had. Adult figures appear frequently in part or in whole, and these, along with animal forms, are carved with careful regard for proportion, even in the grotesques, which in a general sense designate any combination of heterogeneous parts or features of figures, animals or plants (Figure 61).

Relief was handled with remarkable delicacy in contrast to the heaviness and mass of older Roman carvings. With classical orders as a background, and with the cultivated tastes and the talents and creative abilities of the artists, the Renaissance has left a great store of magnificent achievements.

Our own Colonial style, thought by some to be original, closely resembles some of the periods of the Renaissance. Since there is a style of the period for every country, perhaps the Colonial in America should rightly be called the American-Renaissance.

Of necessity, the treatment here is limited with little mention of nationality, except Italian, where it all began. There is no mention of the four periods of the Renaissance. Each country or group has developed its own art and has
developed it along certain national or regional lines. To explore each would require a lifetime.

Of the styles of ornament which are important to the monument industry, the Gothic and Renaissance have made the greatest impact. Of all styles, however, the Renaissance is the most flexible and most adaptable. There are no limits to the use of this style.

**Ornamental Moldings**

ORNAMENT, AS A NOUN, means "a part or addition that contributes to the beauty or elegance of a thing," and as a verb, means "to adorn or embellish with ornaments."

In other words, we can ornament with ornament, or we can ornament by the addition of other features to the design, changing the make-up, the contour, and even the style of design itself.

The rather brief resume of the classical and historical styles of ornament has been presented from the standpoint of applied, cut, carved, or engraved ornament. But from the definition of the word, it is easy to see that such things as moldings, vases, urns, screens, balusters, etc., in reality can be ornament because their very addition adorns and enhances the beauty of a memorial, if properly done.

In the use of these added ornaments, just as in the case of carved ornament, there must be strict adherence to style and compatibility of forms. Classical vases or balusters and properly molded entablatures must be used with classical design. While there is a marked similarity of form in several of the classical styles, it would be unpardonable to use Renaissance carving, for instance, on a monument or a mausoleum which is obviously of Gothic or Egyptian style. There are many examples of misused styles and forms which are just as bad, and it does not require too much investigation to find them. To identify styles and to use them in complete harmony, one has but to refer to a good history of architecture, Myers "Handbook of Ornament," or any other good reference book.

The most flexible and adaptable "ornaments" are moldings. They can be used on dies-top, bottom or in the middle-and on bases. Properly used, even simple moldings can add a great deal of character and elegance to a two piece monument design. Contours and outlines can be changed with moldings, thereby changing the whole character and even the style of the design.

Moldings are generally divided into three classifications according to the
direction of movement or the suggestion of the line of force: 1, crowning molding; 2, dividing molding; and 3, supporting molding. These classifications are just what their names imply. The first, the crowning molding, is used at the top of a die or as a part of the cornice. The most common forms of the crowning molding are shown in Figure 62. Their application to monumental design is unlimited, but there are some illustrations shown in Figure 63.

Dividing molding is often used instead of a band of carving, or with a band of
carving. There are numerous forms of this type of molding, some of which are shown in Figure 64. Modern production methods have made it possible to use
all of these forms of molding to good advantage, and many of the better contemporary designs are made more effective by the use of one or more forms of the dividing molding.

There are unlimited uses for these forms: a, the raised and sunken filet; b, the raised and sunken band; c, the raised bead, and the flush bead; and d, the flute. The V-line, c, is particularly effective with various forms and shapes. Some illustrations of the uses of these moldings are shown in Figure 65.

Moldings of support are many, and are especially adaptable to bases, see Figure 66. Contemporary design often shows molded courses on the base with the die a perfectly plain rectangle. But the older forms, being more classic, usually had molding around the top of the die as well, see Figure 67.

Moldings on bases add greatly to the elegance and beauty of a design. There are so many forms and shapes that are adaptable that it is impossible to show them all, but a few are illustrated in Figure 68. Modern production methods: carborundum saws, wheels, etc., make the cost of production negligible compared with the beauty added to the design, and they should be used more.

Large moldings of simple profile give the effect of strength with greater highlights and heavier and darker shadows, while grace and delicacy are obtained by the use of smaller moldings, which in turn have smaller highlights and more subtle and delicate shadows. Moldings, their proper uses and applications, require considerable study. If properly used, their intangible value—beauty—far outweighs their cost. Classical styles require classical moldings and styles of design can be classified by their moldings. Classical styles and the five orders of architecture are simple to keep true to style, but moldings
to be applied to dies and bases require a considerable amount of creative ability and artistic restraint.

In any analysis of moldings, it is convenient to use the terms "law and rule." It must be remembered, however, that in matters of design there are no laws – just theories – which, like those applied to carved ornament, are based upon existing examples. Reason, restraint, and that indefinable thing called "sense of beauty" must guide us.

Technical skill is essential even in the creation of a simple design. Only when a person is familiar with the beautiful things of the past and knows why they are beautiful, can he create or invent new designs.

### Ornamental Vases and Urns

VASES, AND URNS based upon vase forms, are most interesting and are important facets of memorial design. People like vases subconsciously without knowing anything concerning the importance the vase has played in the history of man.

Contemporary monumental designers have used vases in many ways with the hope that the added vase will make the design more acceptable to the customer. Some of the most common uses in monumental design are illustrated in Figure 69. The vase is not an economy item and actually is not very practical if left open without a container of metal to protect the stone from bursting in freezing weather.

Unfortunately, too, from the standpoint of design, very little attention has been paid to traditional and classical styles of design. The cost of production is perhaps responsible for this lack of "design" in most of the vases and urns we see used in memorial designs.

If necessity is the mother of invention, it is also the mother of the creation of the vase as a form and as a vessel. The vase began as clay pottery created by ancient civilizations and had attained a religious significance long before the time of monumental edifices. The oldest and most eloquent documents of ancient history are the vases created during every era of mankind. Ceramic work served for the construction and ornamentation of monuments indirectly because architects took up the principles of beauty and style which had already been developed in pre-architectural times.
How far back pottery goes into pre-historic times cannot be determined. In the Nile Valley, in Scandinavia, in Africa, in North and South America, in Asia, pottery has been unearthed which is thousands of years old. Besides serving the needs of everyday life, pottery was used in religious and funeral rites. Vessels with oils and food were placed in graves. In some parts of the world where cremation was common, the ashes of the dead were placed in vases with covers (urns) before interment. These ancient rituals have preserved for us
many forms which might otherwise have disappeared completely.

The principle sources of pottery were Greece, Sicily and Italy. These countries developed a wider variety of forms of vases than others and in fact classified them by names according to their purposes. Since early pottery was made to be used and was made of clay, most examples had handles, lips, spouts, etc. Most of these things are impractical, if not impossible, to reproduce in natural stone.

As time progressed, vases became more ornate. Ornaments such as flowers, birds and animals were painted and glazed into the vases. The practice of ornamentation was continued on into the Greek period first, and then on into every period of classical design, Roman and Renaissance especially. The nature of the rather soft marble which the Greeks used made it possible for them to use handles and other things which are impractical in the marbles and granites commonly used in America.

Necessity and usage governed the forms and shapes of vases for ancient civilization, and from the names of the various ancient forms, we are able to classify and name contemporary forms. Pouring was best done through a narrow opening and filling through a wide one, while funnel-shaped necks served both purposes. Handles and lips varied in size and number according to the size of the vase. Attempts have been made to classify all forms, but this has
been impossible since many of the forms were used for more than one purpose. They may be generally classified as follows:

1. **holders**: for storage and preservation. To this group belong the Amphora (Figure 70a), Urn (Figure 70b), Krater (Figure 70c), Ampulla (Figure 70d), Flower Vase (Figure 70e), salt cellar, snuff box, ink pot, etc.

2. **dippers**: for drawing from and filling other vessels. To this group belong the Hydria (Figure 71a), Bucket (Figure 71b), and spoon.

3. **pourers**: for pouring out. To this group belong the Lekythos (Figure 72a), Mug (Figure 72b), Tankard (Figure 72c), and Bottle (Figure 72d).
There are other less familiar forms.

4. **DRINKING VESSELS.** Principals of this group are the Kylix (Figure 73a), Kantharos (Figure 73b), Kyathos (Figure 73c), bowl, goblet, tumbler, etc.

A limited number of illustrations are shown of these most common forms of ancient pottery (vases) for the purpose of showing that even these ancient forms are adaptable to contemporary memorial design and that many have been used as guides and some have been copied exactly.

In addition to the original clay forms, glass, metal, wood and stone were used. Each material imparted its own character to the vessels made of it. A metal vase, for instance, requires form and decoration far different from glass, porcelain or stone. Purpose of the vessel influenced the choice of the material.

In memorial designing most materials have already been predetermined: granite or marble. An added vase, if for the purpose of enhancing the beauty of the design and the fact that it might obviously be used as a flower holder or container, cannot be considered as purely coincidental.

The use of marble or granite vases for cut flowers or plants is not practical.
unless proper precautions are taken and care provided. A vase should have a metal container which can easily be emptied and cleaned. A cover should be provided so that in freezing weather there is no water to freeze and burst the vase (see Figure 74).

Many cemeteries have restrictions governing the use of vases for flowers or plants. Maintenance costs are increased and there is nothing more unsightly than a cracked or broken vase in the cemetery.

There is a very practical and economical solution. Most bronze manufacturers make flower vases which can be placed directly in the ground or incorporated into the design of the monument. (One simple method is illustrated in Figure 75). A block of marble or granite about 1-0 square is cored for a container into which the invertible bronze vase is placed when not in use. This block can be placed in front of the monument, between the markers, or in fact, anywhere on the lot. The bronze vase illustrated is the "Century" from Meierjohan-Wengler in Cincinnati.

There is also available a bronze vase which can be removed when not being used for flowers. A bolt is set into the stone and the bottom of the vase is threaded and screws onto the bolt so that it will stay upright and in place. When the vase is removed, a rosette is provided to screw onto the bolt. Figures 76a, 76b and 76c illustrate ways in which the bronze vase can be incorporated into the memorial proper.

![Figure 76](image)

![Figure 77](image)

![Figure 78](image)
Vases are rather simple things made up of simple forms: the foot, the body and the neck. The most important part, obviously, is the body because it determines the style and design of the vase. The most common forms of the vase body are shown in Figure 77: a, bag shaped; b, conical; c, cylindrical; d, egg-shaped; e, hyperboloid; and f, bell-shaped.

The foot can be anything: a simple ring (torus molding as Figure 78a; filets and scotia moldings as Figure 78b, or a combination of several forms as Figure 78c.)

The neck can be simple as in Figure 79a which is a quarter round; conical as in Figure 79b; hyperboloid as in Figure 79c; or a combination of these and other moldings such as Figure 79d.

The vase is an important part of memorial design and it should be exploited as much as possible in order to increase further interest in memorials themselves. A complete history of the vase with illustrations of the hundreds of various styles and shapes can be found in Myers "Handbook of Ornament."
MEMORIAL DESIGN IS CLASSIFIED by form and style. Every type is based upon examples and drawings of ancient craftsmen. Styles of ornamentation, proportion, and other things have been the subjects of previous chapters but all of these things are incidental to the actual type of style or the design itself. If a memorial is to be patterned after some classical style and closely follow it, then the proportions of the ancient examples should be followed closely. If the memorial is contemporary, then it should be designed and proportioned to meet present conditions and to fit into the surroundings.

Although they constitute only a small per cent of the memorials erected today, such types as crosses, colonnades (architectural styles), tombs and mausoleums should be designed with greatest care; not that they are more worthy of care than the smallest headstone, but because they are larger, their faults are more noticeable.

In every type, size and classification of memorial design we find that novelty for its own sake is usually disastrous. The customer, having no standard of beauty to go by and no power of reasoning about such things, chooses a memorial simply because it is different; not realizing that just because it is different it is almost always certain to be unbeautiful. New things, new ideas and combinations of features can be beautiful, but history proves that beauty evolves very slowly, and that in true beauty there is no dependence to be put in novelty.

We, as a nation, are too much inclined to praise a memorial which shows skillful production handling and to neglect the more important consideration of design. If we can have technical excellence coupled with beauty, it is good. But
we can never lose sight of the fact that in most instances the beauty of design is much more important than the technical ability to produce perfect work.

John Ruskin said, “Fine art is that in which the hand, the head and the heart go together.” Regardless of the type or style of memorial, it should be not only a tribute to the commemorated, but also a symbol of culture and good taste. We, as memorialists, have a great responsibility in that we have in our hands the expressions of our customers, and in the selection of these expressions, we can determine what other people may think of them and their memorials.

Designs for memorials have always been classified according to function and design. In other words, if the function of the memorial goes beyond the purpose of memorialization, the name of the classification covers more than form. Even the average layman knows that a mausoleum is a memorial, and that it also is a place for interment of the deceased members of the family. Instead of considering the isolated and unclassified examples of memorial design, we should consider only those types which have been and are an important part of our industry today.

According to function there are three major classifications: mausoleums, monuments, and individual memorials (markers, headstones, etc.).

Common practice and custom have just about set the pattern for the average family purchasing memorial work today. Cemetery regulations, too, play an important part in what the customer will choose, in that regulations often stipulate a family monument and individual markers for the graves. For this central or family monument, there are many forms of design.

Tablet

Based upon ancient forms, the tablet, both horizontal and vertical, is the most important type of memorial design today. At least 90 percent of all sales are for this type of memorial. Ancient Egyptians, Greeks and Romans used the form extensively and some of the most beautiful examples of memorial design in the world are the old "Greek stele" type memorials found in many parts of the lands around the eastern Mediterranean.

Another reason for the popularity of this memorial is that most producers have their production departments set up to produce this type more economically, thus bringing the memorial within the reach of more and more people of moderate circumstances.

By contour or shape, various classical styles are suggested; and by the proper application of symbolic ornamentation, arranged in an orderly manner, and by a combination of finishes, pleasing and interesting effects may be secured.
Cemetery regulations which stipulate the size of a memorial also have an increasingly important effect on the style of designs to be placed in the cemetery. This, too, is important to the style of design selected.

**Cross**

The Cross is the universal symbol of Christianity and is the only form of memorial which does not require applied ornamentation for symbolism. There are many basic forms of the Cross, a few of them being especially suitable in form, size and significance for memorial design. Another important thing about a Cross is that it can be used as applied ornament or can be used as a free standing memorial.

**Sarcophagus**

Based upon ancient Greek forms and named by them after the stone which they used to build these one crypt tombs (*sarkos* meaning flesh, and *phagein* meaning to eat the caustic qualities of the stone destroyed all flesh within a short while), the sarcophagus is seldom used in the same manner in which the Greeks meant for it to be used. Single crypt tombs in this country are usually built up of several pieces of stone while the ancients simply hollowed a place out in the stone large enough for the body and placed a cap or cover over it. Size wise, at least, there are many fine memorials all over the country which could actually be classified as sarcophagi.

**Architectural**

Any memorial which is based upon ancient architectural forms is usually classified as architectural. This is particularly true with colonnades or any memorial which includes columns as a structural or decorative feature. The classic orders provide the form and the beauty. Contemporary examples which have columns that are in no way related to the classic orders are sometimes beautiful and sometimes bizarre. Any design based upon the classic should be faithful to the style in that all moldings and other features should follow the order to be effective.

**Cottage or Pedestal Type**

Based upon ancient forms which were used as bases or pedestals for urns, vases or sculpture, this style is not used frequently in cemetery memorials. Being square in plan, it is necessary that ornamentation be used which can be adapted as a continuous motif or which can be reproduced on all faces.
Exedra

The seat as a free standing memorial or as an added feature to a memorial requires expert handling. It is very desirable to most people as a memorial type but it is not adaptable to most cemetery lots because of size or other regulations.

Screens and Balustrades

The screen or wing type is one of the most appealing and popular styles of memorial design. When regulations will allow it, the long, screen type memorial is very effective near the back of a lot, flanked by shrubbery.

Balustrades may be used with a center die instead of solid wings. Care must be taken in designing or shaping the balusters so that they will be in harmony with the rest of the memorial, very much the same as if columns were being used.

Formal garden effects, with additions such as sundials, vases, and bird baths, may be incorporated into designs for screen types.

Obelisks

The obelisk or shaft was at one time one of the most popular types of memorial designs. Based on the ancient Egyptian form, it is pagan in source and symbolism, but nevertheless was used extensively for many years as a type of memorial and is found in practically every cemetery which is 50 years old or older.

Sculptured Memorials

The high position once held by the sculptor who conceived, modeled and carved sculptured memorials is being usurped by practically every producer today. More and more memorials are being ornamented by symbolic panels in which are carved ecclesiastical figures.

Mausoleums

The mausoleum, or tomb, is a functional memorial, rich in possibilities for architectural expression, however modest it might be. No matter what the size or cost of a mausoleum, no false economy in design, materials or craftsmanship should be included.

All aspects of a mausoleum or tomb are important. When jointing, fitting, and pointing up are to be considered; and when, in a vestibule-type
mausoleum, such things as doors, windows, and vestibule ventilation are to be considered, the building should be designed by an expert.

Tablets

THERE ARE SO MANY REASONS for the tablet form in the design of cemetery memorials that to even attempt to list them all would be impossible. There are forms of design more beautiful or more to be desired by many, but because of cost, production facilities, cemetery regulations, customs, and many other things, the tablet, horizontal or vertical, is the most popular style of cemetery memorial today. By treatment of the contours, and by applied ornament or carving, it is possible to make that which is otherwise just an ordinary two-piece monument into a beautiful classical, Gothic, or contemporary masterpiece.

Design is further classified and enhanced by the use of lettering of the right style and of a "conservative" size. Many a fine memorial has been ruined by the use of improper or oversize and clumsy lettering.

Designs which have even an inclination toward Gothic: tracery panels, quatrefoils, quatrefoils, or such, should have Lombardic lettering. Designs which are based upon the Classical should have classic Roman letters: round "O's", "G's", etc.; and contemporary designs might have modified Roman, condensed Roman or even some of the modern styles so common today. A condensed version of Vermarco letters is very effective with contemporary designs, particularly vertical tablets.

There is no rule which governs the size of letters to be used on any particular monument design. Some cemeteries have attempted to regulate or restrict the size of family name letters on all monuments, but this, also, is not a solution to the problem which can make a "Bull Durham" sign of the family name on almost any monument. The style of the letters to be used and the design of the monument itself should regulate the size letters to be used.

A fairly safe scale for letters on horizontal type tablets is: For dies up to two feet high, the letters may be one-seventh of the total height of the die. For dies two feet to two feet, six inches high, the letters may be one eighth the total height of the die. This is impossible in some instances because of the length of the name, amount, and arrangement of the ornamentation, and lack of Spacerite alphabet of the proper size. There is no Spacerite alphabet for every fraction of every inch between two and four inches, but the nearest size to one-seventh or one-eighth will usually work out very well.

Since the tablet memorial is produced from a sawed slab of marble or granite of a certain thickness, it is quite natural that the manufacturers have
directed their knowhow and their production machines toward faster and more economical contour and surface cutting. Machines can be regulated to cut any contour shape, and with surfacing and contour machines and sandblast, anything can be done except actual sculpturing; and even this has been tried and is being done successfully up to a certain point. This extra effort on the part of the manufacturers is one great asset the monumental dealer has working for him.

It is doubtful if the memorial designers have been able to keep up with the ingenuity and progressiveness of the stone working machinery manufacturers. There is certainly no longer a necessity for making all dies with serpentine, oval or straight tops, and bases with flat tops and pitched edges.

To a certain extent the shapes and sizes of monuments today are the result of regimentation or regulation by the cemeteries. It is obvious that regulations concerning monument size must be a part of cemetery management, and that monuments must not exceed a certain percentage of the lot width in length, or more than a certain percentage of the lot area in size. Within itself, this dictates, if not in actual words, the size, type and style of the monument which can or must be erected on a given lot in any cemetery. What to do with the space which has been allotted by regulation is, first and foremost, the greatest problem the memorialist and designer have.

Tradition and custom are important factors in monument design because people are subconsciously guided by things which they see and which their friends and acquaintances are doing today. From the earliest civilizations, it has been the custom to mark a grave with a headstone or boulder. At Karnak, ancient Egyptians hewed tombs out of the solid rock walls, and after sealing the tombs, erected headstones in front of them which were ornamented with hieroglyphics telling the story of the life of the deceased.

Ancient Greeks used blocks and tablets of stone, known as steles, to record public notices and to serve as milestones. Later these same forms were adapted for monumental purposes. The early Greek steles were tapered slabs decorated at the top with floral patterns, and as time progressed, these stele forms became more the sculptured records of persons and the events of their lives.

Even in America the stele is considered to be the finest form of classical memorialization. An outstanding example is the Henry Bacon memorial in Washington. Bacon was the architect of the Lincoln Memorial which houses the gigantic seated figure of Lincoln by sculptor Daniel Chester French.
The tablet form progressed with civilization. The Romans and other people influenced by them, beginning with the Christian era, inscribed names and symbols of their trade on gravestones. Those who were Christians inscribed a cross or other symbol which indicated their faith. The Celts introduced the head-cross into Ireland, Scotland and England. This displayed the cross in various forms very prominently.

From the ancient and medieval headstone and tablet forms, Colonial America developed its own style. The New England states, and in fact all of the coastal area of the original 13 colonies, have examples of the Colonial headstones in their older cemeteries.

Art and artistic forms usually evolve very slowly from one era or style into another but that has not been true in America. Single grave headstones developed into vertical tablets of various proportions and shapes, and these in turn developed into larger tablets with the family name and two or more inscriptions, all within 100 years. As a result of this insistence on a new style by Americans, we have today the facilities and know-how to produce this type of memorial on an assembly line basis.

The designing for, and the production of, work in the producing centers varies to meet the requirements of the material at hand. Because of the great difference between granite and marble, it is necessary to design especially for one or the other.

Granite can be polished in such a manner that it will stand the elements and ravages of time. A polished finish contrasts with any other finish and harmonizes beautifully, making it possible to "surface-treat" a granite memorial successfully.

Marble on the other hand, being a form of calcium (crystalline or granular) requires moldings, reeds, flutes, set-backs, etc., for effectiveness because it is not possible to give it a permanent polished, contrasting finish. With marble, it is light and shadow which makes the contrast which can be produced by different finishes in granite.

There have been many methods introduced for the proportioning of tablet memorials, both horizontal and vertical. Proportion to what? A tablet designed for a metropolitan cemetery, which is very pleasing to an urban citizen, might not be pleasing to a farmer in Mississippi or Minnesota. Therefore, the designer whose memorials suit the environment, are properly ornamented with symbolical carving, are properly lettered in a suitable style and size with all elements arranged in an orderly manner, is wise indeed.
The Cross

THE IMPORTANCE OF THE CROSS in memorial art and its many uses in ornamentation cannot be fully described in one chapter or even one book. This brief reference to the various styles and their uses is but an abridged version of the knowledge a memorialist should have and use in designing and selling crosses—memorials of great significance which are rich in symbolism and are true expressions of Christian faith.

As with several other styles of designs, the cross is dependent upon tradition for style and upon location and environment for size, proportion, and material. Ancestry, heritage and faith all have great influence upon the actual style of free standing cross memorials while the cross used in symbolic, applied ornamentation is not necessarily so constrained in form or combination.

Once the badge of suffering and shame, forever after the symbol of victory, the cross form suggested the plan of the world's greatest cathedrals and churches and crowned their loftiest spires. The many forms of the cross served as symbols of the Crusades, and became important in heraldry, the variations being used to designate nations and nationalities of many Western Europeans who participated in the rescue of the Holy Land from the infidel.

The fact that the cross is the universal symbol of all Christianity—Protestant and Catholic—makes it acceptable as a memorial form or as an ornamentation motif. When used as a free standing memorial, its shape alone is a symbol of faith and even though many are left bare of ornament or symbolism, they are much more significant and beautiful if symbols or ornamentation are used on the cross itself.

There are several hundred forms of crosses to be found in old manuscripts, books and fragments of ornamentation. Most of these were used before the Christian era and for that reason they cannot be associated with the advent of Christianity even though many of these more ancient forms have been adapted to the symbolism of Christianity.

Perhaps as many as fifty forms have been used in church decoration, heraldry, and as applied ornamentation on memorial designs and tablets. Of these fifty styles, there are few which might be actually considered adaptable in form for use as free standing memorials. These more common forms of the purely ecclesiastical crosses are the ones to be considered as memorial forms, and the heraldic varieties as decorative.

The ecclesiastical forms are used in applied ornamentation which may be carved or sand blown, but are usually combined with other ornamentation which also has some symbolic significance, such as lilies, roses or grape vine.
These combinations vary with the creative abilities of the designers who make the designs.

The Latin Cross

The Latin Cross is universally accepted as being most appropriate for all persons whose faith includes a belief in, and confession of, the Lord Jesus Christ and His atoning death. It is thought to be the form of cross upon which He was crucified since it was the custom when three were to be crucified at the same time, the one in the center died upon this form of crucifixion cross. We know from the Scriptures that there were two others, one on each side of the Savior when He was crucified.

Many Latin Crosses are poorly proportioned, being too thick and clumsy in appearance. There are those who advocate the five by eight proportions, that is, a cross eight feet high should be five feet wide (Figure 80). This proportion might be pleasing in applied ornament when used with other features, but it appears to be too wide if used in a free standing design.

Location and topography should be considered to properly proportion any cross. An average would be about like that in Figure 81 which is eight feet high and 3-4 wide. The top member is usually \( \frac{3}{8} \) to \( \frac{1}{4} \) higher than the projection of the cross arms, depending upon the location. If a cross is set upon a hill top, for instance, the top arm should be longer to add to the illusion of more height.

The Latin Cross is usually set upon a base composed of three steps. The lowest step represents Charity, the greatest and most important of all theological virtues. The second step or base represents Hope, and it is upon this
step that the name or lettering is usually placed. The top step represents Faith. Being next to the cross it expresses the fact that Faith is the gift of the crucified Lord.

Proportionately these three bases or steps should not exceed one-half of the total width of the cross arm. In Figure 81 the bottom base or step is eight inches high. The middle base is 6 ½ inches high, and the top base is 4 ½ inches high. The washes drop ½ inch each. The total height of the three bases is 1-8, or one-half the total width of the cross arms.

The middle base is usually made the same length as the cross arm (in this case, 3-4), and the two top members should be cut from one piece of marble or granite. In order for the wash lines to mitre, a plan should be made as in Figure 82.

![Figure 81](image)

The length of the middle base is already determined and the projection on the front and back can be determined as one-half to four-fifths of the thickness of the cross. In this example, the projection has been made 7 inches, or 7/10 of the thickness of the cross.

With the overall size of the second base determined, a mitre line should be drawn from the corners of the cross through the corners of this base. The projection at the ends of the bottom base should be proportionately more, and this is done by measuring. All sizes are shown on the plan of this base in Figure 82.

All crosses should have a tenon on the bottom for setting into a mortise in the bases. For a small cross, not more than six or eight inches thick, and even
for a cross the size of the one in Figure 81, the tenon need not be more than 4 inches long (Figure 83).

The tenon method is much more satisfactory than the dowel pin method even though it is more expensive. The tapered tenon is easier to set and will hold the cross in the face of severe winds. Wind vibrations will cause a dowel pin to loosen and create pressures which might eventually break out the bottom of the cross, whereas, if winds are strong enough to blow a cross over, the tenon will pull out of the mortise without breaking.

The Crucifix

The figure of our Lord carved upon a Latin Cross is called a crucifix. It symbolizes the Passion and the Atonement. There are many fine examples of the crucifix all over the country. Unfortunately, there are many which are so poorly done that a well-proportioned symbol, "IHC," "IHS," or "Chi Rho," would have been much more effective and beautiful.

In West View Cemetery in Atlanta there is a very fine crucifix with a corpus about five feet high. The figure was carved from a model with a pointing machine. Every detail is expertly done, every muscle clearly defined, and it is relieved enough so there is no evidence of skimping in any detail. It is the work of a sculptor and is a fine example of what excellent memorial work should be.

In another Georgia cemetery there is a smaller crucifix with the corpus about 3-6 high and raised about two inches. It was carved by a stone cutter from a full size detail and is anything but beautiful. Work of this character, done for discriminating people, should be a work of art. One of these is, the other isn't.

The Greek Cross

The Greek Cross is used extensively in ornamentation and is made up of seven vertical squares and seven horizontal squares (Figure 84).

All properly designed altars have five Greek Crosses on the mensa or top slab. One is cut near each corner and the fifth is cut in the center so that during the celebration of the Holy Eucharist the sacramental vessels will be placed over it.

The Tau Cross
The Tau Cross is sometimes referred to as the Old Testament Cross because it is supposed to be the true form of the cross which Moses lifted up in the Wilderness (Figure 85). It is also referred to as the Egyptian Cross, the Advent Cross, or St. Anthony’s Cross. St. Anthony and St. Matthew are both said to have died upon this form of cross and in the paintings of the crucifixion of our Lord, the two thieves are shown on such crosses, Dismas on the Lord’s right, and Gesmas on His left.

The Saltire or St. Andrew’s Cross

This is commonly known as St. Andrew’s Cross because that Apostle is said to have died upon this form of cross, preaching for hours to the gathered spectators before he died (Figure 86). It is used to symbolize the beginning and
end of the Christian Church year. It is the national cross of Scotland and is the symbol of martyrdom and humility. It is often used in ornamentation on monumental designs.

**The Eastern Cross**

The Eastern Cross is used as a memorial to signify that a person is a member of the Eastern Orthodox Church (Figure 87). It is a slender Latin Cross with a short arm above the usual cross arm. Below the cross arm there is a slanting arm (dextral: slanting to the right; never, sinistral: slanting to the left) which is the same length as the short top arm. The slant is less than 45 degrees, usually 30 degrees.

The upper arm of the Eastern Cross, sometimes called the Russian Cross, represents the inscription placed above the head of our Lord. The slanting arm represents the foot rest since the Eastern Church believes He was crucified with His feet side by side instead of one on top of the other as the Western Church and Protestants believe.

Many strange reasons have been given for the slanting arm. Some have said that the Lord had one leg shorter than the other and others believe that it was due to the earthquake which occurred while He was upon the Cross. The real reason was perhaps an attempt to represent the St. Andrew's Cross since it was he who introduced Christianity into Russia.
The Celtic Cross

The Celtic Cross is also known as the Irish Cross and the Cross of Iona (Figure 88). It was used by early Celtic Christians and many examples are to be seen today in Ireland, Scotland and England.

The vertical member is usually battered, and at the junction of the vertical and horizontal members, there are round holes cut through the stone. A circle or nimbus is placed around the intersection representing Eternity. The plane of this circle is set back from the face of the cross proper.

Most ancient examples are elaborately carved with circles and basket-weave patterns, and even figures in low relief representing the Four Apostles are sometimes used surrounding a suitable symbol of the Savior which is carved in the center.

Modern production facilities make it possible to cut and ornament Celtic Crosses economically. As a memorial form, it cannot be surpassed for beauty and opportunity for symbolic ornamentation.

The socket-stone base shown in Figure 88 is the type usually used with this style cross. There are ancient and contemporary examples, however, which have this style of cross on the regular Calvary (three step) base.

The Cross Botonette

Widely used as a decorative form, the Cross Botonette is especially effective when used with Gothic tracery panels or when it is surrounded with carving (Figure 89). This style and the Cross Fleuree (Figure 90) with its ends terminating in three petals are used extensively as features and symbols of the Church of England (Episcopal). This association dates back to the Crusades when English soldiers emblazoned one or the other form of cross on their shields for recognition. Both forms have been used as memorial forms, but are used more extensively as applied ornament.

The Maltese Cross

A cross resembling four spear heads with the points touching, this is one of the most significant of all cross forms (Figure 91). Used extensively as ornament, the eight points, equidistant from each other, symbolize the Eight Beatitudes. It is also called the Regeneration Cross.
There are many other forms of the cross which might be well used in memorial work, particularly as ornamental features. The forms illustrated here, however, are the most commonly used, most economically produced, and the best known by everyone. Those mentioned have been used by decorators, needle-women, glass painters, artists, architects and stone carvers for centuries and have proven themselves to be interesting decorative features as well as adaptable for memorial design.

Works without Faith in the realm of memorial art are short-lived. It is Faith which gives beauty, meaning, and conviction to memorial art and symbolism. There is no better expression of Faith than the creation and building of a beautiful cross memorial.

The Obelisk

THE LARGEST OBELISK known is that which was brought from Heliopolis to Alexandria by Emperor Constantine and which was later transported to Rome. The height of the monolithic shaft is 105 feet, 7 inches. It is 9 feet, 8 inches square at the bottom. In other words, based on 180 pounds to the cubic foot, the shaft alone weighs 753 tons.

The engineering and planning involved in taking the shaft down at Heliopolis; moving it to Alexandria and setting it; taking it down and transporting it across the Mediterranean to be transported for miles overland and reset at its final location in the Circus Maximus in Rome; these things defy the imagination of most people today.

Of all of the ancient styles or types of design, there is none which has been copied so often. Practically every city in the South has its Confederate Memorial-obelisk in form and surmounted by the figure of a Confederate soldier. Often these have very ornate dies with much carving and lettering. There are also many such memorials in the cities of the North and in our National Cemeteries.

The San Jacinto memorial in Texas is surmounted by a large star symbolizing the Lone Star State, and the Washington Monument in the District of Columbia is patterned after the Egyptian obelisk in design and proportions. Adaptations of the obelisk made for cemetery memorials are of various sizes, but the larger sizes are much more pleasing.

Most of the original Egyptian obelisks were made of red granite. There are a few of smaller dimensions which were made of sandstone and basalt. The oldest examples were placed in pairs at the entrance of a temple or court and most were commemorative pillars recording the title and achievements of the
King or Pharaoh who had them erected. The faces were adorned by hieroglyphic inscriptions depicting the religious, cultural and military life of the ruler and his court. But more especially, the inscription gave the ruler credit for having built the temple or court, and succeeding rulers who made additions or improvements to the original building were, in turn, accorded the privilege of adding their own inscriptions to the original ones. Some of the older examples have inscriptions of several rulers of succeeding generations and even, succeeding centuries.

The obelisk in the Circus Maximus in Rome, mentioned previously, bears the name of Thothmes III and also Thothmes IV, both of the 18th Dynasty of the 15th Century B.C. The two obelisks at Luxor were erected by Ramses II in the 19th Dynasty, about 1300 B.C. The obelisk at Heliopolis bears the name of Osirtasen, dating back to about 2020 B.C., and is the most ancient. The many obelisks standing in Alexandria today were transported there more than 2,000 years ago.

Some years ago Ismail Pasha presented one of these ancient obelisks to the United States. It is standing in New York, and is referred to as "Cleopatra's Needle." This monument of antiquity is a treasure of inestimable value. It bears the name of Thothmes III. It is 70 feet high and measures seven feet, seven inches at its base. We can hardly appreciate the fact, but we have in this country a relic of antiquity once looked upon by Moses and Aaron – Ramses the Great has his knighting banner carved upon it – Darius, Cambyses, Alexander and Augustus knew it – it was equally well known by Pythagoras, Herodotus and Strabo – a long list of the most illustrious of the Crusades and the Middle Ages passed before it. A monument of such antiquity and importance should be cherished by everyone.

The most photographed and certainly the one seen by the most people is the obelisk in front of St. Peter's in Vatican City, Rome. This was brought to Rome by Caligula. It is 83 feet high.

There are 13 obelisks of various sizes in Rome today, all of which were transported there by Augustus, Constantine and Caligula when Egypt was a province of the Roman Empire.

In Cincinnati's Spring Grove Cemetery, there is one of the finest memorials of this type in America. From a purely academic standpoint, any design to be good should closely follow the scale and proportions of the original examples. This Mulhauer obelisk follows the example and dictates of the ancient craftsmen to the closest margin.

Most ancient examples show rather strict adherence to the rule making the monolithic shaft at least ten times as high as the width of the shaft at the
bottom, the width of the bottom base being equal to one-fourth the total height of the memorial. The Mulhauser base is 14 feet square and the total height of the memorial is 56 feet.

Each face of the shaft should be battered to the top one-eighth of the base width, to a pyramid top which should be one diameter in height, that is, it should be as high as the width of the shaft at its base (Figure 92).

The shaft is usually set upon a series of bases (Figure 93) or upon a die, which in turn is set upon two or more bases (Figure 94). In either case the proportions of the shaft and the relation of base width to the total height should be closely followed for pleasing effect.

On some of the ancient examples we find a plinth between the shaft and the top of the die. This plinth was usually elaborately ornamented with intaglio carving (Figure 95). The die blocks should be considerably larger than the shaft and should have concave faces (Figure 96). Following the Egyptian period, the Greeks and Romans often used dies with vertical sides (Figure 97), but these never equaled the Egyptian examples in design or magnitude.

For centuries following the fall of the Pharaohs, the Greeks and Romans attempted to copy the obelisks as a memorial form. They were unsuccessful because they did not have a stone which could be quarried and produced in the
great sizes possible with red Syene granite. They lacked the subtle touch of ornamentation found in the creative and superstitious minds of the Egyptians. They also lacked the inventiveness of the Egyptians who could place a huge obelisk in the center of a circular court and use it as a gnomon of a sundial, telling time by the shadow cast under the bright sun of that arid land.

The ancient Egyptians had many Gods and every temple or court was dedicated to one or more of these Gods. The obelisk was dedicated to the Sun God, Ra, symbolizing the power of re-creation of this God. Because its original symbolism was pagan, many people object to the use of the obelisk as a memorial form.

While it contradicts and defies the true Christian interpretation of symbolism, nevertheless, it is one of the most effective and impressive forms of memorial design.

**The Sarcophagus**

THE WORD "SARCOPHAGUS" is a combination of two Greek words: sarkos (flesh) and phagein (to eat), and literally means "flesh consumer." The words were combined into one word by the Greeks who were accustomed to entombment as a traditional custom of burial and who had at their disposal a stone which had caustic minerals strong enough to literally consume all flesh.

The custom of entombment had been borrowed from the more ancient Egyptians, who had made extensive use of their reddish brown granite to build tombs and make mummy cases. For the expression of their personal vanity and as a salute to their pagan Gods, the Egyptians treated their deceased fellows with minerals and oils and wrapped them in such a manner that the wrappings were a preservative. The dry, hot climate of Egypt served to dehumidify bodies as archaeologists discovered in the excavations of ancient ruins of that civilization.

The custom of entombment appealed to the Greeks, but they had different gods for whom it was not necessary that human bodies be preserved. They also had the caustic stone in unlimited quantities. Usually a hole was hollowed out
of a large piece of the stone and after the body had been placed in it, a cap of
the same stone was put in place.

As time progressed, sarcophagus designs became more elaborate and many
ancient examples are known to have been rather ornately carved with symbolic
ornamentation. The custom of the ornate sarcophagus-type tomb was carried
on into the Christian period and many examples were unearthed in the
catacombs under the city of Rome.

A sarcophagus must, of necessity, be large enough to serve as a tomb, even
when not actually used as one. Otherwise, it would be just another memorial. It
would seem that to qualify in size and proportion, a minimum size sarcophagus
memorial should be about as shown in Figure 98. The die is 7-0 long, 2-8 wide,
and 3-0 high. The bottom base can be any style, depending upon the design.

The design can be rather plain, as shown, or it may be very ornate with
pilasters and almost any style of ornamentation. As time progressed from its
first use, classical orders and styles were developed and all were used
extensively in sarcophagi designs.
Tradition and prevailing practice require that if this type is used as a family memorial, the name of the head of the family be used as the inscription on the memorial: "The Family of John Doe," and that individual inscriptions be used on markers. The inference is obvious since a true sarcophagus would contain only one body.

Should the sarcophagus be made large enough for two crypts, the individual inscription for each should be placed on the memorial along with the family name. This was the intent and purpose of the "Twin-Tomb" which I developed many years ago and which had the crypt closers in the back with the name and inscriptions on the front. As a family memorial, the Twin-Tomb is very effective if arranged on a large lot so interments can be made in front of, or around, the building (Figure 99).

The sarcophagus as a memorial type is not extinct, it is just being used under an assumed name. Designers have put the "utility" back into the style and more and more are being created and built.

**Screens and Balustrades**

THE EVOLUTION OF DESIGN is absolute, even though it might be subtle at times. Just as the styles of ornamentation seemed to evolve from the preceding styles, designs create future styles. This is particularly true in the consideration of screens and balustrades, and their American offspring, Garden Type designs.

A close study of architectural and ornamental styles reveals that the use of the balustrade was an invention, or innovation, of the Italian Renaissance period in the first half of the 15th Century.

Greek and Roman antiquity produced no examples of the balustrade as such. Instead artisans of those eras used either a solid parapet or a railing of interesting bars of wood, bronze or stone. The succeeding Gothic periods produced miniature arcades or panels or open tracery as parapets along the edges of church roofs or as handrails on stairways. The Gothic era was succeeded by the Renaissance, and the balustrade succeeded the parapet and

![Figure 99](image-url)
open paneling.

Just as there must be a reason for, and a source of, any style or type of design, our screens and balustrades are the offspring of these ancient examples and styles.

As a memorial form, the screen may be classical, Gothic or contemporary. Protection and privacy in the family plot are undoubtedly the reason for the adaptation of this type of design to memorials. Often composed of a central die with flanking wings, the screen assumes an attitude of enveloping protection (Figure 100).

Designers and craftsmen of the Renaissance had little sympathy for the more conservative battlemented parapets of their predecessors. Their first attempts resulted in something they called colonnettes, with the balusters merely being miniature columns patterned after the styles they were familiar with. The oldest examples of actual round balusters were "double vase" types produced in the 15th century (Figure 101). The "single vase" type was developed and first used by Vignola (1507-1573). There was a production problem; it seems, even then, because of its slenderness compared to its height. Vignola designed the simple vase style to secure a more robust support for the broad stone railing which he liked to use (Figure 102).

In any event, the classical baluster should be used in designs which are classical and which have authentic classical moldings and ornament. To use a classical baluster with contemporary or Gothic design is unpardonable and is evidence of a lack of knowledge and good taste.

**Garden Types**

DESIGNERS OF THE EARLY Colonial period in this country took the best of the Renaissance features and developed their own style, American Colonial.
Contemporary designers have combined features of the screen and the balustrade into the Garden Type of memorial design. Features such as vases, urns, balusters and benches may be combined into one design, but in order to be true to the style, all must depend upon planting and landscaping for complete appeal and effectiveness. This type design permits a more artistic treatment at nominal cost than any other type. A case in point is the so-called wing-type monument which has a small name base under a vase or urn, which in turn is flanked by two small dies (Figure 103).

A sundial, for instance, is an economical form of garden type memorial and one which is not used as much as it should be (Figure 104).

A large urn or vase on a die is another form which has a certain elegance and which appeals to many people as a memorial form (Figure 105).

The creation and use of memorial designs based upon the sarcophagus, screen or balustrade are governed to a large extent by cemetery restrictions governing the length of bases, etc. Occasionally, however, every memorialist will be confronted by someone who wants such a memorial and has the plot to
put it on. For the designer, these rare instances offer opportunities to display his creative abilities and talents.

**Columnar Designs**

MEMORIAL AND MAUSOLEUM designs based upon architectural precedents are too often identifiable only by the type or style of the column used. There are more elements to classical design than columns. In order to be true to, or close to, traditional forms and examples, the combinations of moldings and proportions should be in harmony with and in proper proportion to the classical design.

In the use of the classical styles, there are several different forms or kinds of columns and entablatures. These are called orders. Each order is made up of a column which has a capital, shaft and base (except the Greek Doric). This column is crowned with an entablature which consists of an architrave, frieze and cornice. Each style may, or may not, be mounted on a pedestal which is about one-third the total height of the column. (Here again the Greek Doric is different, as will be explained later.)

Centuries were required to perfect these orders and the use of anyone style should be complete in every respect: moldings, details and proportions. It is unpardonable to simplify an entablature, for instance, with Corinthian columns or with Doric columns. This has been done frequently in order to reduce production costs. When costs are to be considered, it is much more consistent with good practice to use contemporary design than to combine features from the classical with features which do not harmonize or compliment them.

In the determination of sizes and proportions of the various members or parts of any order, the maximum dimension of the column shaft is the governing factor. Figure 106 illustrates a Roman Doric column and entablature. The shaft diameter is divided into six parts (sixths) so that one diameter (1D) equals 6/6. In Figure 106, if 1D is 12 inches, then 1/6D equals two inches. The column base would be 8/6D square, or 8 times 2 inches, or 1-4.

**The Greek Orders**

The Greeks were pioneers in developing the architectural columnar design. The expansion of Greek culture several hundred years B.C. was such that its architecture and sculpture played a most important part. Fine examples of Greek art were constructed according to three orders or styles of architectural design: Doric, Ionic or Corinthian. Illustrations of these and the succeeding Roman styles are to be found in every history of architecture. The illustrations
of the Greek forms, Figures 107, 108, and 109, are from plates in the American Vignola.
Figure 107 illustrates the Greek Doric, consisting of a stylobate base of three members which is usually 1D in height overall. The shaft of the column is surmounted by an echinus mold and abacus (plinth) and is four to six diameters in height overall.

The shaft diminishes toward the top in a very slight curve which is called the
entasis. This entasis is to be found in all styles or orders. The Greek Doric column has no base but usually has 16 or 20 flutes which are concave in an elliptical form rather than semi-circular as in other orders.

The Doric architrave, d, is 3/4D in height as is the frieze, e. The cornice, f, is

![Figure 109](image)

The five Roman orders are: A-Tuscan, B-Doric, C-Ionic, D-Corinthian, and E-Composite.
1/2D in height.

Greek Ionic columns, Figure 108, are 9D high with the architrave about 5/8D, the frieze 6/8D and the cornice 7/8D in height.

The column shaft has 24 flutes which are separated by a small fillet instead of the sharp arris to be found in the Doric style.

The volutes on the capital may vary, but the overall height of the column of 9D will include 1/2D for the capital and 1/2D for the base.

Greek Corinthian, Figure 109, is 10D high with 1-1/6D of this being the capital height and 1 1/2D the base height.

Ionic and Corinthian were often used with a pedestal type base which had a total height of 1/3 the total column height. Of this pedestal height, 1/9 was the height of the molded cap and 2/9 the molded base.

Illustrations of the Greek orders in Figures 107, 108, and 109 show all the columns with the same diameter, indicating relative proportions of all parts in each and the comparative heights of the orders.

**The Roman Orders**

Constant and free communication with Greece over a long period prior to the Roman conquest of that country in the middle of the Second Century B.C., had filled Rome with Greek artists, sculptors and philosophers. Greek forms and Greek ideas were freely introduced and adapted to local conditions and fancies.

Under Augustus (30 B.C. – 14 A.D.) every effort was made to beautify Rome, and Greek influence caused rapid development which reached its height about the second half of the Second Century A.D. At that time, although Rome was richer than ever and had endless varieties of marble and alabaster with which to work, the decay of Roman art had begun and the ornate and costly buildings of the later period were no match in beauty of design or delicacy of workmanship.

The five Roman orders are Tuscan (a heavier and simpler version of the Roman Doric), Doric, Ionic, Corinthian, and Composite. These orders are all so different in every respect that their moldings, members and even their proportions are distinctive.

To Greek influence more than any other one thing can be ascribed all of the refined elements of Roman art. The Romans adopted the Doric with their own variations, the Ionic and the Corinthian. To these three styles they added two others: the Composite which was peculiar to their own country, and the Tuscan which they borrowed from the Etruscans.
THE TUSCAN – Figure 110A. Simplicity is the distinguishing characteristic of this order. There are few moldings and these are rather simple. Approximate dimensions of the traditional forms show the total height of the column to be 7D with the architrave and frieze each being 1/2D and the cornice 3/4D in height.

THE DORIC – Figure 110B. In the adaptation of the Doric style to meet their own requirements, the Romans changed the column completely, basing their form on the Tuscan but adding flutes. To this fluted column they added an entablature which closely followed the Greek form (see Figure 106).

There are two distinct forms of Roman Doric: the mutullary as shown in Figure 106, and the denticulated which had a row of dentils just above the bed mold of the cornice.

Distinguishing characteristics of the Doric are certain features of the frieze and the bed mold, called triglyphs and mutules. Under each triglyph and just beneath the taenia (fillet) is a short fillet called regula under which there are six drops called guttae. The soffit (bottom) of each mutule has 18 or 36 short guttae.

Proportions of the Roman Doric and the Greek Doric are radically different as can be seen when comparing Figure 107 with Figure 110B. Proportions of the Roman Doric are: total height of the column is 8D, of which 1/2D is the height of the cap and 1/2D is the height of the base. The architrave is 1/2D in height and the frieze and cornice are both 3/4D high.

THE IONIC – Figure 110C. Prototypes of this style are to be found in Persia, Assyria and Asia Minor. It is characterized by bands on the architrave and dentils in the bed mold of the cornice. The most conspicuous and distinctive feature is the scrolls of the capital. These scrolls, or volutes, are purely decorative and were borrowed from Assyria and Egypt with no structural significance.

Originally this style had no frieze and no echinus in the capital. These features were borrowed from the Doric, and in like manner the dentils and bands of the Doric were adopted from the Ionic. The frieze was introduced in order to provide space for sculpture and carving which were lavishly used in later Roman Ionic.

Proportions of the Ionic are: the column is usually 9D high and of this 1/2D is the height of both the cap and base. The members of the architrave have the same heights as their Greek counterparts.
THE CORINTHIAN – Figure 110D. The three distinguishing characteristics of this order are the tall, bell-shaped capital, a series of small brackets which support the cornice, called modillions, and a richness of detail which is greatly enhanced by the use of acanthus leaf carving in the capital and modillions.

Proportions of this order are: the column is 10D high, of which the cap is 7/6D and the base is 1/2D. The architrave and frieze are each 3/4D and the cornice 1D in height.

While the Romans were unable to appreciate the simple grandeur and dignity of the Greek Doric and Ionic, they had great respect and admiration for the more elaborate Corinthian style with its foliated capital. Although varied and enriched by the Romans, it retained its original and pleasing aspect and became the national order of the Roman Empire.

THE COMPOSITE – Figure 110E. This style is a heavier form of the Corinthian with the same proportions but with fewer and larger details. As the name implies, it is a composite of features from Ionic and Corinthian.

**Intercolumnation**

The location of columns with relation to each other, or intercolumnation, for instance in a colonnade, is not a haphazard process. Regardless of size, those styles which are not regulated by triglyphs and metopes (see Figure 106) should never be spaced more than 5D on centers apart.

Tuscan, Ionic, Corinthian, and Composite may be spaced as follows: coupled columns are 1-1/2D apart on centers. If columns are 2-1/4D apart, it is called Pycnostyle, 3D on centers is Systyle, 3-1/3D is Eustyle, 4D is Diastyle, and 5D on centers is Areostyle. Units of coupled columns may be spaced 6D apart and this is Areosystyle.

Spacing of Doric styles is based upon the triglyph and metope. The width of the triglyph is 1/2D and the metope is 3/4D. If the columns are coupled, there is only one metope between the triglyphs which are centered over the columns. One triglyph and two metopes make the spacing Monotriglyphic, two triglyphs and three metopes are said to be Di-triglyphic, three triglyphs and four metopes are Tri-triglyphic, and four triglyphs and five metopes are Tetra-triglyphic.

The styles and information given here are based upon ancient examples and practices which are generally accepted as the basic forms of the classical orders. Actually, the development and use of columns, capitals and entablatures extended over a period of about a thousand years and over many countries. There are about as many variations as there were countries. Those people and those countries with the finer craftsmen and better materials were the ones.
who achieved the greater results and left posterity a richer heritage. These people were the Greeks and the Romans.

Unlimited variations in memorial and mausoleum designs are possible. Since theories and practices based upon historical and traditional examples are usually most pleasing, a good history of architecture is essential for every monument dealer and salesman. It is interesting reading because it traces the improvement of man's knowledge of building and design from the caves of ancient times to the structural wonders of the present day.

**Mausoleums**

MANY PEOPLE CONSIDER a mausoleum to be the highest type of memorialization. It is a useful form, and rich in possibilities for architectural expression, however modest it may be in size or regardless of how many crypts it may contain.

Because cost is the controlling factor with most purchasers, the average memorial salesman subconsciously steers the customer away from such a controversial subject as price. People who can afford such things as boats, yachts, and summer cabins on lakes are not particularly interested in saving money on something which is the only purchase of its kind they will ever make and one which should last forever.

There is no saving to be made if quality is sacrificed, anyway. A cheap and unsubstantial mausoleum defeats the purpose for which it was intended and is a waste of money and a menace to the cemetery. No matter how inexpensive a mausoleum may be, whether it is a simple twin-tomb or a vestibule-type building, it is of primary importance to remember that there should be no false economy attempted in design, materials, craftsmanship or construction.

Another factor which causes many memorial salesmen to hesitate in attempting mausoleum sales is the necessity for such added items as bronze doors, stained glass windows, vents, ceiling hangers, etc. This should cause no hesitancy at all in considering the sale of a mausoleum. Most granite and marble producers will order these things as a service to the retailer without added expense.

After years of designing and assisting in the sale of mausoleums, I have found that, if properly handled, the profit to be made on a mausoleum comes easier and with much less trouble and time than the same profit on monumental sales. Everything is furnished. Foundation plans are made, and this work can be sublet to a ready-mix contractor or will be installed by the cemetery. Arrangements will be made for transportation and setting. In other words, about all the dealer
will have to do is to make the sale and pay the bills. Actually, it is not quite that simple because there are many pertinent facts about a mausoleum that the salesman and dealer should be able to explain to the complete satisfaction of the purchaser.
The building boom in this country in the past few years has left the public "foundation conscious." Just as with a house or business building, the foundation of a mausoleum is important. There are two methods of installing the foundation which are accepted. Figure 111 illustrates one of these ideas which is adaptable to a solid granite floor slab. In this type foundation, all of the foundation concrete is in the vertical walls. Figure 112 illustrates a foundation with a solid poured floor on top of which all the exterior and interior stone is set. This is usually referred to as a floating foundation. While it is somewhat more expensive than that shown in Figure 111, it is probably somewhat better. In either illustration, the walls A and B run from the front perimeter wall to the back wall. The spaces marked with an X should be about one inch to allow sufficient space for the setters to properly grout the stone to the concrete.

Many granite quarriers and manufacturers suggest, and prefer to build, mausoleums with one piece side walls and one piece back walls. Joints allow for the expansion and contraction of the stone. The larger the piece of stone, the more the expansion and contraction, the harder it is for the joint to maintain its size and shape, and serve its purpose. Coursed ashlar walls require much less repointing and cleaning.

A vestibule type mausoleum is actually a building within a building. This fact makes it mandatory that vents be provided. For more evenly controlled air circulation, there should be four vents on each side of the mausoleum; two near the floor level and two near the top, as are shown in Figure 113. The circulation of air in the air space between the exterior and interior stone will keep the temperature of the interior at about the same temperature as the exterior, thus reducing the possibility of condensation forming on the interior.

To eliminate moisture accumulation on the exposed interior walls, crypt fronts, etc., it is also necessary to ventilate the vestibule. This is done by having vent strips built into the doors and the use of a ventilator type ceiling hanger. It is also possible to put a vent strip into the window frame. The more ventilation and air circulation there is, the less will be the possibility of condensation.

Sound theory and practice in the structural field is that any piece of stone which sits on another should be dowelled to it and any piece of stone which butts against another should be clamped to it. The use of dowels and clamps is shown in Figure 113.

Another axiom of the stone setting trade is that any piece of stone six inches thick or more, which a man can not pick up, should have a Lewis-hole cut in the top for handling. When the pieces of stone are set in place, these Lewis-holes should be filled with mortar to prevent water from accumulating and later freezing, thereby breaking the stone. This idea might sound ridiculous but there
have been several instances of this negligence on the part of setters which have cost considerable time and expense later.

While the design may dictate the type of roof construction, many people have the mistaken idea that a one-piece roof slab is better than a roof built up of three or more pieces. This is not necessarily true because a roof built of any number of pieces which is properly designed to have wide setting beds, is just as good, and in many instances, is much less expensive. It also eliminates the cost of oversize quarrying and manufacturing, and the handling of such large pieces by the setters. Figure 114a illustrates the one piece roof slab and 114b the built-up roof. Regardless of the thickness or size of the roof slabs, they should be dowelled to the walls supporting the roof in order to keep it from moving out of place in the natural processes of expansion and contraction with temperature changes.

Door sizes are somewhat standardized to 3-2 in width and 6-8 in height. The most satisfactory doors are those mounted in a continuous frame and swung on a full length, piano-type hinge. All bronze manufacturers who feature mausoleum equipment make doors of this type. The head, jamb and threshold are illustrated in Figure 115.

Windows in the back of the vestibules are usually 2-0 wide and 3-0 high. Leaded stained glass is installed on the inside of the bronze frame and plate protection glass is installed in the outside groove of the frame. See Figure 116. In cases here no shelf is required on the inside; the lug on the bronze frame may be inserted in the space between the interior marble and the exterior ashlar. If a shelf is required, then a check is necessary in the ashlar with jamb and lintel trim.

A ceiling hanger is more than an ornament. Figure 117 illustrates the most common type used. The hanger supports the ceiling slabs making it possible to have the ceiling in several pieces. Also, it is vented to allow for air circulation in the vestibule.

Several things control crypt construction. Although sizes may vary, the most common size is 7-6 long, 2-8 wide and 2-3 high. As long as construction is safe and sound, it does not make much difference what material is used. There are those who prefer slate linings with marble for rails, crypt fronts and trim, while
others prefer all marble construction. Figure 118a illustrates the use of slate and marble in combination, while 118b shows all marble or granite construction. Either is satisfactory, but the stile and rail construction has proved best. It makes future interments easier and there is less chance of breakage when crypt fronts have to be removed.

Figure 119 is an isometric drawing showing some of the things which have been touched on lightly in the preceding paragraphs.
All exposed surfaces in the interior should be polished except the floor, which if marble, is usually a sanded finish. If a harmonizing color of granite is used for the floor, it might be polished. The exterior surfaces of a mausoleum
may be of any finish: sanded, sparkle, or axed for marble; or polished, steeled, or axed if granite.

Mausoleum interment or entombment was once a privilege reserved almost exclusively for the rich and ruling class. Progress in engineering skill and stone working machinery has perfected the modern mausoleum, insuring its permanence and satisfaction, as well as making the mausoleum a possibility for families of moderate circumstances.

The first consideration with a mausoleum prospect is to get a suitable design and a set of plans from a competent designer or producer. If the design meets the customer's requirements, all other things should be rather simple. The illustrations and text of this article will make it possible for the dealer or salesman to understand and talk intelligently about those things which are most important.
Chapter VI
Symbolism

SYMBOLISM IN MEMORIAL DESIGN is effective only if the person making the design uses the symbols properly, and the person making the sales presentation paints a word picture of just what the carving is and what it signifies. Also, the purchaser’s knowledge of significant things must be such that he fully appreciates the aesthetic value of the symbolism used in the design.

It is not enough to say that a rose signifies love or that a lily symbolizes purity. There is a reason for every use of symbol, and knowing what the symbols mean and the reason why they are used is just as important as knowing what the actual symbols are.

The reasons for symbolism are important and the proper explanation of symbolism in the sales presentation requires knowledge of the history of symbolism, its interpretation and application.

The principle sources of symbols are the Bible, Greek and Roman mythology, and heraldry. The Bible is the richest source. Every plant or animal of the Holy Land, at some time or other in the Old or New Testament, was likened to something else or to someone. Jesus, himself, likened the wine to his own blood and the bread to his body. From this we have the Chalice and the Host. There is hardly a chapter in the Bible in which there isn’t some reference to something which might well be used as a symbol, even in this time.

Mythology is a rich source of symbols. One of the most widely known and used is the phoenix, that mysterious and mystical bird which rose from the ashes of its own funeral pyre to a new and everlasting life.
Heraldry, too, was rich in symbols. Much of the symbolism of the Medieval era was to be found in the manuscripts of the lonely monasteries and in the wonderful pictorial allegories found in church windows. Most people were illiterate and could not read and write. In order to appeal to them more effectively, the monks and priests who travelled around Europe used picture stories which were, in turn, made into the window and church decorations.

Even after the discovery and development of the printing press which made it possible for the printed word to become a part of everyday life on the continent, there were still those whose aesthetic and artistic temperaments were such that they demanded more and more of the picture-history of the church. It was during this period that some of the world's greatest artistic masterpieces were done.

Somewhere in the Bible, in Greek and Roman mythology, or in heraldry can be found the source of practically every symbol that we know and use, be it plant life, animal life or geometrical form, animate or inanimate. The interpretations might be a little farfetched according to contemporary thinking but from one of these sources practically any symbolic form or symbol can be authenticated.

Memorial design, in fact all art, can be divided into two classifications: the art that is sensuous and appealing to the eye alone; and the art that is symbolic and which appeals to the heart and mind and has an inner and deeper meaning and significance. All of the noblest and greatest examples of all art belong to the latter classification. The effectiveness and impact of one design only excels others to the extent that it provides food for thought, and appeals to the mind and heart of man.

The word symbolism is Greek in origin and means, literally, the putting together of things, positive and visible, implying something else that is often incapable of representation. Symbolism is largely employed as a ready means of expressing and impressing truths in a simple manner. It is used extensively in religious services as a means of expressing doctrines in a way that will appeal to the average person, as, for instance, the legend of the preaching of St. Patrick when he illustrated the doctrine of the Holy Trinity by the use of the shamrock which grew at his feet.

There are many examples to be found in heraldry: the lilies of the Bourbons, the roses of the Lancastrians and Yorkists. By association with dynasties and historical events, symbols have great significance. There is no better example than the donkey of the Democratic party and the elephant of the Republican party.
Symbolism is a suggestive and convenient way of conveying information. There is symbolism of action, of language, of color, of forms, of number, and even of sound. Three of these—form, color and number—are adaptable to memorial design. The most important of these, of course, is form because it covers contours, applied and carved ornamental motifs, etc.

Color, from a symbolic sense, is not so important in the memorial field because seldom is the full advantage of color even mentioned. Gray, white, blue, pink and red granites and marbles are used extensively with whatever symbolism there is in the memorial being provided by the application of sand blown or carved ornamentation. A given color may be used in a good or bad sense according to the subject represented or by whom it is used. It is only after the true circumstances are known that a positive meaning can be made.

In old Gothic work, yellow signified love and wisdom. The Ancient Moors suggested wisdom and good counsel by golden yellow, and deceit and fraud by the use of light yellow. During the medieval period in France the doors of felons and traitors were painted yellow. Spanish executioners wore uniforms of yellow and red—yellow to indicate the crime of treason and red to symbolize the punishment. Judas, thief and traitor, has been symbolized in ancient manuscripts by his dirty, yellow robes.

Yellow and white, when represented by gold and silver, are used as an enhancement of honor—thus the first fruits of the people of Israel were offered at the temple in baskets of silver. In another place we read, “A word fitly spoken is like apples of gold in baskets of silver.” (Psalms 12:6) “We will make thee borders of gold with studs of silver.” (Song of Solomon 1:11)

Perhaps because of so many references to gold in the Bible and in connection with the Jewish people, Hitler had his stormtroopers make all Jews in Germany wear arm bands of "yellow" and all of their homes and places of business had yellow Stars of David prominently painted on them.

White has always been accepted as the symbol of purity, holiness and innocence. In the Bible, we find many references to the color: “The sins that are as scarlet shall be made as white as snow.” White, in a derogatory sense, means fear, and the familiar expression "showing the white feather," clearly shows that despite the good interpretations of almost every symbolic form, there are contradictions.

Red, as applied to spiritual values, signifies an ardent love, a zeal for faith. In mundane virtues it signifies energy and courage, and in an evil sense, cruelty and bloodshed. "Red" to many people means but one thing—Communism. The color designation is perhaps the best one because when the revolutionaries
took over Russia, the country underwent the worst blood bath any country ever had to withstand. Red, as a color, is particularly adaptable to the regimes which exist through bloodshed. In practically every religion and cult of the Orient, however, the color red is always consecrated to the services of religion and is held sacred.

Green, the characteristic color of spring, is naturally associated with hope, while black expresses the sense of sadness or sin: “Oh, heaven! to think of their white souls, And mine so black and grim.” In old manuscripts, our Savior, during the temptation in the wilderness, is clothed in a black robe. Black is the natural expression of material darkness and gloom which follows the passing of day, the natural symbol of spiritual darkness of the soul into which no star has ever dawned.

Examples of the symbolism of numbers are not frequently found, and even then some of them are not clearly defined. There are, however, a few numbers which are especially significant. The number three, such as the three-pointed window, a trefoil, or triangle, symbolizes the Trinity; four, the Evangelists (Matthew, Mark, Luke, John); six, the attributes of the Diety (power, majesty, love, wisdom, mercy, justice); eight, regeneration; and twelve, the Apostles.

Seven has been called the number of perfection throughout the ages. Some of the examples substantiating this are: Balaam, as an effectual test of the will of God, built seven altars and prepared seven oxen and seven rams. Job said, “In seven troubles there shall no evil touch me.” Jacob, as a sign of perfect submission, bowed himself seven times before his brother. Jericho was circumnavigated seven times before it fell. Naaman was commanded to bathe seven times in the Jordan. Samson, for full security, was bound by seven bands. The Roman Church has seven sacraments. Ancient Jewish law required seven-fold restitution by a thief. There were seven wonders of the ancient world, the seven ages of man, the seven wise men of Greece, the seven champions of Christendom, seven days of the week, seven principal metals and seven leading planets.

Plant life is so abundant, so widely spread over the earth, so pleasing to the senses and appealing in so many ways to every person that it naturally furnishes many objects for symbolic use.

In the Bible we find allusions to the withering grass and the fading flower which become fitting symbols of the short estate of man and the transientness of his glory; the lilies of the field arrayed in a splendor outshining that of King Solomon himself, and teaching a lesson of trust in the all-providing care; the purging with hyssop; the divine root and living branches; the parable of the
wheat and the tares; the grain sown in the earth to explain something of the resurrection.

There is no symbol in nature more universally familiar in the Christian world than the palm branch. Being abundant in the Holy Land and bold in its character, it was selected as a symbol of rejoicing, of triumph. The palm was first associated with martyrs only, but soon became appropriate to all of the Christian faith. It was commonly used as ornamentation on the catacombs of Rome but was also used many centuries before the advent of Christianity and the time of Christ. In the first Book of Kings 6:29, we find a description of King Solomon's Temple, "He carved all the walls of the house round about with carved figures of cherubims and palm‐trees and open flowers, within and without." In the New Testament we find that the visions of John showed "innumerable companies of beautiful spirits that, clothed in white robes, bear in their hands the palm branches." Ancient Judean coins bore the palm tree and vine or clusters of fruit or ears and sheaves of corn. The copper shekel of Simon had a representation of the palm tree as did the silver rial of Queen Mary of Scotland.

The vine is often referred to in both the Old and New Testaments. It was the symbol of the Israelites. In Isaiah we find, "My beloved had a vineyard on a high and fruitful hill; and he fenced it round, he cleaned it from the stones; he planted it with the vine of Sorek." In the Psalms we find another good example of the same simile: "A vine thou didst bring out of Egypt; thou casted out the nations and planted it. Thou prepared the ground for it; it spread its roots and filled the land. The mountains were covered with its shade, and with its tendrils the lofty cedars."

There are many allusions which liken Jesus to the vine, and he said, "I am the true vine." There is a parable about the vineyard whose rightful owner was slain; or in a more general sense, the expression of the temporal blessing in the benediction of Jacob by Isaac when he said, "God give thee of the dew of heaven, the fatness of the earth and plenty of corn and wine."

The bread and the wine of the Last Supper are sometimes represented by ears of corn and bunches of grapes. In classic art and ornamentation, the vine, with the ivy vine, is associated with the services of Bacchus.

The lily is referred to as the symbol of the purity of life. In many old paintings and examples of sculpture, the Blessed Virgin bears a lily in her hand. In St. Luke 12:27, we find Jesus' words, "Consider the lilies how they grow: they toil not, they spin not; and yet I say unto you that Solomon in all his glory was not arrayed like one of these." In many predominantly Roman Catholic countries, the snow drop is a similar motif dedicated to the Blessed Virgin and
on certain festival days, of which the Annunciation is one, her altars are decked with snow drops.

The almond, one of the most characteristic trees of the Holy Land, has been used as the symbol of the close of life from its flowering in the winter time – the hoary head of old age being likened to the flourishing almond tree in several places in the Old Testament, particularly.

The pomegranate, another common tree and shrub of the Holy Land, symbolized by the abundance of its fruit, a rich and fruitful life. The promised land of Canaan was described to the captives as, “a land of wheat, and barley, vines and fig trees and pomegranates.” The pillars of King Solomon's Temple had ornamented caps of lilies and pomegranates, and the robes of the High Priest had “pomegranates of blue and of purple and of scarlet round about the hem thereof.”

The passion vine is used to symbolize, as the name implies, the Passion of Our Lord, and it can only be used symbolically in this connection. Just as in the case of several sacred monograms, there should be some additional symbol clearly defined as the symbol of the Saviour, such as a cross, to give the passion vine true significance. It is an appropriate symbol when properly used because of the beliefs and explanations of ancient writers. The ten outer petals (five petaloid and five sepaloid) forming the outer ring of the bloom represent the ten Apostles (Peter being absent because he denied the Savior and Judas because he betrayed Him). The rays forming the coronet are the glory, and the ovary is not unlike a hammer; the three styles represent the nails and the five stamens represent the five wounds.

The rose has been used as an ornamental feature as far back as there is a recorded history of man. The rose of Sharon often mentioned in the Bible has no relationship to the rose as we know it because in this country it is the Althea. True roses grow freely in the Holy Land and the Syrian origin of our beautiful damask rose is indicated by its name, the rose of Damascus. Among some of the Northern European countries in ancient times, a rose was suspended in the places of deliberation requiring secrecy, hence the expression "sub rosa." In mythology, we find the same idea for Cupid is described as having given a rose to Harpocrates, the God of Silence.

There are many legends in Christianity in which the rose plays an important part. Among many titles given to the Virgin Mary during Medieval times, we find "Santa Maria della Rosa," that flower being consecrated to her; hence it is often seen in old paintings and frescoes either in the hand of the Virgin Mother or of her son. Dante wrote, “Here is the rose, wherein the word divine was made incarnate.”
The age of heraldry is responsible for the symbolic interpretations of many flowers and plants, and some mention should be made of the importance of the rose during that age of chivalry.

The rose of England, like the thistle of Scotland and the Irish shamrock, is commonly known to everyone. The rose was first worn as a royal badge or symbol of Edward I. James I, under whose reign England and Scotland were united, wore a badge composed of a rose and thistle. The thistle was adopted as the Scottish symbol in 1503. The Tudor rose, as it is known in heraldry, has been used extensively as ornamentation since the conclusion of the War of the Roses, in which conflict the red rose was the symbol of the Lancastrians and the white rose was the symbol of the Yorkists.

Many plants and flowers have symbolism based upon interpretations made during the age of heraldry. Henry II bore a broom plant and from this custom "The Broom of the Plantagenets" came into being. Henry IV adopted the columbine, and Catherine of Aragon, the pomegranate and a sheaf of arrows. The daisy was used as a symbol by many people of the times. In France its name is Marguerite, meaning a little pearl, expressive of its beauty.

Scottish clans in the same way have their appropriate symbols. The Camerons bear the oak; the MacGregors, the pine; McLachlin, the ash; MacDonald, the heath; Chisholm, the alder; Buchanan, the birch; Campbell, the myrtle; MacPherson, the box; and Robertson, the brake. Scottish clans went even further with their national or clan symbolism. In addition to having various trees represented on their arms, their tartan (plaids) from which their kilts were made had distinctive patterns and colors.

Being able to recite a long list of the various things from nature used as ornamentation and giving their symbolism is good. It is better, however, to know why this or that has a particular significance. Somewhere there is a proper explanation—in the Bible, in mythology, in tradition, or in heraldry.

The number of symbols described in detail in this, chapter is short because to record historical backgrounds of all things used as ornamentation in memorial design could go on indefinitely. A rather complete list may be found in the book, "Memorial Symbolism, Epitaphs and Design Types," published by the American Monument Association. Many of the individual members of that association have, from time to time, printed handbooks and reference books and in these a rather complete listing of motifs and their symbolism may be found.

Regardless of the motif, nature is the designer and presents many fine examples of refined simplicity and rich complexity. If we consider leaves or
foliage only we are amazed at the variety of forms available as ornamentation. In other words, the character of the leaf, more than the bloom, influences the character of the design ornament. A simple leaf, like the olive or laurel, will produce a bold simplicity of design while deeply serrated leaves like the maple, violet or rose, will give a very considerable richness and complexity to the design if properly used.

There is a great difference between the terms "applied" and "adapted." All natural forms require certain modification or conventionalization to adapt them from their natural situations to given areas or spaces. The very principles of ornamentation are denied when natural forms are reproduced in a natural manner and then are applied in a manner which has no affinity with nature. Ornamentation should in some degree express or adapt the beauty from nature without being an exact imitation. Mere imitation is not proper ornamentation because no matter how well it is executed, it cannot supersede God’s handiwork.

In memorial ornamentation we do not imitate nature, we conventionalize and give a sense of unity in the midst of variety, "similitude in dissimilitude," or as Pope says, "Where order in variety we see, and where, though all things differ, all agree.”
Chapter VII
Use of Color in Memorialization

UPGRADING SALES CAN ELIMINATE at least a substantial percentage of the stereotyped monuments which are being produced and replace them with beautiful, well-designed and well-executed memorials. To too many people, upgrading is a dirty word, but it shouldn’t be. They listen to a designer’s talk and see his illustrations, they listen intently to sales clinics and convention speakers, and they decide to take a fling at this upgrading business by calling on competent and qualified designers for original ideas.

Unfortunately this enthusiasm wears off too quickly, because the first time the prospect of making a sale of something larger than usual presents itself, they will call their producer and ask how large an all-polished serpentine top he can supply for a certain amount of money. Instead of offering to assist the dealer with original designs or something exclusive, the producer, too, follows the course of least resistance, gives the price and keeps his fingers crossed.

A prominent and nationally known sculptor recently said that designers in the memorial field had reached an all-time low and that they were now merely shape carving manipulators. There is evidence all around us to confirm his opinion. We see in trade papers original (?) designs which defy all laws of good taste, beauty, proportion, orderly arrangement and appropriateness, said to be the creations of this or that master designer but see the same shapes, the same finishes, the same sizes and the same colors in every retailer’s display and in every cemetery.

There may be many valid reasons for this monotonous sameness but there are only two sources of this lack of creativity: the producers and the retailers. Between them they can whip up a million reasons why, but regardless of the
number of answers, there is only one reason and that is "easy selling." There must be sales with legitimate profit for any business to succeed, and in any sales volume there will be sales of the contemporary styles of monuments regardless of the efforts to create exclusive and appropriate designs.

The mere mention to many people of sizes, shapes, finishes and colors is resented as being told that there is a better way than following the course of least resistance. When sizes, shapes and finishes are the same, an assembly line price is created which has, and will continue to, downgrade monuments. As a consequence this will eventually lead to the extinction of the monument business as we have known it. In fact, there are areas in our country now which have just about reached the point of no return.

In their efforts to come up with new ideas or new gimmicks, designers have just about exhausted every conceivable arrangement of ornamentation on the average monument. The die is polished. There are sprinkled panels for the name, inscription and ornamentation, and some of these are so poorly arranged and proportioned that at a distance they appear to be quick-patches. The lighter colored panels give a two-toned effect which is considered by many to be pleasing and harmonious. There could be nothing wrong with the color harmony thus created because all tones created by different treatment of the same piece of stone are "self-tones." These self-tones require little or no imagination, creative ability or color appreciation because the color is built-in. Color-wise you can't make a mistake in this manner. Color harmony, however, is not created by self-tones but by the use of different colors to create a desired over-all effect.

Many quarriers and producers simply do not have a variety of colored materials of their own to use in the creation of memorial designs which are parti-colored or multicolored. Rather than suggest the use of some other material with theirs, they stick to the "simon-pure" theory and no one can actually blame them for promoting the use of their own materials. It would seem, therefore, that to experiment with or use this idea of multi- or parti-colored monuments, the retailers should be the experimenters.

The combinations of colors which are pleasing are unlimited. In our churches, buildings, automobiles, homes, clothes, even shoes, we have become accustomed to a combination of harmonious colors. Why not in our monuments? We can visualize beauty in combination such as black and white, dark red and white or black, light gray with black or pink or dark gray. Sounds revolutionary? It is not so revolutionary as one might think and rather than depend upon self-tones or monochromatic schemes for color combinations,
more contrasting and harmonious colors should be used even if they do not come from the same source.

Experience has taught that certain combinations of colors, whether in nature or the arts, affect the eye agreeably while others give offense. The former are "harmonies" and the latter are "discords."

Attempts have been made to discover the laws of color vision and to invent a practical system of color measurement, and by so doing find out why some combinations are pleasing and others are not. If it were possible to know all there is to know about color harmonies, it still would not be possible to devise laws which would guarantee immunity from chromatic discord.

Colors change in effect according to their environment, each being modified somewhat by those adjacent to it. Color harmony is not merely a matter of selection but also of arrangement. Any color scheme which is extremely pleasing can become disturbing by rearrangement.

Area, like arrangement, influences color appearance. A harmonious color scheme can often be made discordant, or vice-versa, by increasing or decreasing color area in relation to adjacent color areas. It is easy to visualize a small area of dark red reinforcing, through contrast, a large area of light gray. Yet what disturbing effect it could have if it were increased in size to rival the gray in area. Area, therefore, like orderly arrangement, cannot be arbitrarily regulated.

Texture, though not a quality of color, is another influence which cannot be ignored. In architecture and decoration, things harmonious in color often show textured inconsistency. Certainly this would be true in the combination of materials and finishes of a monument. The color intensity created by polishing often makes a dominant color too pronounced to be effectively combined with another color, vastly different, but having the same color intensity by also being polished.

Color fitness or suitability, therefore, must be taken into consideration along with personal taste. Contrasts must be controlled to achieve harmony instead of chaos. Arrangement and area have everything to do with the use of a combination of colors in a monument.

There are very few designers or artists in the monument industry who are familiar with the theory of color as influenced by light and optical laws. For that reason, a brief discussion of the general principles may prove to be of some value in the selection of compatible colors.

There are three colors incapable of being produced by any mixture of other colors: red, blue and yellow. These are called primaries.
From the combination of any two of these, the secondary colors are produced. There are three secondary colors: green, produced by a mixture of blue and yellow; orange, produced by a mixture of red and yellow; and purple, produced by a mixture of red and blue. The secondary color produced by any two primaries is complementary to the other primary color. Thus green, compounded of blue and yellow is a complementary color to red; purple is complementary to yellow; orange to blue.

In optical science, the combination of the pure colors of the prism forms white light, but in dealing with pigments, the mixture of the three primaries results in black or in the numerous shades of gray and brown, depending on the proportions. From this we see that black, dark gray and brown harmonize with, and could be successfully used with, practically every blue, gray, white, pink or red.

A mixture of any two secondary colors results in a tertiary color. There are three tertiary colors: citrine, compounded of a mixture of green and orange, olive of green and purple, and russet of orange and purple. Citrine is yellowish in tone, olive inclined to blue, and russet has a reddish, rusty tone.

Why all this academic information about colors and their complements? There is a reason for harmony of colors and it is all to be found in the above explanation. Regardless of the like or dislike of color combinations, there is no law or regulation which overrules personal taste.

There are many colors of granite and marble available for monuments and mausoleums. Of the many beautiful and intensely colored granites, there are a number which are more beautiful when not polished. Black or red granites may be successfully used with marble if the darker, polished areas do not subdue the marble. The use of combined colors is not new, it has been done through the centuries by the world's greatest artists and architects, who knew when and where to use each color to make it most effective.

A testimonial to the effectiveness of a combination of colors and materials: recently a very nice memorial was sold, combining one of the domestic black granites, all polished, and white marble. This sale might have resulted in the conventional two piece memorial except that a polished sample of the black granite was placed on a table and a piece of white paper was rolled up and stood on end on the black sample. The sharply contrasting colors and the reflections of the white on the polished black surface was all that it took to close the contract. Perhaps someone will benefit from this experience which happened to me while working with a dealer.
Color combinations could be the means of upgrading monument sales. A trial period by every monument dealer might prove beneficial. Instead of a simon-pure display with blue or gray dies on bases of the same material and marble dies on marble bases, one or two marble dies might be shown on black or red granite bases, and blue or gray dies on black, red or even marble bases.

Let’s create exclusive and appropriate designs! Unusual colors, unusual combinations of material and finish CAN be in good taste!
About the Author

J. B. HILL, of Tate, Georgia, established his own design studio in August, 1962, after 35 years with The Georgia Marble Company, a number of them as Chief Designer.

Born in Canton, Georgia, he graduated from high school there. Recognizing the need for further training, he took a correspondence course in architecture and was an occasional day student at Georgia Tech. In 1930-32 he taught night classes in the Vocational Department there.

Mr. Hill entered the memorial industry during high school when he worked for the Coggins Marble Company in Canton. He joined the Georgia Marble Company in 1927. During his association with this outstanding firm, he designed some of the outstanding memorials in America: The Peter McGuire colonnade, J. D. Robinson memorial, Boeckling colonnade, Charles Howard Chandler memorial, Massengill memorial, Pioneer Tennessean memorial, Coyle mausoleum, Seaton mausoleum, Roy Acuff memorial, Lay memorial, and many hundreds of others all over the country.

Mr. Hill's experience is not limited to designing – he has assisted in the sale of many of the finest memorials and mausoleums. He assisted Archie Green, Executive Vice President of Monument Builders of North America, with a number of Sales Institutes, started under Mr. Green's direction.

Mr. Hill is active in the Methodist Church and is a past Worshipful Master of the Royal Arch Masons. In addition to many civic groups, he has served on various committees of the Georgia Historical Society and designed several memorials which they erected. He served on the committee and designed the Founders Memorial for the Parent-Teachers Association, which was erected in
Marietta, Georgia. He is also active in the Boy Scout movement, and was county director of the National Foundation for Infantile Paralysis for seven years.

Mr. Hill has played golf in many amateur tournaments and uses his photographic hobby to make many of the pictures used for advertising and sales purposes. But his real love is fishing—and he says he pursues it "any time I have time and anywhere I can wet a hook or a fly."