

THE FIVE NOBLE ORDERS OF ARCHITECTURE

by Peter Verrall

Apart from the Three Great Emblematical Lights in Freemasonry, the Volume of the Sacred Law and the square and compasses, one of the most discussed features in our ceremonies must surely be the pillars and columns. They are certainly the most profuse for they are represented many times in our lodge rooms.

Do you know how many there are in your own lodge room? If you hazarded a guess, the chances are that you would be at least 50% wrong.

Numbers will vary, of course, depending on the interior decoration in any particular lodge room. There should, however, be a minimum of ten columns or pillars exhibited, comprising the following:

- Three on the first degree tracing board;
- Two on the second degree tracing board;
- One each on the Junior and Senior Wardens' pedestals; and
- The three columns alongside the Wardens and the Worshipful Master.

But it does not stop there, for many lodges have two pillars at the west end of the mosaic pavement, especially in New Zealand, and many Wardens' and Masters' chairs and pedestals are supported by turned wood columns to the backs, the legs and even the armrests.

Columns are not only incorporated in the furniture of the lodge but also appear on the walls as pilasters, around doorways and, in some instances, frame the Masters' and Wardens' chairs. A glance through the many books on Masonic halls in England and Wales by VWBro the Reverend Neville Barker Cryer will soon give some idea of the many variations that occur in these countries alone.

Closer to home, my own lodge room at Inglewood, in Perth, has at least 31 representations of columns or pillars. I am sure that many of you have lodge rooms where that figure is easily exceeded.

Columns and pillars have always been ideal subjects to symbolise uprightness and support, and in our everyday language we talk about a person being a 'pillar of society' and a 'column of strength'. It is not surprising therefore that Freemasonry, with its emphasis on uprightness of character and good moral conduct, has used these symbols for its teaching.

Incidentally, the words *column* and *pillar* mean the same except that the word *pillar* refers more particularly where it is completely freestanding from a building and does not necessarily need to be cylindrical. A *pilaster* is defined as a shallow pier or rectangular column projecting only slightly from a wall.

Pillars, with reference to Masonry, first appeared in writing in the *Cooke Manuscript*, about 1410, where mention is made of two pillars, but it refers not, as we would imagine, to the Grand Pillars of King Solomon's Temple but to two other pillars built by the four children of Lamech. We are told in the manuscript and subsequent versions that they feared the world was going to be destroyed by fire and flood, so they took counsel together and decided to preserve all the then known sciences by engraving them on two pillars, one of marble so that it would not burn and one of clay brick or *lacerus* which would not sink.

The two Grand Pillars, as we know them today representing the Porchway or Entrance of King Solomon's Temple, were first implied in the *Edinburgh Register House Manuscript* of 1696, where reference is made that the first lodge was 'in the Porch of King Solomon's Temple'.

In the *Dumfries No 4 Manuscript*, of around 1710, reference is made to the two pillars of the children of Lamech but actually relates them to the two pillars of King Solomon's Temple.

However, six years after the four lodges in London decided to form a Grand Lodge, in 1717, to assist in cementing peace, love and harmony amongst themselves, Dr James Anderson wrote the *Book of Constitutions*, copying much of the earlier Masonic history—much of it historically wrong—and extolling the marvels of King Solomon's Temple. There is no specific mention in his history of the pillars themselves but written exposures around 1723 to 1730 make mention of the two pillars in the catechetical lectures.

The traditional history relating to these pillars is well described in our ritual, especially in the second degree tracing board, and therefore I do not intend to elaborate on them in this paper.

The odd man out, or should I say the odd men out, when discussing columns in Freemasonry, are surely those taken from Greek and Roman times, which have nothing in common with our traditional history but were in fact created about 700 years after the building of King Solomon's Temple. How did they get involved in Freemasonry?

To understand the reason for their introduction into the Craft, it is necessary to appreciate the conditions that prevailed at the inception of Speculative Freemasonry.

As I have previously stated, columns were in use in the lodges, but only the two which related to the Grand Pillars of King Solomon's Temple. They were symbolised (there being no purpose-built or specially furnished lodge rooms as we have today) by the two wardens who were placed either side of the entrance, in the west, with each of them holding a small column. The candidate entered between these symbolic pillars, which were considered the repository of the essential attributes of a lodge—Wisdom, Strength and Beauty—their bases representing *Wisdom*, their shafts *Strength* and their capitals *Beauty*.

The first mention that I could find of three pillars relating to the five Noble Orders of Architecture is in the exposure, *A Mason's Examination*, dated 1723, the year Dr Anderson published his *Constitutions*, where the question is asked in the catechetical lecture: 'How many orders be there in Architecture?' and the answer: 'Five: Tuscan, Doric, Ionic, Corinthian and Composite or Roman'.

Four years later, in Prichard's *Masonry Dissected*, we find a further reference.

- Q: What supports a Lodge?
A: Three great pillars.
Q: What are they called?
A: Wisdom, Strength and Beauty.

There is, however, no mention of their relationship to the five Noble Orders of Architecture.

The first evidence that the candlesticks, which were displayed in a triangle on the floor of the early speculative lodges, were related to the columns, was in the records of the Lodge of Felicity No 58, which was founded in 1737. An order for three candlesticks asked that they be made in Doric, Ionic and Corinthian styles.

They were the original 'Three Lights' in Freemasonry eventually becoming the 'Three Lesser Lights', with the square and compasses and the Volume of the Sacred Law as the 'Three Great Lights'. The lesser lights are now situated in our lodges adjacent to the Worshipful Master and Wardens.

England, during the period of the early development of Speculative Freemasonry, was itself going through a transitory stage in its architecture.

The styles of the great Gothic period were falling into disrepute and architects like Inigo Jones had, in the 1600s, visited Italy and returned totally influenced by the works of Palladio and other Italian architects in the neoclassical style. This style, which became very popular in England for many years, was based on the premise that design can be obtained by rules and that a system of ideal proportions can be calculated; in other words, it can be achieved by means other than visual appreciation.

At the same time it was the custom for cultured people of means to devote their attention to the study of architecture by travelling to other parts of the world to inspect old buildings and other aspects of antiquity. Many of these people were Masons, who, on their return, followed the then current practice of giving lectures in their lodges concerning buildings in general and their relationship to architecture in particular.

This was the great Age of Reason, the period of enlightenment. Philosophy was in vogue throughout Europe. It was under these fertile conditions that Speculative Freemasonry rose and developed.

With the extreme preoccupation in one style of architecture at this time in our history, the giving of lectures in the lodge rooms providing information to the brethren, and the fact that Freemasonry cannot live in a vacuum but must be influenced by and become part of the world scene in every age, it is hardly surprising that the classical columns, or the five Noble Orders of Architecture as they are known, have found a special place in English and subsequently Australian Freemasonry.

We talk about five orders: Tuscan, Doric, Ionic, Corinthian and Composite. This is the correct order according to a statement by the French architect, Claude Perrault, in Paris in 1683. In accordance with other expositions of the orders published between the 15th and 19th centuries, it was based on the formulae recorded by Vitruvius and on the study of actual Roman examples.

All five orders are illustrated on the Master Mason's Certificate in New Zealand (see Illustration 1, page 16), but here in the Western Australian Constitution only three, namely the Doric, the Ionic and the Corinthian, are included. Two of these columns, the Tuscan and Composite, are of Roman origin, but it is the other three, the Greek Doric, Ionic and Corinthian, which play an important part in our ritual and which I would like to explain to you in some detail.

William Preston, who inaugurated a system of Masonic lectures which had a far reaching influence on the development of the Masonic ritual in all three degrees, delivered a lecture in 1792 on this subject. He defined an Order as 'a system of all members, proportions and ornaments of columns and pilasters or a regular arrangement of the projecting parts of a building which unite with those of a column and form a beautiful and complete whole'.

What he was saying is that an Order of Architecture is the combination of the following parts: the base, the column and the horizontal entablature or part supported (see Illustration 2, page 17).

1. The *Base*, as the name denotes, supports the column and distributes the load to the foundations.
2. The *Column* is defined as an upright member of any material, of any simple form in plan and freestanding. It distributes the weight of the roof to the base and consists of:
 - (a) the *Shaft*, which can be fluted;
 - (b) the *Capital*, the carved section at the upper part of the column; and
 - (c) the *Abacus*, which is the square or rectangular member between the capital and the superstructure or entablature.
3. The *Entablature* comprises:

- (a) the *Architrave*, the chief beam laid from column to column to carry the load over a distance between columns;
- (b) the *Frieze*, the ornamental portion above it; and
- (c) the *Cornice*, the crowning projection which supported the pediment and with it enclosed the sculptured tympanum, the gable end of the roof.

Many of these terms are still used in present day building parlance, though in slightly different contexts. The *architrave* is now the surround to a door or window frame, the *frieze* is a decoration along the wall near the ceiling and the *cornice* is the ornamental moulding round the wall of a room just below the ceiling.

The following passage from the early Speculative Masonic lectures shows the close connection at that time between the Noble Orders and Freemasonry. It was in a series of questions and answers:

Q: Why do five hold a Lodge?

A: In allusion to the five Noble Orders of Architecture, Tuscan, Doric, Ionic, Corinthian and Composite.

Q: I will thank you for the rise of those orders.

A: In the History of Man there is nothing more remarkable than that Masonry and Civilisation are like twin sisters and have gone hand in hand. The Orders of Architecture mark their growth and progress. Dark, dreary and comfortless were those days when Masonry had not laid her line or extended her compass.

The Race of Mankind, in full possession of wild and savage liberty, mutually afraid of and offending each other, hid themselves in thickets of the wood or in dens and caverns of the Earth. In those poor recesses and gloomy solitudes, Masonry found them and the Grand Geometrician of the Universe, pitying their forlorn situation, instructed them to build houses for their ease, defence and comfort. It is easy to conceive that in the early state of society, genius had expanded but little.

The first efforts were small and the structure simple and rude. No more than a number of trees leaning together at the top in the form of a cone, interwoven with twigs and plastered with mud to exclude the air and complete the work. In this early period we may suppose each was desirous to render his own habitation more convenient than his neighbours by improving on what had already been done.

Thus in time, observation, assisting that natural sagacity inherent even in uncultivated minds, led them to consider the inconveniences of the round sort of habitation and to build others more spacious and convenient of the square form, [see *Illustration 3, page 18*] by placing trunks of trees perpendicular in the ground to form sides, filling the interstices between them with the branches closely woven and covered with clay. Horizontal beams were then placed on the upright trunks which, being strongly joined at the angles, kept the sides firm and likewise served to support the covering or roof of the building composed of joists on which were laid several beds of reeds, leaves and clay.

Yet rough and inelegant as these buildings were, they had this salutary effect, that by aggregating mankind together they led the way to new improvements in arts and civilisation: for the hardest bodies will polish by collision: the roughest manners by communion and intercourse. Thus by degrees mankind improved in the art of building and invented methods to make their huts more lasting and handsome as well as convenient. They took off the bark and other unevennesses from the trunks of the trees that formed the sides; raised them above the earth and humidity on stones; and covered each of them with a flat stone or tile to keep off the rain.

The spaces between the ends of the joists they closed with clay or some other substance and the ends of the joists they covered with boards cut in the manner of triglyphs. The form of the roof was likewise altered for, being on account of its flatness unfit to throw off the rain that fell in abundance during the winter seasons, they raised it in the middle giving it the form of a gable roof by placing rafters on the joists to support the clay and other materials that composed the covering.

From these simple forms the Orders of Architecture took their rise for when buildings of wood were set aside and men began to erect solid and stately edifices of stone, they initiated the parts necessity had introduced into the primitive huts and adapted them in the temples which although at first simple and rude were, in the course of time and by the ingenuity of succeeding architects, wrought and improved to such a degree of perfection on different models that each was by way of eminence denominated an 'Order'.

All the principal Greek buildings were constructed during the Hellenic period from 650 BC to 323 BC but the masterpieces belong to a short period of about 150 years within that time.

Greek culture of that era naturally owed much to preceding oriental civilisations but, by reason of their innate artistic sense, the Greeks so profoundly influenced the development of European architecture that Greece must be regarded as the true source of both artistic and literary inspiration. Greek architecture stands alone in being accepted as beyond criticism and is the standard by which all periods of architecture may be tested. It is said of Greek architecture: 'Whatever we hold of beauty, half is hers'.

The Greeks were an extremely clever people, producing many of the finest builders and sculptors. They had a superb building material in their marble, which had the finest and whitest grain and was in abundant supply. It could be cut to a high standard of precise detail and exactness of line. The ideal climate, with its clear atmosphere and bright sunshine, emphasised the shadows and the play of light and shade.

Construction was always by means of *post and beam*—called *trabeated* from the Latin *trabs*, meaning a beam—which relied on vertical load pressures as against an *arch* which provided outward thrusts. Stability was achieved by a judicious observance of the laws of gravity.

Beams between columns were restricted in length, as the stone would not stand too much pressure. It was essential that there was an equal distribution of pressure between the marble blocks and this was effected by rubbing the *beds* or *faces* to finely fitting surfaces so mortar was unnecessary. The stones generally were laid according to the pressures they had to bear. Blocks in walls and columns were laid on the natural bed found in the quarry, whilst the beams were laid with the natural bed vertical to withstand the cross strain.

The Greeks built with special regard to the external effect and ornamented their buildings with the finest sculptures, to produce fitting shrines for the many deities to whom they were dedicated. This regard for external effect included the finer points in the correction of optical illusions (see Illustration 4, page 19).

The horizontal line on the bottom chord of a triangle can appear to sag or drop in the middle as shown in *Figure A*. A rise of something like 3 inches (75 mm), in a building width of 100 feet (30 metres), about 1 in 400, is necessary to counteract this illusion and is still used in present day structures where the bottom chords of exposed roof trusses are cambered up in order to appear level.

Figure E show the front of a building as it finally appears, but to achieve this effect a rise of 2.64 inches (67 mm), is necessary in the centre, as shown in *Figure G*. If this were not done, the front of the building would look like *Figure F*.

Vertical features are also subject to optical illusion, giving the appearance of falling out. Columns in a building height of 36 feet (11 metres) had a lean-in of 2.65 inches (nearly 70 mm), meaning that they would all meet if extended up a distance of one mile (1600 metres), as shown in *Figure G*.

The shafts of tapered columns were given an *entasis*, a swelling or curving, amounting to about 0.75 inches (20 mm) in a height of 34 feet (10 metres), as shown in *Figure D*. This was to counteract the

hollow appearance which results from straight-sided columns. *Figures H and J* show the visual effect that convex or concave lines have on two parallel straight lines.

Columns on corners were set closer together and were also thicker, to counteract the optical illusion of appearing thinner against the open sky compared to a solid background, as shown in *Figure B*.

In its description of Greek architecture, volume 6 of *Chambers Encyclopaedia* (1950) says:

Especially in temples it seems to the modern mind extremely conservative for it admitted of an extremely narrow range of types of building, of structural features and of decorative elements: but constant progress was made within these limitations, the acceptance of which directed effort towards obtaining absolute perfection of design. The various types of buildings were regarded as so many art-forms, each capable of inexhaustible variety but not of radical alteration; the architect's aim was to determine the most pleasing proportions of the traditional shapes throughout every part of the building and eventually this was effected with an almost unbelievably meticulous care for detail. No other race has ever approached the standard of architectural counterpoint which the Greeks attained. This supreme high quality could not have been attained if the architects had allowed themselves wide scope of originality and experiment.

The first of the five Noble Orders of Architecture is the Tuscan, of Italian origin, having being invented in Tuscany and is very simple, with few mouldings. It was a simplified variation of the Doric order but without flutes in the column because the right quality of marble for carving could not be found in that area.

It was not favoured by the Greeks who preferred the Doric, the first of the three Greek Orders, being the best proportioned. Why the style is specifically called 'Doric' is not clear, for the Dorians were a tribe inhabiting the region to the north of the Gulf of Corinth. They overran the greater part of southern Greece about 1000 BC and settled in Sicily and the south-west of Italy. Their only influence in founding an architectural style could possibly be that, being a powerful race, they took the credit from the countries that they subjugated. In fact the people of Athens, who produced the most perfect architectural monument in the Doric style, were Ionian rather than Dorian in their racial connections. This building was the Parthenon, (see Illustration 5, page 20), which still stands on the Acropolis in Athens to this day and is considered to be the most perfect example of architecture ever created by man. 'Parthenon' means 'virgin's chamber', as the temple is dedicated to the Virgin Athena. It was founded about the year 440 BC, after the final triumph of the Athenians over the Persians.

Greek architecture relates especially to temples, where the plans were all very similar and of simple rectangular form. In the centre was the long narrow building of the temple proper, having solid walls surrounded on all sides by a series of freestanding load-bearing columns, forming an open colonnade. These columns, which are of the Doric order, are fluted, varying from just over 6 feet (1.8 metres) in diameter at the base to just under 5 feet (1.5 metres) at the top. The diameter of the base is exactly one sixth of the height, the significance of this being that it is modelled on the form of man, where they found that the length of his foot was one sixth of the height of his body.

The Doric column itself, shown in *Figure A* of Illustration 6 (page 21), actually stands without a base, directly on three steps, and is easily recognised by its distinctive capital, consisting of the *echinus*, meaning *curved* in Greek, and which referred to the curved shell of the sea-urchin. On the top is the square block called the *abacus*. The whole effect is similar to human hands spread out and holding up a book. The column generally has about 20 shallow flutes or channels, separated by sharp *arrises*, or edges.

The frieze is distinguished by 'triglyphs', said to represent the ends of timber joists having three vertical projections to each. This reminds us of the timber origin of the Doric style, where the columns and their entablatures were made entirely of wood, and Greek architecture is sometimes called 'a carpentry in marble'. Between the triglyphs are fine relief sculptures.

The second Greek Order is the Ionic (see *Figure B*), which is slenderer than the Doric, with volutes or scrolls on its capital. These could have derived from the Egyptian lotus plant, the horns of sacred rams, or the nautilus shell. Whereas all other capitals can be viewed from all angles, the Ionic is only viewed satisfactory from two sides. This column has a moulded base and twenty four flutes. Its origin, like the Doric, is also vague, and some possible examples have been found from as early as 700 BC.

The old Masonic lectures had this to say:

At this Era their buildings, although admirably calculated for strength and convenience, wanted something in grace and elegance which a continual observation of the softer sex supplied; for the eye that is charmed with symmetry must be conscious of women's elegant beauty. This gave rise to the Ionic Order.

Its column is nine diameters high, its capital is adorned with volutes and its cornice has dentils, like teeth. History informs us that the famous temple of Diana at Ephesus, which was upwards of two hundred years in building, was composed of this Order. Both elegance and ingenuity were displayed in the invention of this column. It is formed after the model of a beautiful young woman of elegant shape dressed in her hair as a contrast to that of the 'Doric' which represents a strong robust man.

The last of the Greek Orders and by far the most ornate, is the Corinthian, shown in *Figure C*. Its possible origin is of interest, for the Masonic Lectures tell us:

Thus the human genius began to bud; the leaf and flower ripening to perfection producing the fairest and finest fruits; every liberal art, every ingenious science which could civilise, refine and exalt mankind. Then it was that Masonry put on her richest robes and decked herself in her most gorgeous apparel.

A new capital was invented at Corinth by Callimachus, which gave rise to the Corinthian which is deemed the richest of the Orders and masterpiece of Art. Its column is ten diameters high, its capital is adorned with two rows of leaves and eight volutes which sustain the Abacus. This Order is chiefly used in stately and superb structures. Callimachus took the hint of the capital of this column from the following remarkable circumstance. Accidentally passing the tomb of a young lady, he perceived a basket of toys which had been left there by her nurse, covered with a tile and placed over an acanthus root. As the leaves grew up they encompassed the basket till arriving at the tile they met an obstruction and bent downwards. Callimachus, struck with the object, set about imitating the figure. The base of the capital he made to imitate the basket, the abacus the tile and the volutes the bending leaves.

Whether Callimachus actually invented the capital, or just developed it, is unknown. He was referred to as a worker in metal and may have been the first to produce the capital in brass.

About 25 BC, Vitruvius wrote: 'While the Doric Order was modelled on man and the Ionic on the female figure, the Corinthian was an imitation of the slenderness of a maiden for her outline and limbs being slender they admit of a prettier effect in the way of ornament'.

An article by a Freemason commented that it was interesting to note that Freemasonry, being exclusively male, chose two of the three columns allied to the softer sex!

There is only one remaining order, the Composite, used by the Romans and formed by a combination of the Ionic and Corinthian Orders. The large volutes from the Ionic Order are inserted above the Corinthian leafage.

And so symbolically we are told in the first tracing board that:

Our Lodges are supported by three great Pillars. They are called Wisdom, Strength and Beauty; Wisdom to contrive, Strength to support, and Beauty to adorn; Wisdom to conduct us in all our undertakings; Strength to support us under all our difficulties and Beauty to adorn the inner man.

The universe is the Temple of the Deity whom we serve; Wisdom, Strength and Beauty are about His Throne as pillars of His work, for His Wisdom is infinite, His Strength omnipotent, and Beauty shines through the whole of the Creation in symmetry and order.

It continues later:

The three great Pillars supporting a Freemasons' lodge are emblematical of those divine attributes. They further represent Solomon, King of Israel, Hiram, King of Tyre and Hiram Abif. Solomon King of Israel for his wisdom in building, completing and dedicating to God's service the Temple at Jerusalem; Hiram, King of Tyre, for his strength in supporting him with men and materials; and Hiram Abif, for his curious and masterly workmanship in beautifying and adorning the same. But as we have no noble orders in architecture known by the names of Wisdom, Strength and Beauty, we refer them to the three most celebrated, the Ionic, Doric and Corinthian.

The three columns refer to the three who rule the lodge and are prominently displayed at the pedestals.

In the Presentation of the Pillars charge, the Junior Warden is told that he is entrusted with the care of the pillar of the Corinthian Order, which is an emblem of beauty, and points out to him that he is to adorn the work with all his powers of genius and active industry, and promote regularity amongst his brethren by his own precept and example and the discriminating encouragement of merit.

The Senior Warden is entrusted with the care of the pillar of the Doric Order. He is told that it is an emblem of strength and directs him to use all his strength of mind and powers of intellect to preserve peace, order and harmony among the brethren of his lodge, to facilitate the designs of his Worshipful Master and to see that his commands are carried into full and permanent effect.

And finally the Worshipful Master, as the representative of King Solomon, is entrusted with the care of the pillar of the Ionic Order. He is told that it combines the strength of the Doric with the beauty of the Corinthian, that it is an emblem of wisdom and points out to him that he is to combine wisdom with strength and firmness of mind and the beauties of persuasive eloquence in the well ruling and governing of the lodge.

It is interesting to note that the original Greek seniority has been changed in present day Freemasonry for the Ionic has become senior to the Doric.

This was not always the case, for the premier Grand Lodge in England, when ordering chairs for the Grand Master and Wardens in 1791, instructed that the Grand Master's chair should have Doric columns and the Grand Senior Warden's, Ionic. These chairs are still preserved and in use today by the United Grand Lodge of England.

The main visual significance of the columns in our lodge rooms today is the use by the Wardens in their display on the pedestals when the lodge is at labour or refreshment. This practice of raising and lowering the columns is thought to have emanated from the time of the Table Lodges in the 18th century where both the labour and the festive board activities were carried out in the same room, punctuated by toasts and drinking, whilst the lodge was still open. If the lodge was 'called off' when a meal, as distinct from the liquid refreshment, was to be taken and the brethren remained in their seats at the table, then some form of signal, recognisable at a glance, was required to indicate whether the lodge was at labour or refreshment.

Brethren, I am pleased to say that four of the five Noble Orders of Architecture feature in the names of lodges under the jurisdiction of the Grand Lodge of Western Australia:

Tuscan Loyal Westralian No 18,
Swan **Doric** No 125,
Ionic No 186, and
Palmyra/**Corinthian** No 312, as well as
Fortitude with **Wisdom** No 163.

Perhaps, with the present trend in the amalgamation of lodges, a **Composite** Lodge, to complete the recognition of all the five Noble Orders of Architecture, might be most appropriate.

In conclusion, I would like to read a poem written by Bro Walter K Belt of the USA from his book, *Poems on the Trestle Board*.

Every Lodge must be supported,
Holds an ancient metaphor,
By great Pillars, three assorted,
Which inspire each visitor.
And although its voice is stiller
When he sees the first huge pillar,
There's a lesson he is taught:
It is still with WISDOM fraught.
The great Pillar which is second,
He should contemplate at length.
By all Masons it is reckoned
As a source of hidden STRENGTH.
Third, the man who does his duty,
Undeterred by any strife,
Well may show the inner BEAUTY
which can glorify his life.

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Illustrations

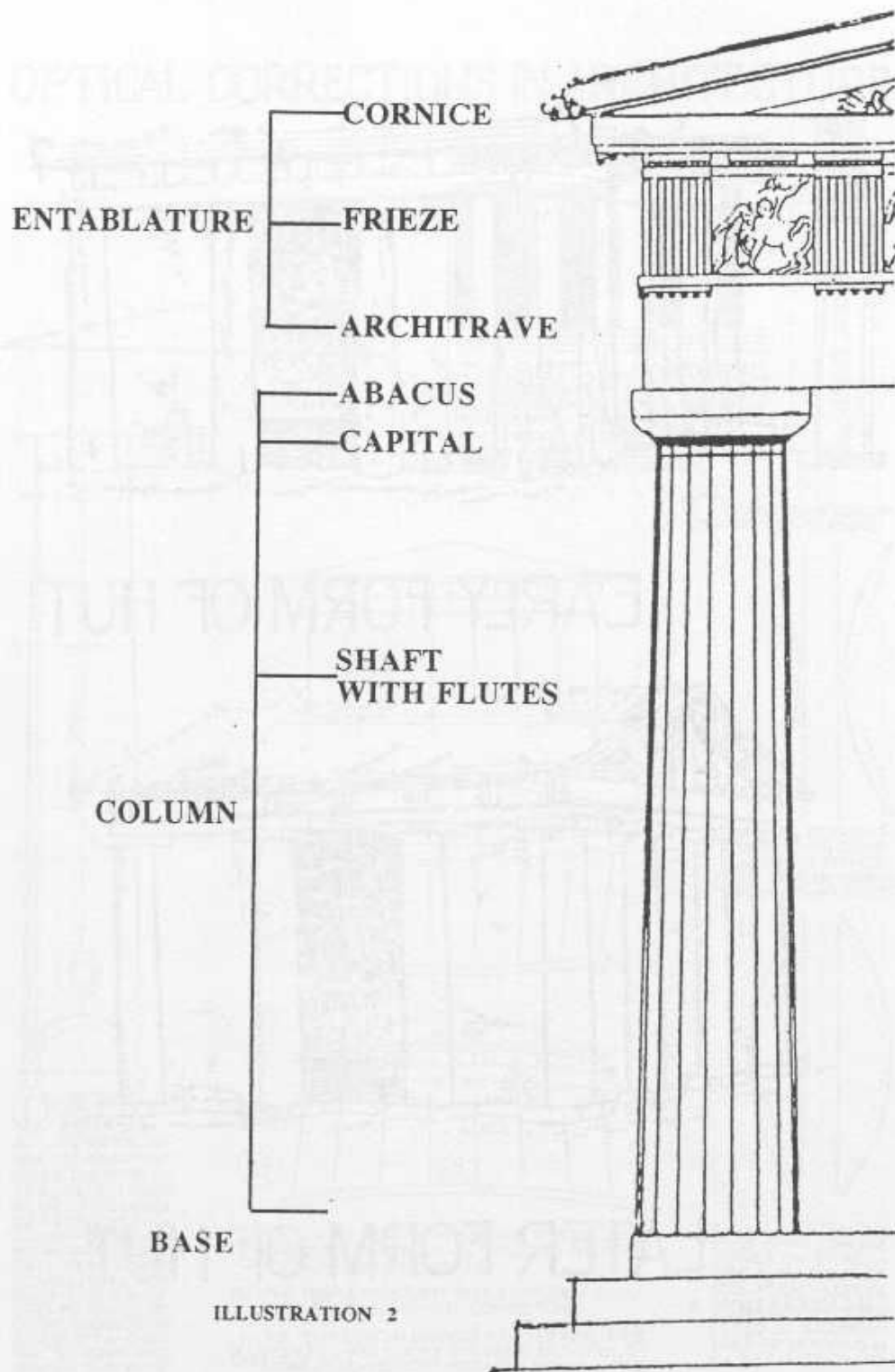
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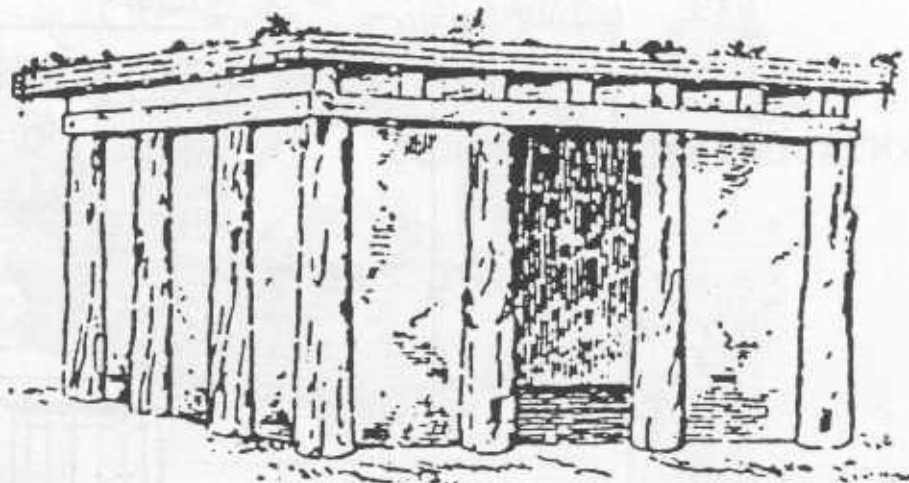
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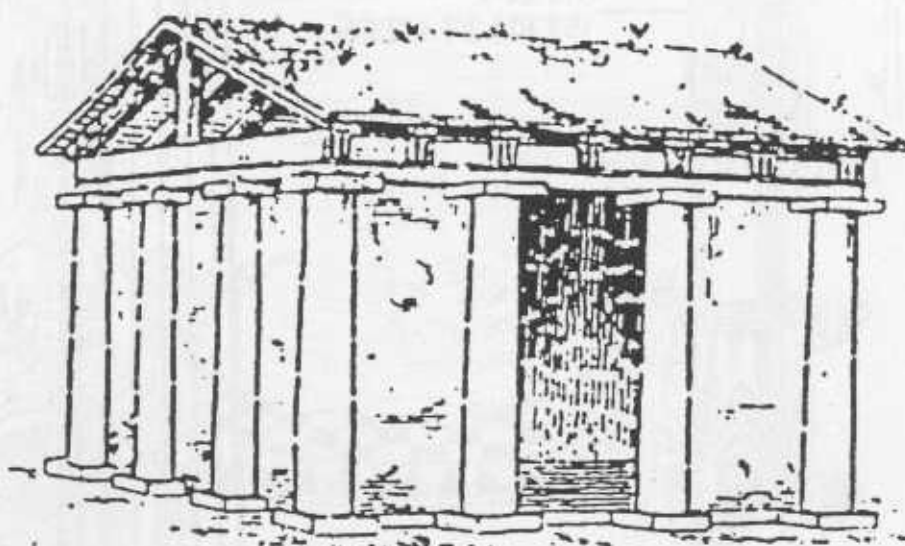
ILLUSTRATION 1

1865





EARLY FORM OF HUT



LATER FORM OF HUT

OPTICAL CORRECTIONS IN ARCHITECTURE

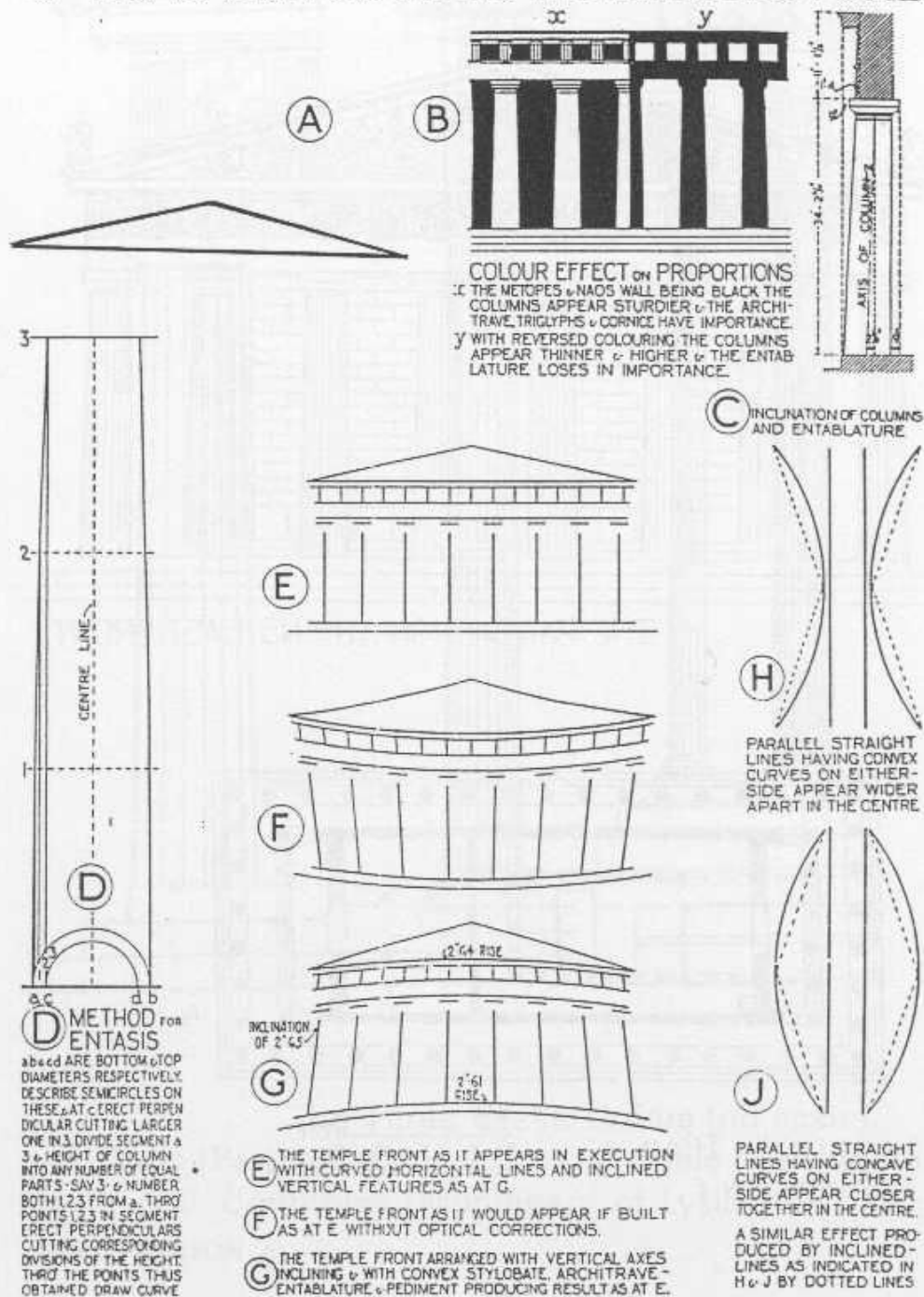
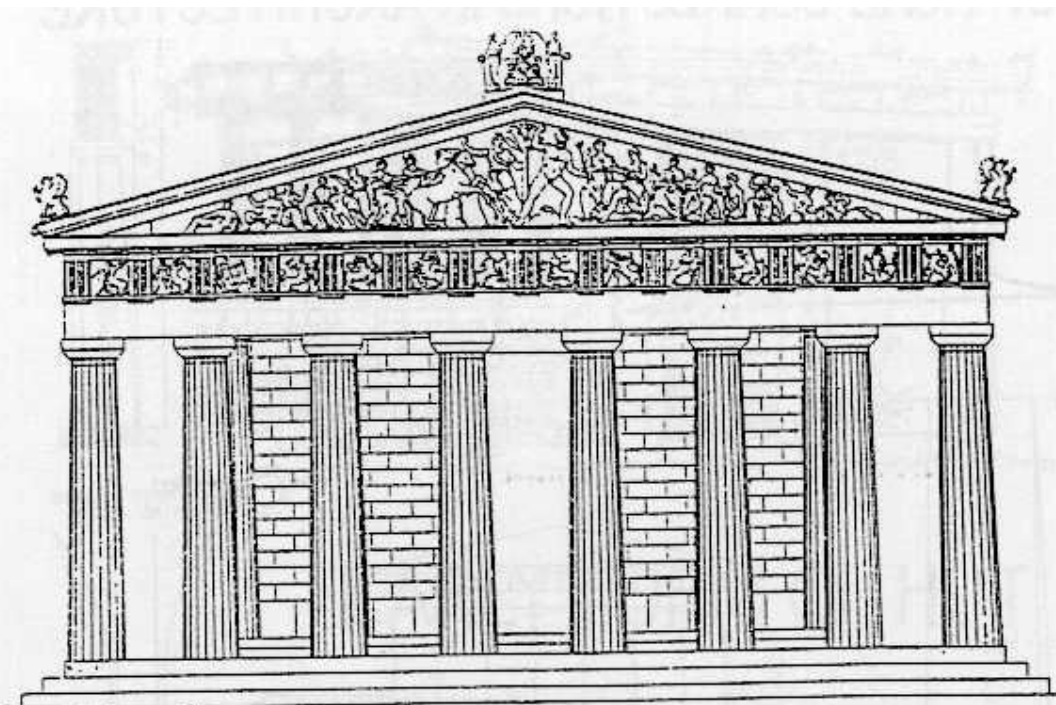
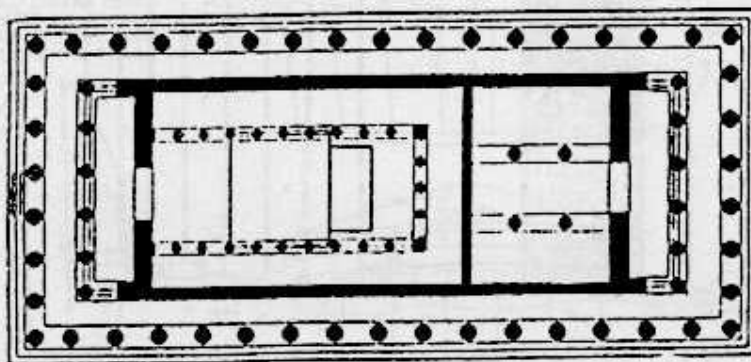


ILLUSTRATION 4

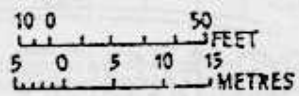


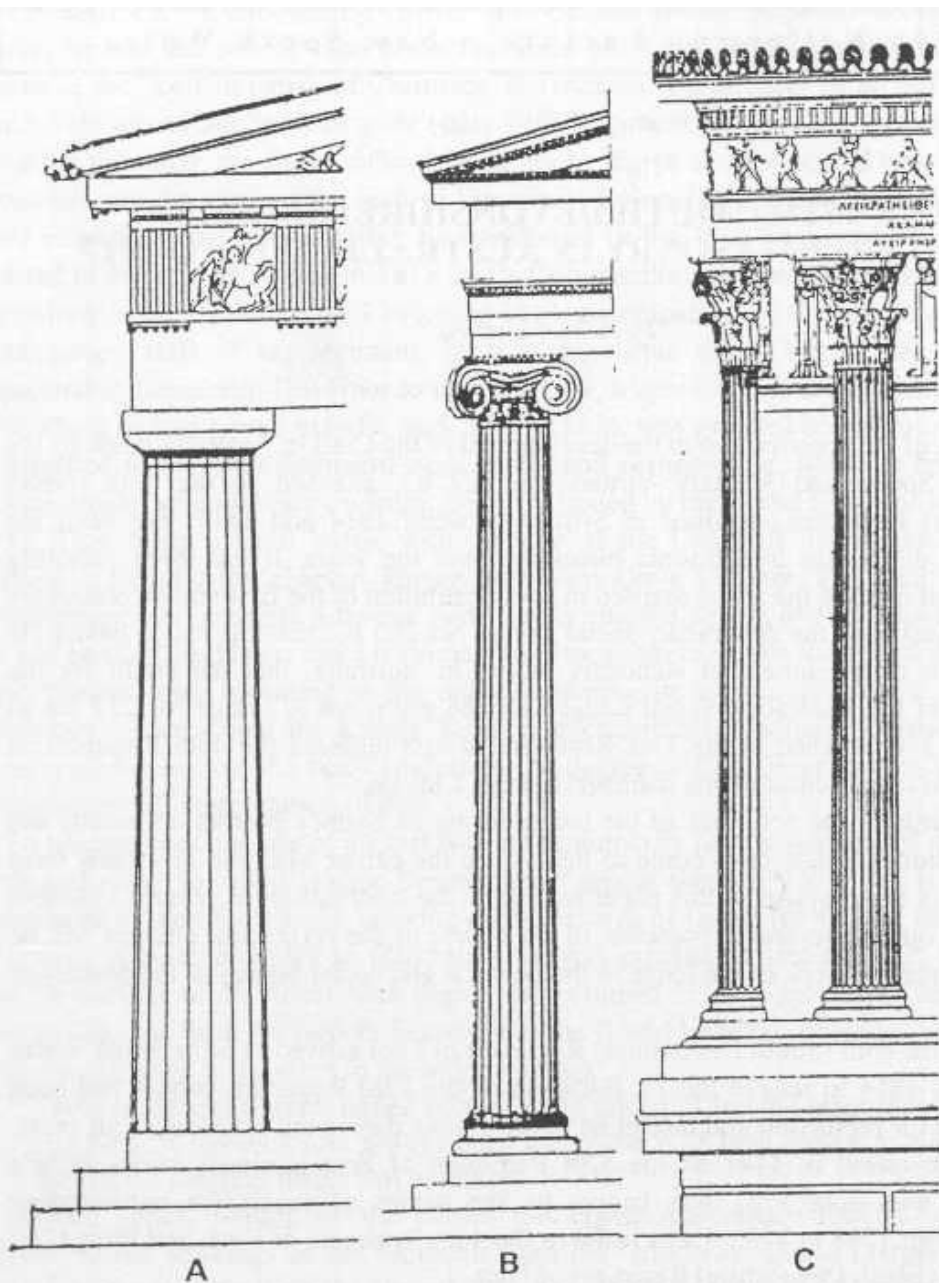
THE PARTHENON ATHENS: EAST FRONT



Plan

ILLUSTRATION 5





The Three Greek Orders (no scale).

A Doric (Parthenon)

B Ionic (Erechtheion)

C Corinthian (Monument of Lysicrates)

ILLUSTRATION 6