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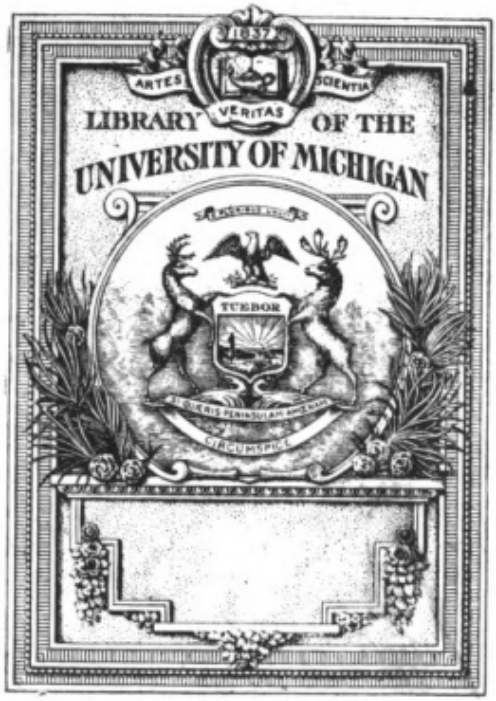

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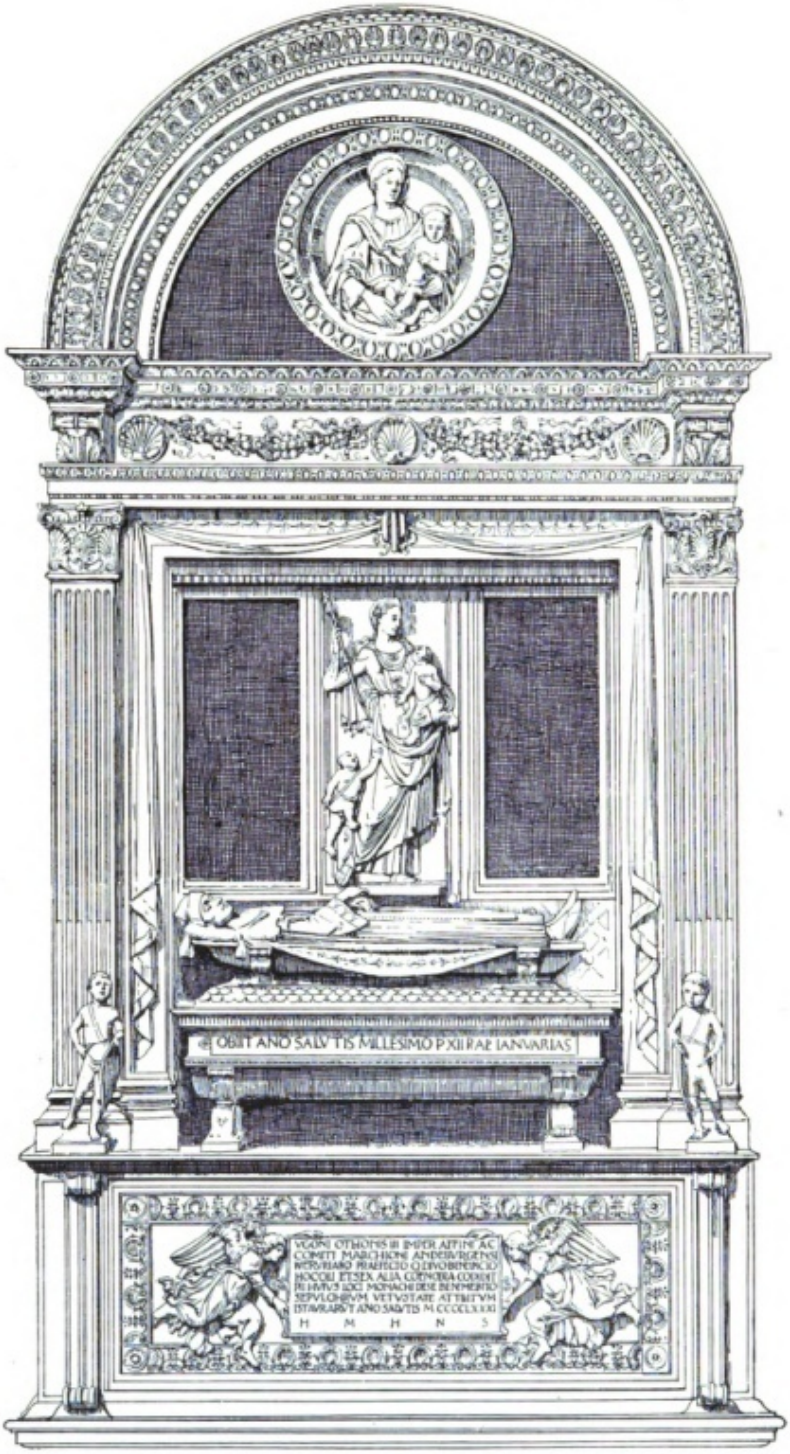

MONUMENT TO CONTE UGINO, BY MINO DA FIESOLE,
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A Manual of
HISTORIC ORNAMENT

TREATING UPON THE EVOLUTION, TRADITION, AND DEVELOPMENT OF ARCHITECTURE & THE APPLIED ARTS

PREPARED FOR THE USE OF STUDENTS AND CRAFTSMEN

BY RICHARD GLAZIER

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SECOND EDITION, REVISED AND ENLARGED
WITH 600 ILLUSTRATIONS BY THE AUTHOR

• • •

LONDON
B. T. BATSFORD, 94 HIGH HOLBORN
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PREFACE.

This manual has been prepared with the three-fold object of giving an elementary knowledge of Architecture and Historic Ornament, of awakening a responsive and sympathetic feeling for the many beautiful and interesting remains of ancient and mediæval civilization, and lastly, of directing the attention of students and craftsmen to the beauty, suggestiveness, and vitality of the Industrial arts of the past, and their intimate relation to the social and religious life of the people.

The advantages to be derived by students and craftsmen from such a study are manifold, for, by a careful study of these arts we may see the capabilities and limitations of material, the appropriateness and application of ornament, the continuity of line and form—yet with a marked diversity of enrichment and treatment—the interest and significance of detail, and the customs, myths, and traditions of the past, with their continuity of thought and expression.

The illustrations, which have been chosen expressly for this work, are typical examples of each period or style and are produced in line as being the method best suited to the requirements of students, giving definition, emphasis, and constructive qualities of design rather than pictorial effect.

In the appendix will be found a list of text-books and works of reference, which may be studied with considerable advantage by students desiring further information upon this important subject.

RICHARD GLAZIER.

MANCHESTER,
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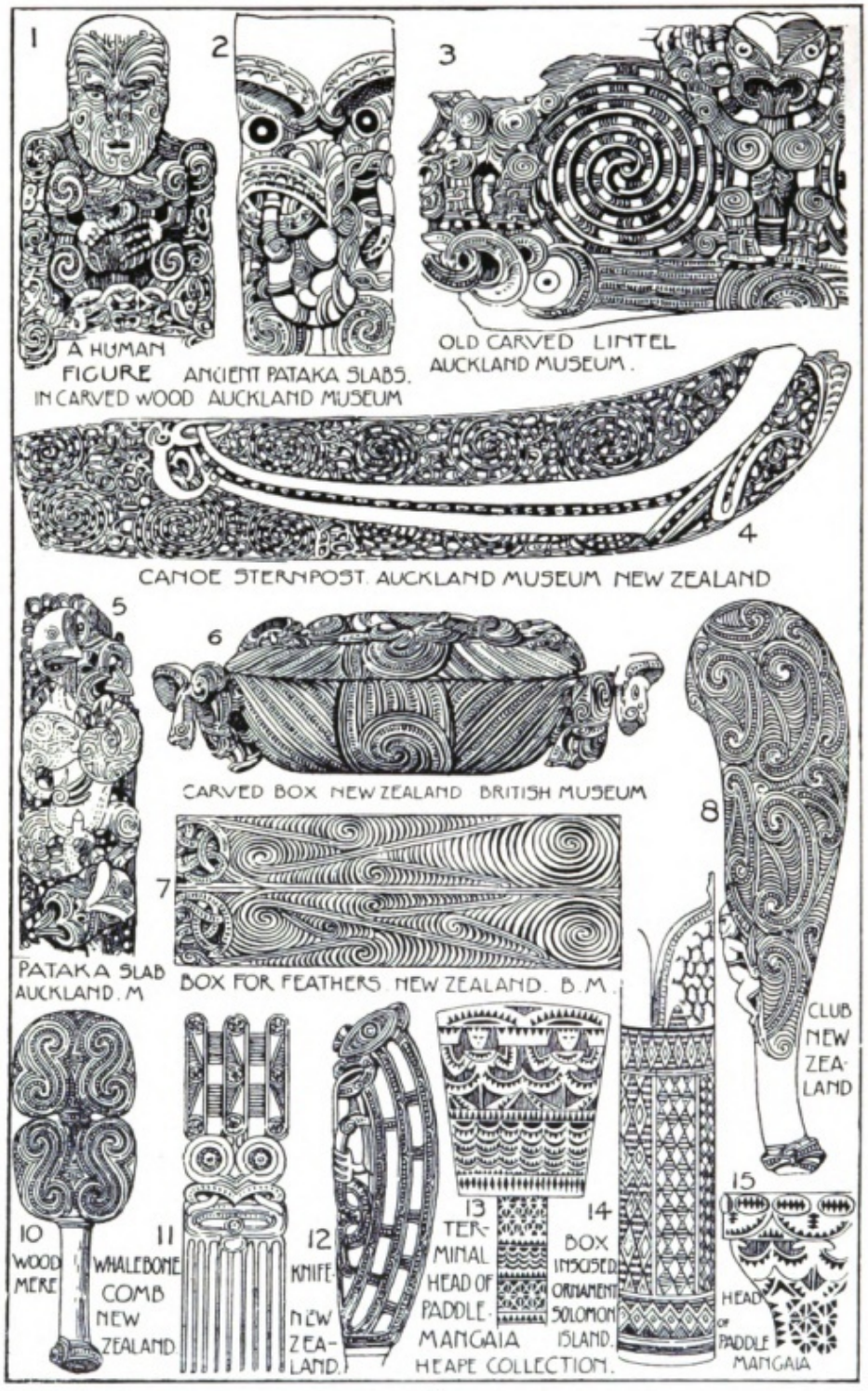

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ORNAMENT OF OCEANIA.

The ornamentation of the people of the Pacific Isles is full of interest, and is remarkable for the evolution and perfecting of an ornamental style by a primitive people, with myths and traditions purely local, and in no way influenced by other nations. It is a style of ornament full of meaning and symbolism, yet simple in detail and arrangement, not founded upon the beautiful vegetation and flora of their islands, but upon abstract forms derived from the human figure, and arranged with a pleasing geometrical precision remarkable for a primitive people.

The ornamental art of these people may be broadly divided into provinces, each with its distinct ornamental characteristics and traditions, New Zealand showing the highest development and Australia the lowest in the ornament of Polynesia and Melanesia.

Much of the ornament is purely linear, consisting of parallel and zig-zag lines; that of Australia consists almost entirely of these lines incised in the ground and occasionally filled in with colour. In New Guinea a higher development is reached, the ornament, of straight and curved lines, being carved in flat relief. In the province of Tonga-Samoa, the surface is divided into small fields, and the linear ornament runs in a different direction on each of the fields. The Hervey and Austral Islands are distinguished by their remarkable adaptations of the human female figure, the illustrations given here showing the original type and its ornamental development. These examples, together with the circular eye pattern, form the elements of the Hervey province, of which the Heape collection contains many

fine examples. In the Solomon Island the linear ornament is occasionally interspersed with an inlay of angular pieces of mother of pearl. The New Zealand province is distinguished by its skilful pierced carving, the beauty of its spiral forms adapted from the human figure (figs. 1-12), and the constant use of the border here given.

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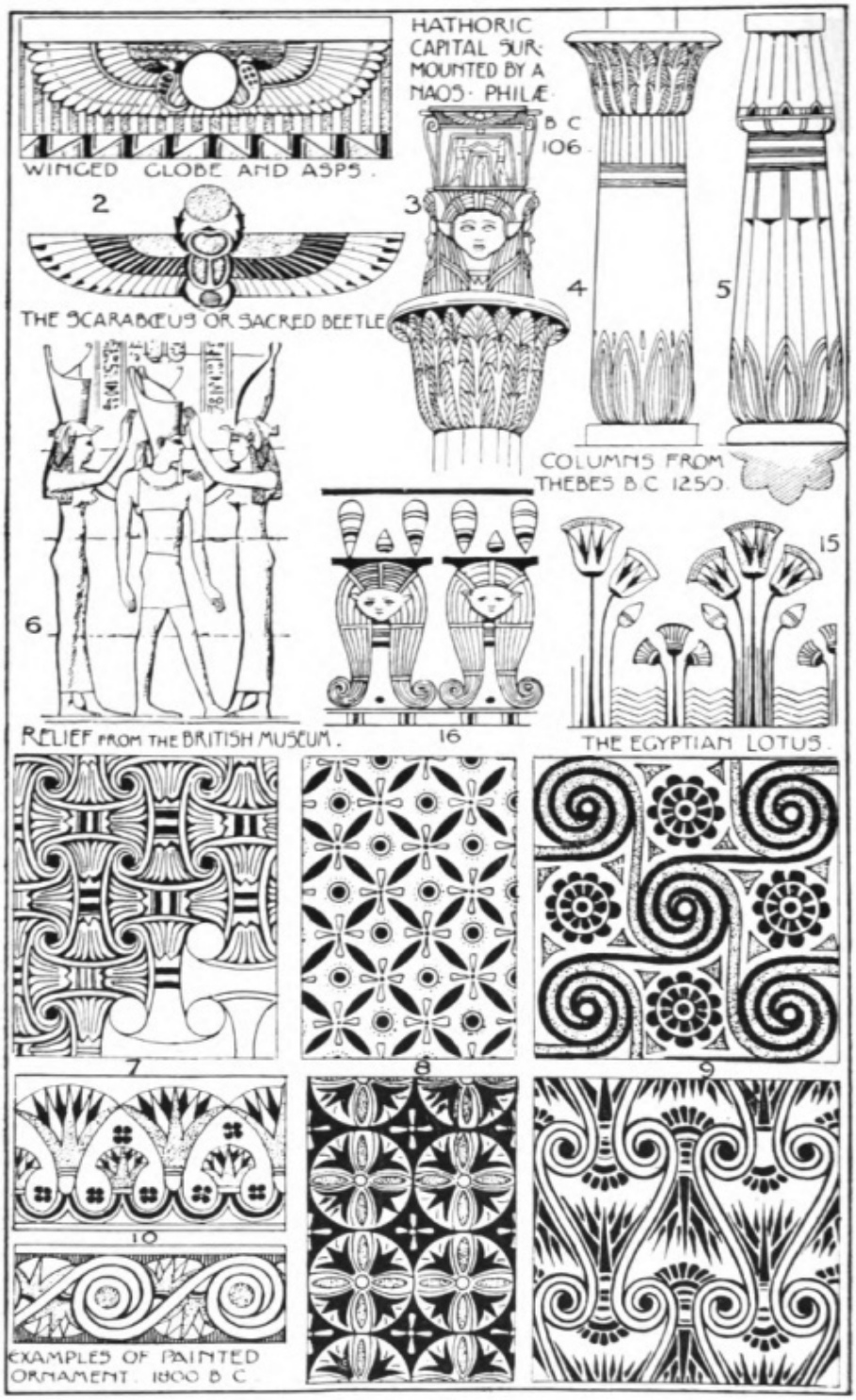

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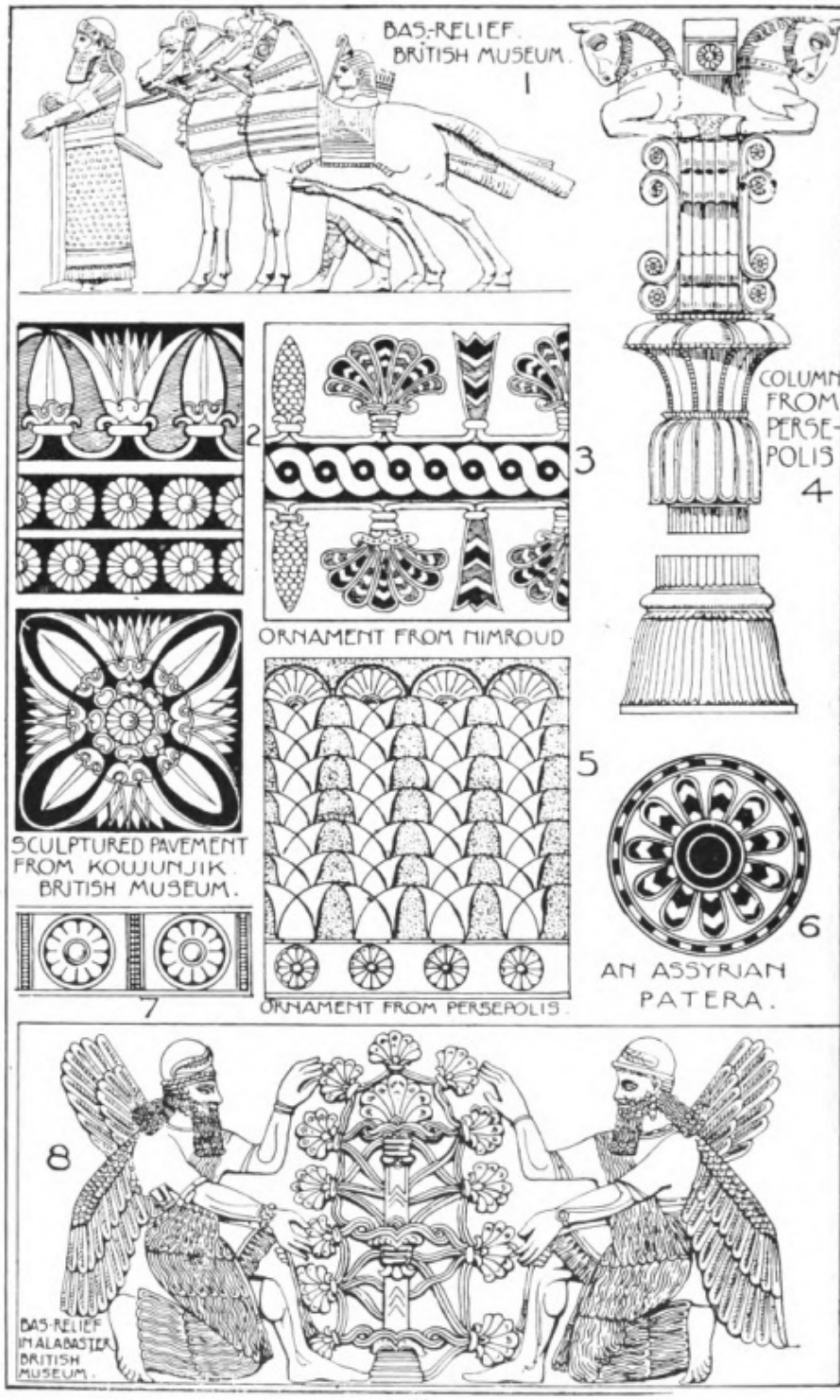

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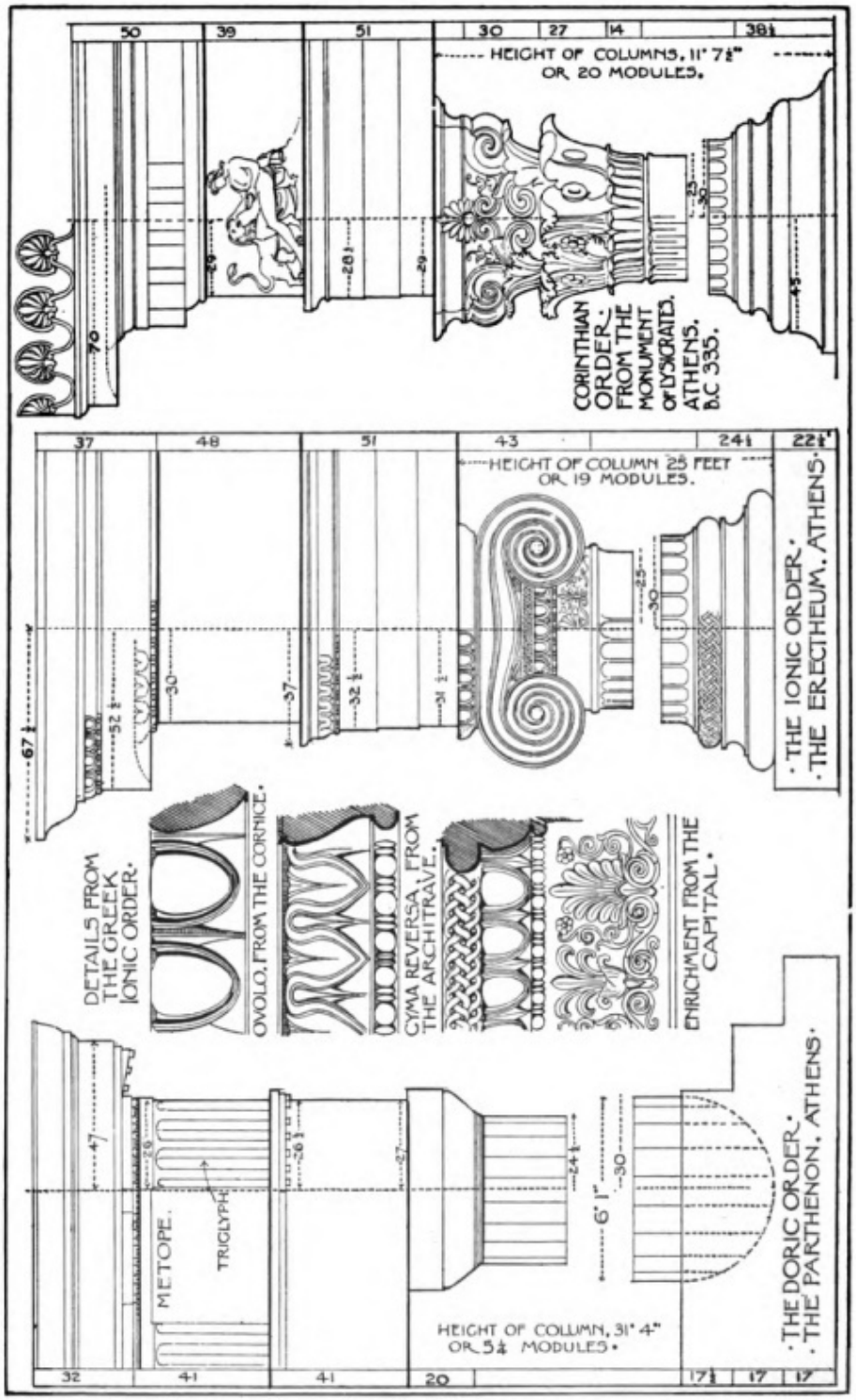

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GREEK ARCHITECTURE.

Classic or columnar architecture is divided into the Greek and Roman styles, and each style comprises several orders of architecture: the Grecian orders are the Doric, the Ionic, and the Corinthian, and many examples of each of these orders are still extant in Greece and her colonies—Asia Minor, Southern Italy, and Sicily. From a comparison of these buildings, certain constructive and decorative features are observed to be present, and thence they are considered as the characteristics of the style or order, which comprises the base (except in the Grecian Doric, which has no base), column and capital, and the Entablature, which consists of the Architrave, Frieze, and Cornice. The proportions of these orders are generally determined by the lower diameter of the column, which is divided into 2 modules or 60 parts, the height of the column always including the base and capital. The DORIC order was used for the early Greek temples from B.C. 600, and culminated in the Parthenon, B.C. 438. The COLUMNS in this order are 4½ to 6 diameters in height, with 20 shallow flutings with intermediate sharp arrises; the CAPITAL is half a diameter in height, and is composed of an echinus or ovolo moulding with annulets or deep channellings below, and a large square abacus above. The ARCHITRAVE is plain; the FRIEZE is enriched by rectangular blocks, with 3 vertical channellings in the face, termed triglyths, alternately with square metopes which were frequently sculptured. The CORNICE, composed of simple mouldings, projects considerably beyond the face of the frieze.

CARYATIDE, ERECHTHEUM.

The IONIC order has columns of from 9 to 9½ diameters in height, with 24 flutings divided by narrow fillets; the *base* is half a diameter in height, and composed of a plinth, torus, fillet, cavetto, fillet, torus, and fillet. The CAPITAL is $\frac{7}{10}$ of a diameter high, and consists of a pair of double scrolls or volutes, supported by an echinus moulding enriched with the egg and tongue, with an astragal below.

The ENTABLATURE is one quarter the height of the columns, the ARCHITRAVE of one or more fascias, the FRIEZE continuous and frequently enriched with sculpture in low relief; the CORNICE has simple and compound mouldings supported by a dentil band. Caryatides were occasionally introduced into this order; they were female figures clad in drapery having vertical folds which re-echoed the flutings of the Ionic column. These Caryatides supported the entablature in place of the columns; a beautiful example is in the south portico of the Erechtheum at Athens.

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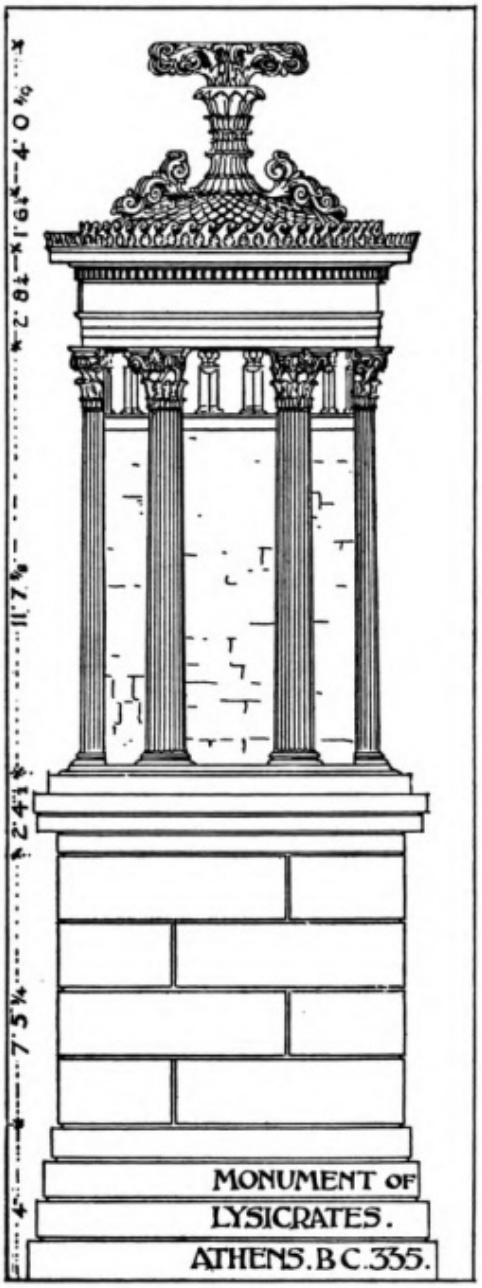
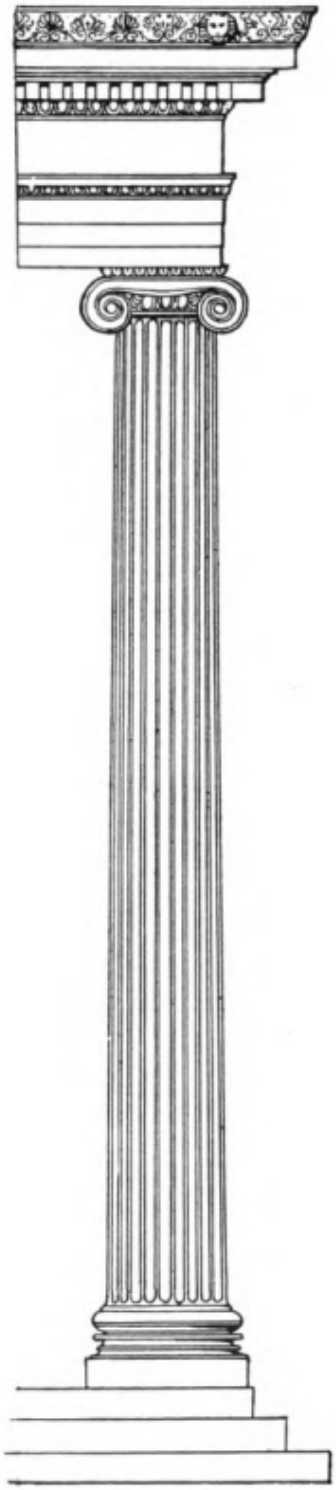


PROPORTIONS OF THE ENTABLATURE, IN PARTS.

		Architrave.	Frieze.	Cornice.	Total Entablature.
Doric	Parthenon	44½	40½	26	111
	Theseus	50	55½	25½	131
Ionic	Erechtheum	51½	48½	37½	137½
	Priene	46⅔	29	55⅔	131½
Corinthian	Lysicrates	51	39½	50	140½
	Jupiter Olympius	41⅔	27⅓	48	117



IONIC ORDER, TEMPLE OF ILYSSUS.

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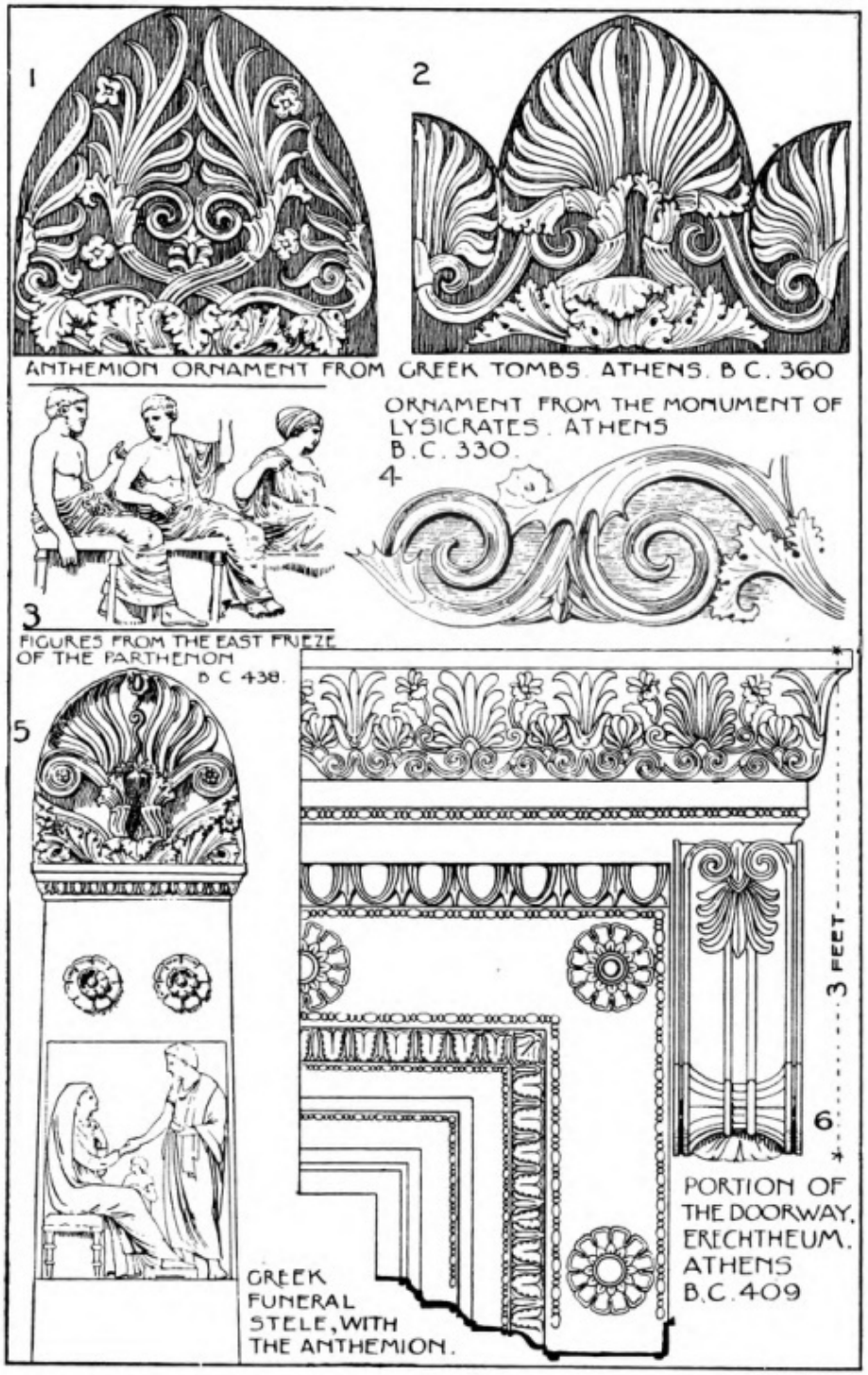

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GREEK ORNAMENT.

Greece, or Hellas, consisted of a number of small states, speaking the same language, and worshipping the same gods. Almost the whole of the Ægean coast of Asia Minor was occupied in early times by Greek Colonies, which supplanted those of the Phœnicians of Tyre and Sidon. The southern portion of this seaboard was occupied by the Dorians, and the northern by Ionians. In the course of time other Greek settlements were made on the Black Sea and Mediterranean Coast of Asia Minor, as well as at Syracuse, Gela and Agrigentum in Sicily, and in Etruria and Magna Grecia in Italy. These colonies appear to have reached a higher state of art at an early period than Greece itself. The ascendency in art in Greece was enjoyed by the Dorians circa, 800 B.C.; after which Sparta took the lead, but was in turn excelled by the Ionians, when Athens became the focus of Greek art, and attained a degree of perfection in that respect that has remained unequalled to this day. Athens was destroyed by the Persians under Xerxes, 480 B.C.; but under Pericles (470-429 B.C.) Greek art reached its culmination.

The abundant, although fragmentary, remains of Grecian architecture, sculpture, and the industrial arts, show most vividly the artistic feeling and culture of the early Greeks, with their great personality and religious sentiment, in which the personal interest of the gods and goddesses was brought into relation with the life and customs of the people. Their myths and traditions, their worship of legendary heroes, the perfection of their physical nature, and their intense love of the beautiful, were characteristic of the Greek people, from the siege of Troy to their subjection by Rome, B.C. 140. The almost inexhaustible store of Greek art, now gathered in the British Museum, and in other European museums, furnishes one of the most valuable illustrations of the many glorious traditions of the past. The vitality of conception, the dignity and noble grace of the gods, the consummate knowledge of the human figure, and the exquisite skill of craftmanship, are here seen in the greatest diversity of treatment and incident.

The work of Phidias, the most renowned of Greek sculptors, is largely represented in the British Museum by noble examples, showing his great personality, wonderful power, and his remarkable influence upon contemporary and later plastic art.

The Parthenon, or temple of the goddess Athene, which was built upon the Acropolis at Athens by Ictinus and Callicrates, B.C. 454-438, was enriched with splendid works of sculpture by Phidias. Many of the originals are now in the British Museum forming part of the Elgin Marbles, which were purchased from the Earl of Elgin, in 1815. The two pediments of the temple contained figure sculpture in the round, larger than life size. The Eastern group represents the birth of Athene, and the western group the contest of Athene and Poseidon

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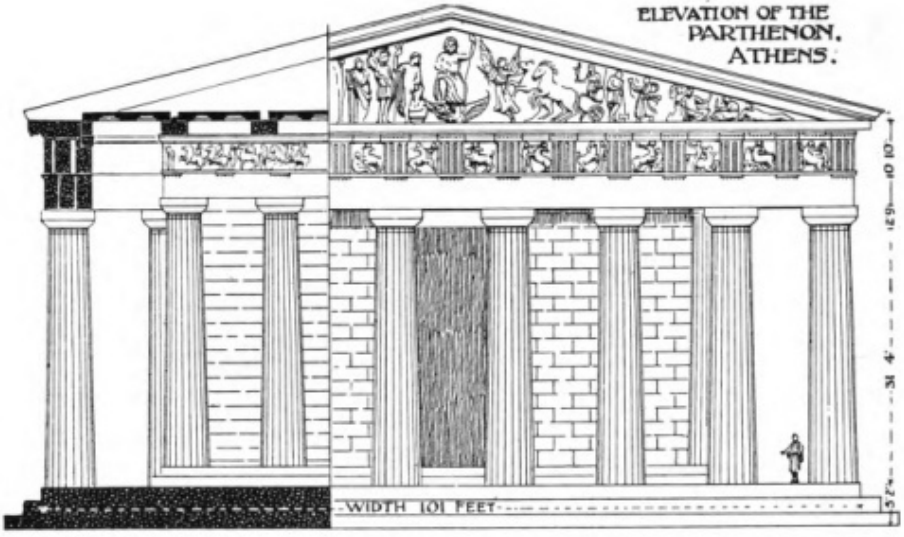
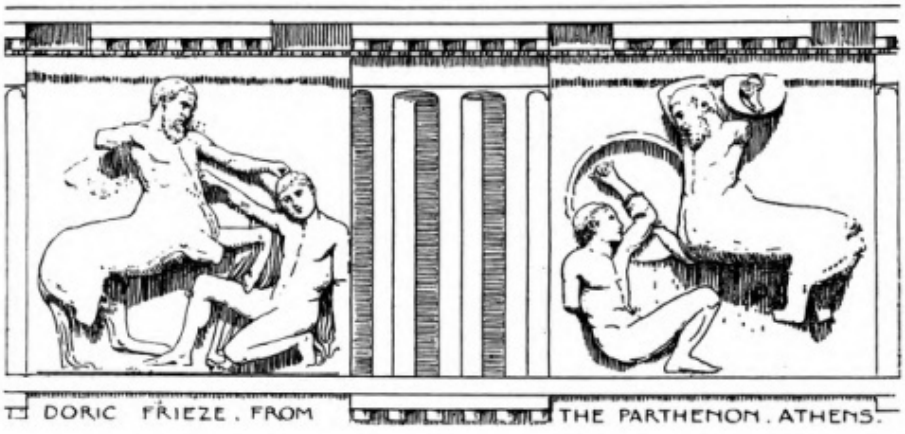


for the soil of Attica. The fragments of these pedimental groups are now in the British Museum, and, though sadly mutilated, show the perfection of sculpture during the Phidian age. Of the 92 square metopes sculptured in high relief, that enriched the Doric frieze, 15 are included in the Elgin Marbles. The subject represented on these metopes was the battle between the Centaurs and Lapithæ, or Greeks, —a fine example of composition of line and mass, and dramatic power of expression.



The continuous frieze upon the upper part of the cella wall, under the colonnade or Peristyle, was 40 feet from the ground, 40 inches in height, and 523 feet in length. It was carved in low relief, the subject being the Panathenæic procession, the most sacred and splendid of the religious festivals of the Ancient Greeks. This frieze, with its rhythm of movement and unity of composition, its groups of beautiful youths and maidens, sons and daughters of noble citizens,

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its heroes and deities, heralds and magistrates; its sacrificial oxen, and its horses and riders are doubtless the most perfect production of the sculptor's art. Each figure is full of life and motion, admirable in detail, having an individuality of action and expression, yet with a unity of composition, appropriate to its architectural purpose as a frieze or band.

The Parthenon, however, was but the shrine of the standing figure or statue of the goddess Athene, which was 37 feet high, and formed of plates of gold and ivory, termed *Chryselephantine* sculpture. Probably owing to the intrinsic value of the material, this work of Phidias disappeared at an early date.

Among the examples of sculptured marbles in the British Museum is the beautiful frieze from the interior of the Temple of Apollo at Phigaleia, erected by Ictinus, B.C. 450-430. This frieze, which shows an extraordinary vitality and movement, is 101 feet long and consists of 23 slabs 25½ inches in width, the incidents depicted being the battle of the Greeks and the Amazons, and the contest between the Centaurs and the Lapithæ. The dignity and reserve of the Parthenon frieze is here replaced by activity and energy of line and an exuberance of modelling.

Some of the marbles in the British Museum are from the Nereid Monument of Xanthos, B.C. 372, so called because the female figures display moist clinging garments, and have fishes and seabirds between

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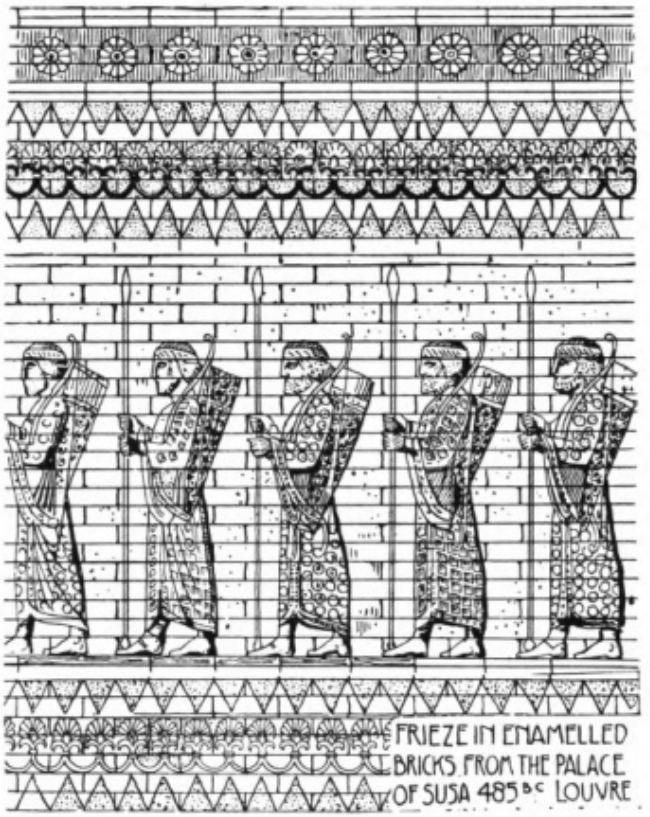
frieze, of which an illustration is here given, was executed in glazed and enamelled bricks. A dignity of conception and unity of composition were here combined with skilful modelling of relief work, and fine colouring of blue, turquoise and yellow. This treatment of the frieze no doubt influenced the later work of the Greeks, who so nobly carried on this tradition of the frieze.



FRIEZE IN ENAMELLED BRICKS FROM THE PALACE OF SUSA 485 B.C. LOUVRE

Greek ornament is distinguished by simplicity of line, refinement of detail, radiation of parts, unity of composition, and perfect symmetry. The anthemion, which is the typical form, is derived from the traditional lotus and bud of Egypt, Assyria, and India. It differs, however, in its more abstract rendering and its absence of symbolism, having a charm of composition and a unity and balance of parts, yet lacking that interest and deeper significance associated with many periods of art.

The anthemion was sculptured upon the top of the funeral stele (figs. 1, 2, and 5, plate 5), upon the architrave of doorways (fig. 6), and above the necking of the Ionic columns (plate 4), or painted upon the panels of the deep coffered ceilings. It was also used in a thousand ways upon the many fine vases and other ceramic wares of that period. The simplicity and beauty of the anthemion and its ready adaptability, has doubtless rendered it one of the best known types of ornament. Like the Egyptian and Assyrian prototype, the Greek anthemion is usually arranged with alternate flower and bud, connected by a curved line or more frequently by a double spiral. Illustrations are given on plate 6 of a few typical examples, where the rhythm and beauty of composition are indicative of the culture and perfection of Greek craftmanship.

Another feature, which at a later period received considerable

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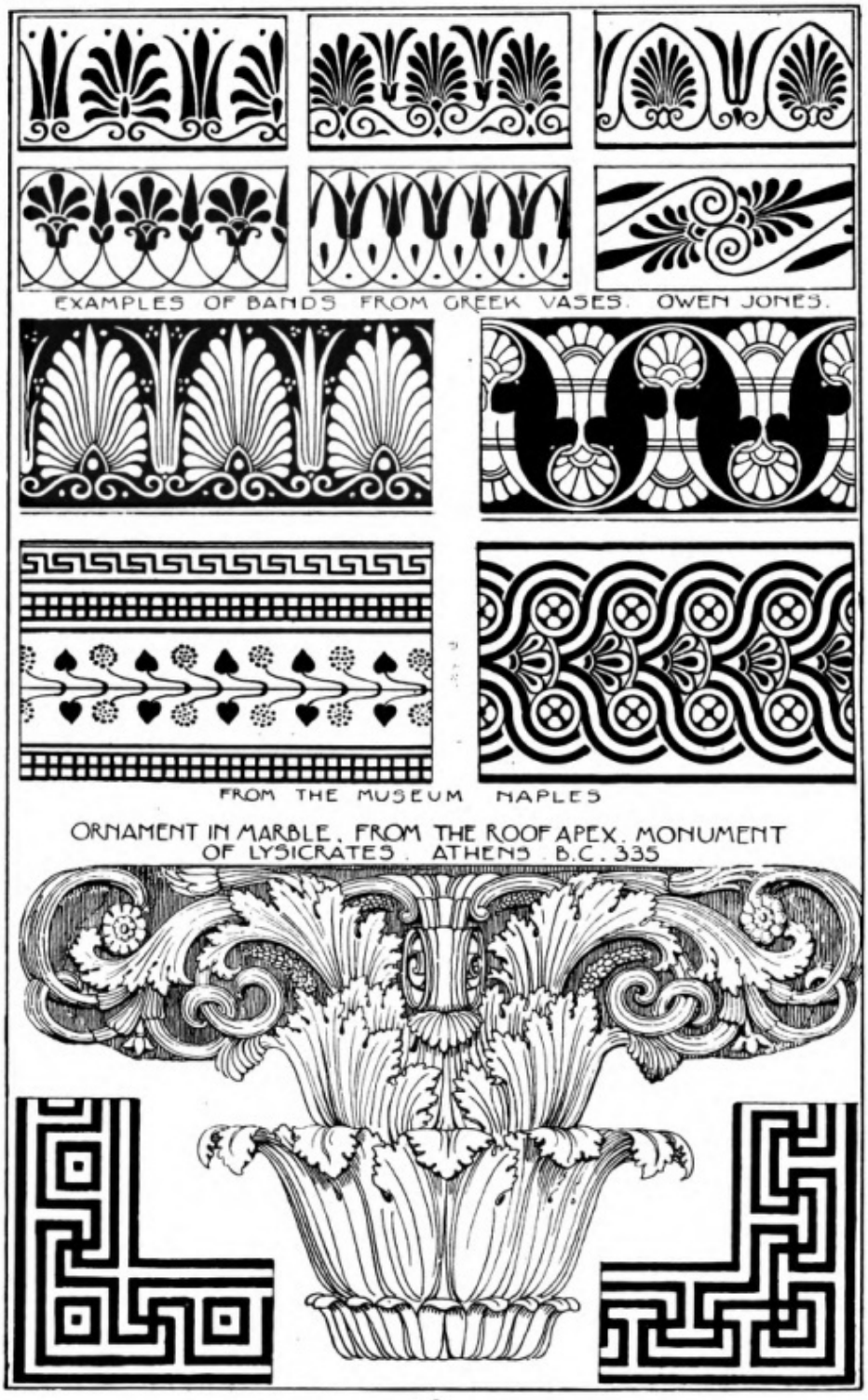

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development, was the scroll given on plate 6, which is a fine example from the roof of the monument to Lysicrates. The scrolls, cut with V-shaped sections, spring from a nest of sharp acanthus foliage. This scroll is formed of a series of spirals springing from each other, the junction of the spiral being covered by a sheath or flower ; the spiral itself being often broken by a similar sheath.

This spiral form, with its sheathing, is the basis of the Roman and Italian Renascence styles, and sharply differentiates them from the Gothic ornament, in which the construction line is continuous and unbroken.

The rosette, a survival of the traditional Assyrian form, was frequently used upon the Architrave (fig. 6), and the funeral stele (fig. 5, plate 5) where its circular and radiating form contrasts so beautifully with the functional straight lines of architectural design. The extraordinary vitality and versatility of the Greek craftsmen may be traced through a magnificent series of coins dating from B.C. 700 to B.C. 280. The interest of subject, beauty of composition and largeness of style, combined with the utmost delicacy of technique, of these gold, silver, and electrum coins, are a reflex of the artistic feeling for beauty of the early Greeks.

Colour, as well as form, was a great factor in the art of the Greeks; their architecture and sculpture were enriched and accentuated by the judicious use of beautiful colour. The Parthenon, with its simple and refined Doric architecture, and magnificent sculpture by Phidias, was enhanced by colour, which was introduced in the background of the pediment and the frieze, and also upon the borders and accessories of the draperies. The "Lacunaria," or sunk panels of the ceilings, were frequently enhanced with blue, having rosettes or stars in gold or colour. A frank use of pure colour was almost universal in early Egyptian and Assyrian art, and the Greeks were not slow to avail themselves of any art that was beautiful.

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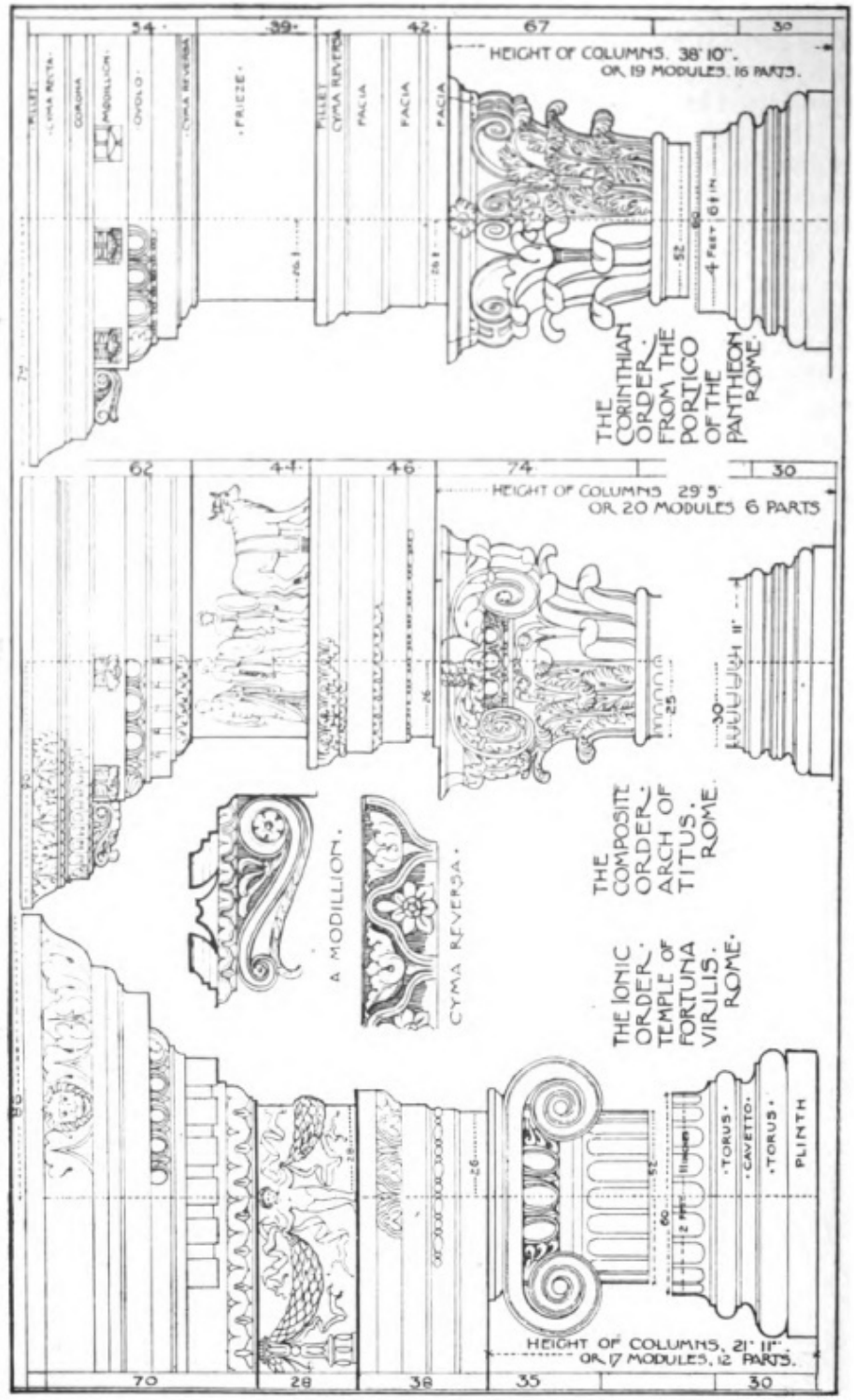

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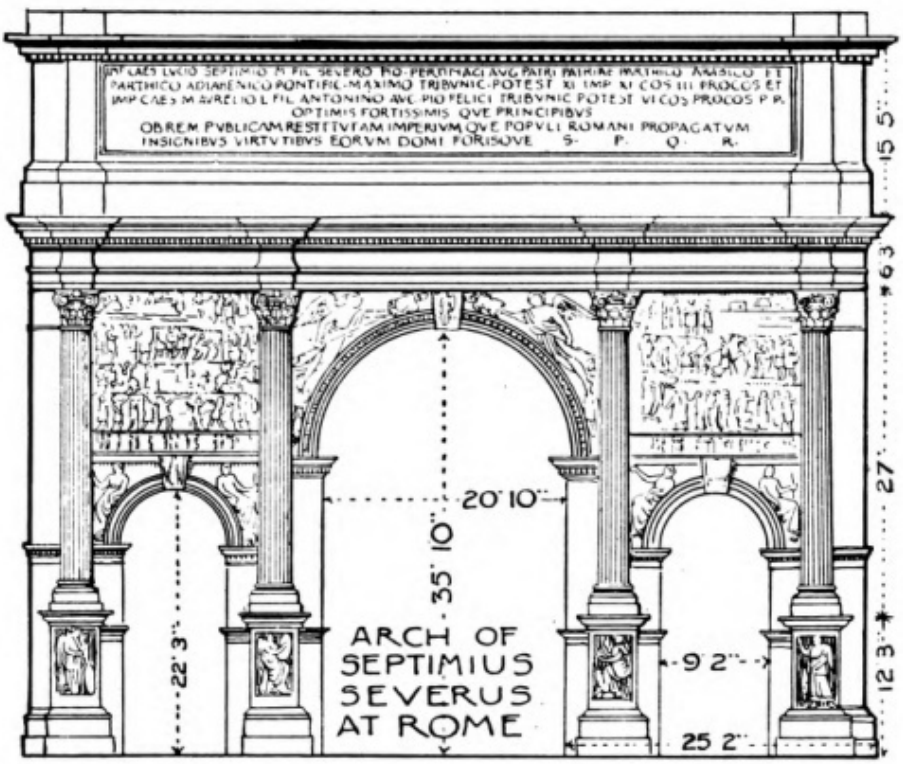
ROMAN ARCHITECTURE

Is differentiated from that of Greece by the extensive use of the arch and of superposed orders. The many fine remains of Roman temples and public buildings show the extraordinary versatility and conception of the Roman architects, their constructive skill, and their remarkable power of assimilating the arts of other nations. The Roman temples were somewhat similar in plan to their Greek prototypes, but usually without the side colonnade, larger in scale, and with an ostentatious display of mouldings and ornaments, less refined in contour and detail.



A typical example is given here of a triumphal arch, namely, that of Septimus Severus, A.D. 203. Other examples are the Arch of Titus, A.D. 83, and the Arch of Constantine, A.D. 326, all near the Forum at Rome. Trajan's Arch, A.D. 114, was destroyed by Constantine, who used many of the reliefs for the building of his own arch.

The superposition of columns and arches is seen in the Theatre of Marcellus, B.C. 20, where the lower order is of the Doric and the upper of the Ionic, and, like the early Greek Theatre, was semi-circular in plan.

The Colosseum, commenced by Vespasian, A.D. 72, and completed

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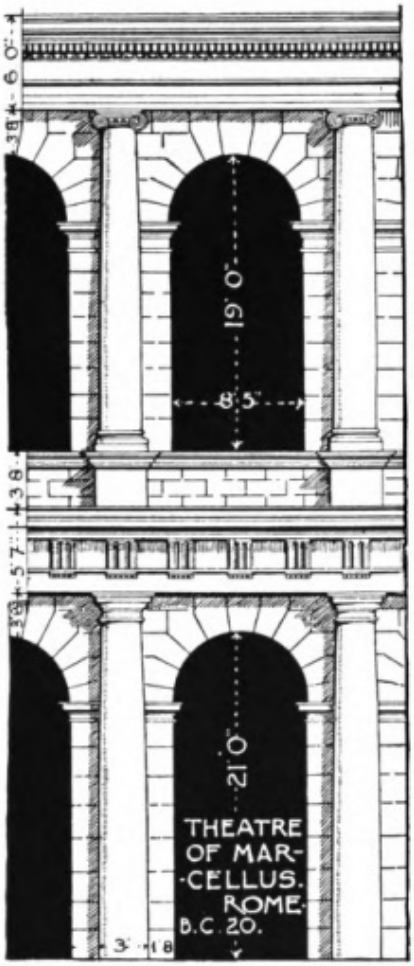
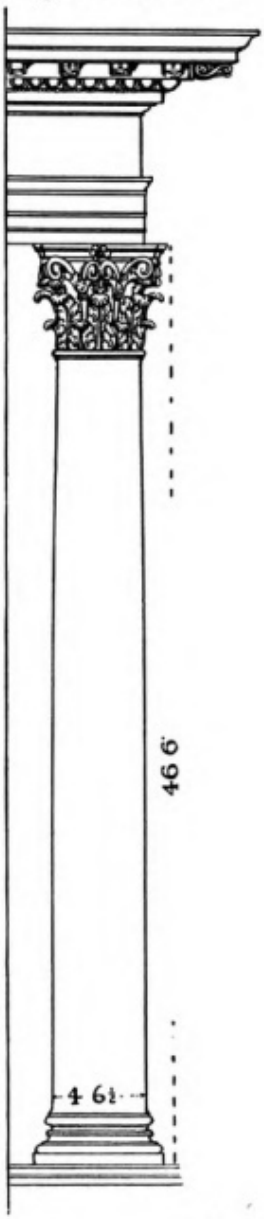


by Titus, A.D. 80, has a third story, having the Corinthian order, and an attic story, with Corinthian pilasters, the whole reaching to a height of 157 ft. The diameter of the amphitheatre was 584 by 468 ft.

One of the best preserved buildings of the early Roman period is the Pantheon (plan, plate 54), built during the reign of Hadrian, A.D. 118-38. This has a fine dome of coffered panels, having a diameter of 142 ft., and an altitude of 71 ft. 6 in., with a total height of 143 ft. from the floor to eye of dome.

The beautiful octastyle Corinthian portico, of the time of Agrippa, B.C. 27, has granite columns 46 ft. 6 in. in height, with fine capitals in white marble.



THE CORINTHIAN ORDER FROM THE PANTHEON

The magnificent temple of Castor and Pollux, frequently called Jupiter Stator, is only known from the three columns still standing; but these show the magnitude of scale and the exuberance of detail that characterized the finest period of Roman architecture. The proportions of this order are columns, 45ft. 3 in. in height and the entablature 11ft. 7 in.

The Tuscan and Composite orders were added to the Doric, Ionic, and Corinthian orders, thus forming the five orders of architecture.

The Romans rarely used the peristyle temple, consequently the cella was of the same width as the portico. In the civic buildings and palaces, the Romans show the greatest constructive skill

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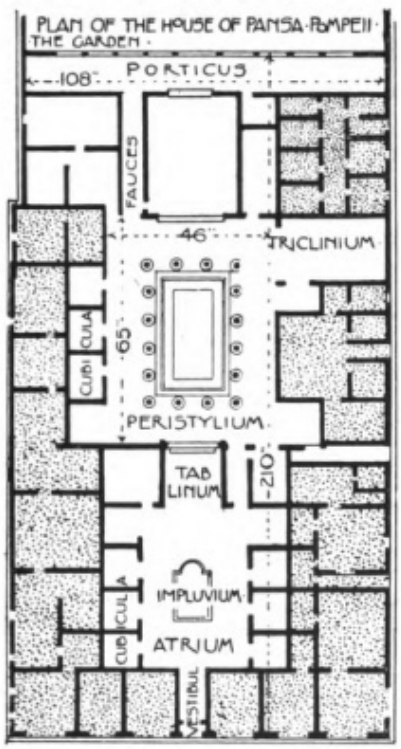
and splendour of embellishment. The skilful planning and appropriateness of decorative treatment in their basilicas and amphitheatres are evidences of the practical nature of the Romans.

The Basilica or Hall of Justice was an important architectural feature, rectangular in plan, with a semi-circular apse at one end, where the Tribunal was placed; roofed with timber framing, or vaulted with concrete, and supported with rows of columns or piers. The remains of two typical Roman basilicas are still in existence: the Basilica of Trajan, A.D. 114, rectangular, 180 by 160 ft., five aisles, the centre aisle with a semi-circular wooden roof, and enriched with bronze plates, is typical of one class; and the Basilica of Maxentinus, A.D. 310, with a width of 195 ft., and a length of 260 ft., is typical of a vaulted Basilica, the two side aisles with an arched roof, and the centre aisle with an intersecting vaulted roof.

These Roman basilicas were adopted by the early Christians to their service, and the basilica church became the typical form used up to the 12th century in the Romanesque provinces.



The Roman houses were of two types: the *Domus*, or houses clustered together, and the *Insular*, houses which were surrounded by streets. Most of the finest Pompeian houses were of the *Insular* type.

The usual plan of a Roman house consisted of the *Ostium*, an entrance or *Vestibule*, which opened into the *Atrium*, a large room or court partly roofed over, with an opening in the centre called the *Conpluvium*, under which was the *Impluvium*, or cistern of water, placed below the level of the ground. Small chambers surrounded the *Atrium*, and at the further end was the *Tablinum* or private room, frequently leading to the *Peristylium* or private part of the house, an open court, with a colonnade surrounding a marble fountain, with flowers, shrubs, and trees, forming a *Viridarium*. Surrounding the *Peristylium* were private rooms, one of which was the *Triclinium*, or dining room. From the *Peristylium*, *fauces* or passages led to the *Porticus*, a colonnade which overlooked the garden.

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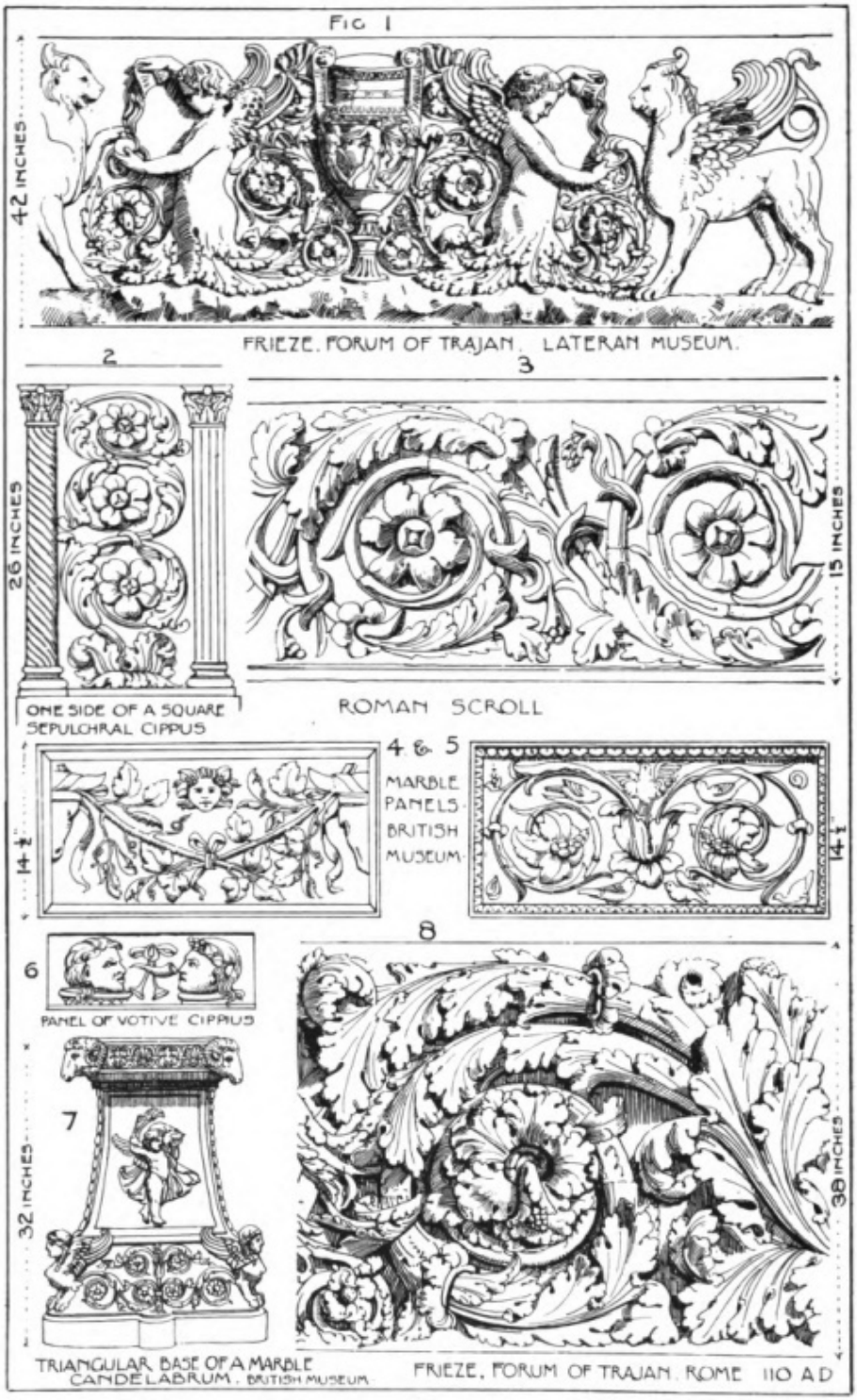

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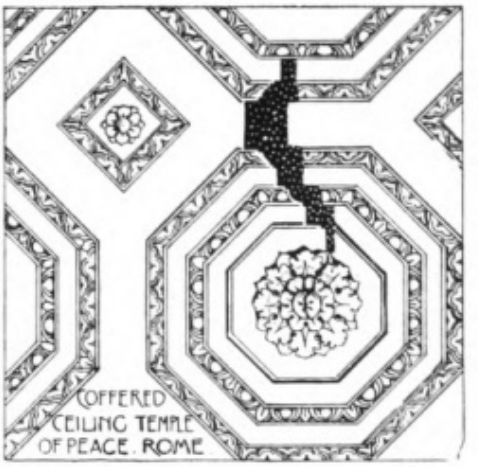
ROMAN ORNAMENT.

Rome, founded by Romulus, B.C. 783, became by successive wars and conquests the mistress of the world, absorbing the arts and the architecture of the Etruscans B.C. 567, the Samnites B.C. 340, and of Corinth and Carthage B.C. 146. From these varied sources arose the style termed Roman, assimilating and adopting the column and the horizontal entablature of the Greeks; the arch, the vault, the mural paintings, and the decorative use of bronze and terra-cotta of the Etruscans, with the sculpture, ornament, mosaics and coinage of the Greeks and Carthaginians. These varied arts were assimilated and perfected by the Romans during the period B.C. 100 to 337 A.D.

Roman ornament is the continuity of the Greek and Etruscan styles, consisting of the anthemion, the acanthus and the scroll; the Romans using these forms with greater exuberance and elaboration, together with bold and vigorous carving, yet lacking the simplicity, refinement, and graceful contour of the Greek and Etruscan forms.

Roman ornament consists largely of continuous spiral lines, clothed with cups and sheaths of acanthus foliage, the various spirals terminating in a rosette. These main spirals are frequently interwoven with fine curved or spiral lines, clothed with acanthus or other foliation, such as the vine, olive and ivy. Birds and reptiles and cupids, and the chimera or griffin (fig. 1) are often interspersed with the ornament, thus giving that largeness of mass, and contrast of form, which is so characteristic of Roman art. The Thermæ, or baths and public buildings, displayed fine decorative ceilings, having deep sunk panels called Lacunaria, or coffers; square, hexagonal or octagonal in form, with a centre rosette in high relief and the border mouldings of the coffers being enriched with the egg and dart, or the water leaf. These exhibit an effective treatment of moulded surfaces. The ceilings of the tombs and palaces were in many cases ornamented



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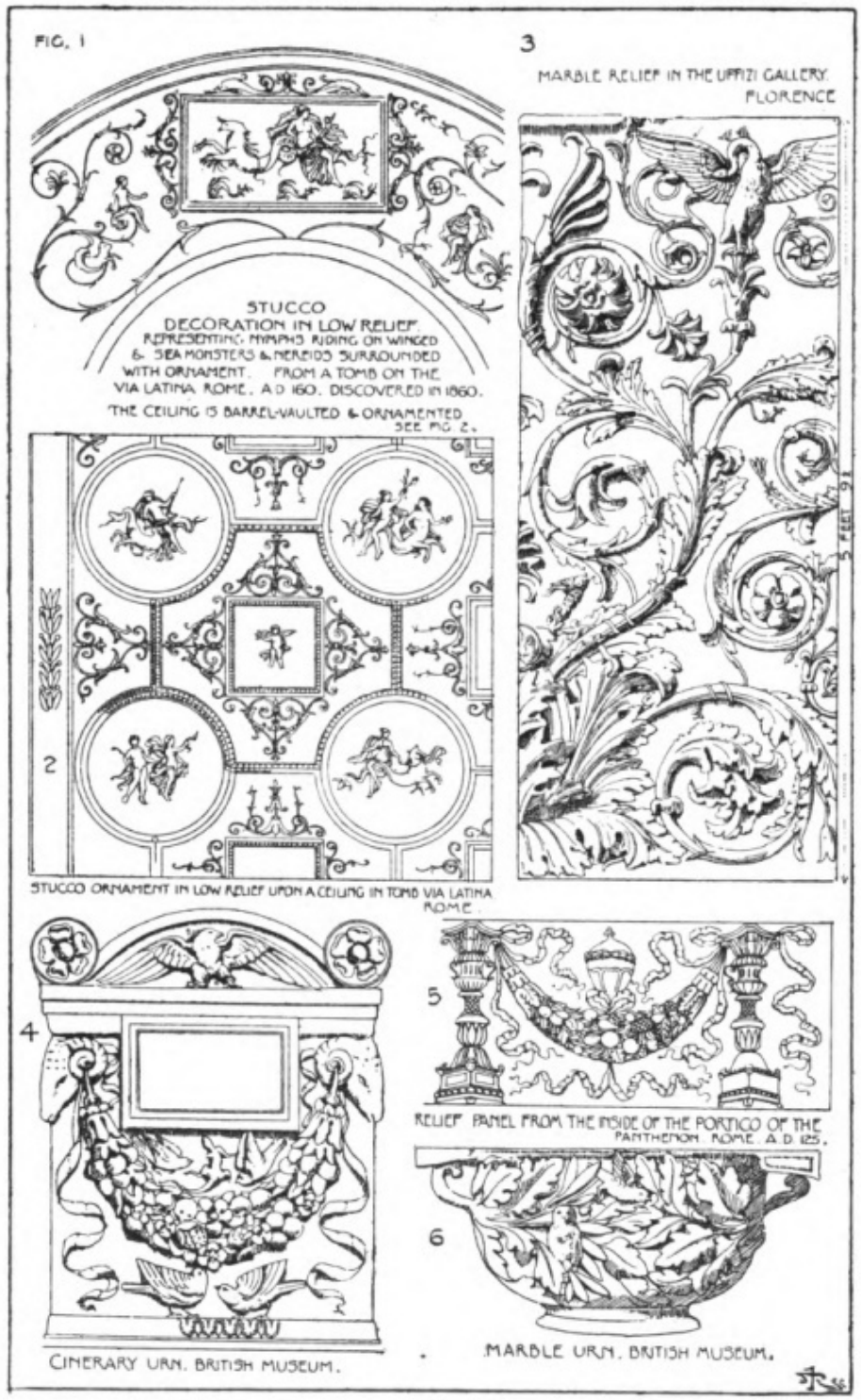

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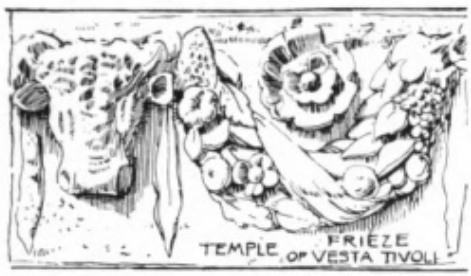
with circular and square panels, richly decorated with arabesques or mythical figures, and cupids in low relief of fine stucco; the mouldings or divisions in higher relief, and having the water leaf or the egg and dart enrichment (plate 9).

The architectural frieze and the sepulchral urn and sarcophagi of this period were often decorated with festoons (figs. 4 and 5, plate 9), and which were supported by cupids or by candelabra (plate 9), or by the skulls of oxen, as on the frieze from the Temple of Vesta at Tivoli, here given, which is no doubt a survival of the sacrificial custom of worship.



The architectural basilica and forum of Trajan, erected A.D. 114, by Apollodorus, a Greek of Damascus, was of the utmost magnificence, the remains attesting to the skill and artistic craftsmanship of the Romans. Apollodorus also erected the marble column of Trajan, having a rectangular pedestal 18 feet high, and richly sculptured with the dresses, armour and standards of the Roman army. This pedestal supports a column of the Tuscan order of architecture 97¼ ft. high, and 12 ft. in diameter, enriched with a series of spiral bands, having bas-reliefs representing the successive events of the Dacian War by the Emperor Trajan.

This magnificent and well preserved relic of antiquity furnishes a complete epitome of the costumes and the arms and armour of that period. Another well preserved column, similar to that of Trajan, was erected in Rome by Marcus Aurelius, A.D. 174, the subjects of its reliefs being the war with the Marcomans. Large marble urns, or Tazzas, enriched with Bacchanalian figures, surrounded with foliage and birds and animals; magnificent tables, chairs, couches, and candelabra, of bronze, enriched with silver damascening, together with the choice remains of sculpture and mosaics, all indicate the luxuriousness and love of magnificence of the wealthy Roman citizens.

In Roman architectural ornament we see the most powerful modelling combined with the use of the continuous scroll growing from a nest of foliage, repeated in their painted decorations (see Pompeian). This elaboration of the typical Greek ornamentation and the rounded serrations of the Acanthus (see plate 33), forms the chief characteristic of Roman ornament, which is wonderfully bold and vigorous in conception and execution, but deficient in the refinement and delicacy of Greek art.

There is a considerable difference in the foliations of the various capitals. The Corinthian capital of the Parthenon has foliage of the simple olive leaf type. In the composite capital of the Arch of Septimus Severus the foliage is serrated like fig. 8, plate 8, while that of the Corinthian capital of the Temple of Vesta, Tivoli, is more of the parsley leaf type, and each leaf is folded forward at the terminations.

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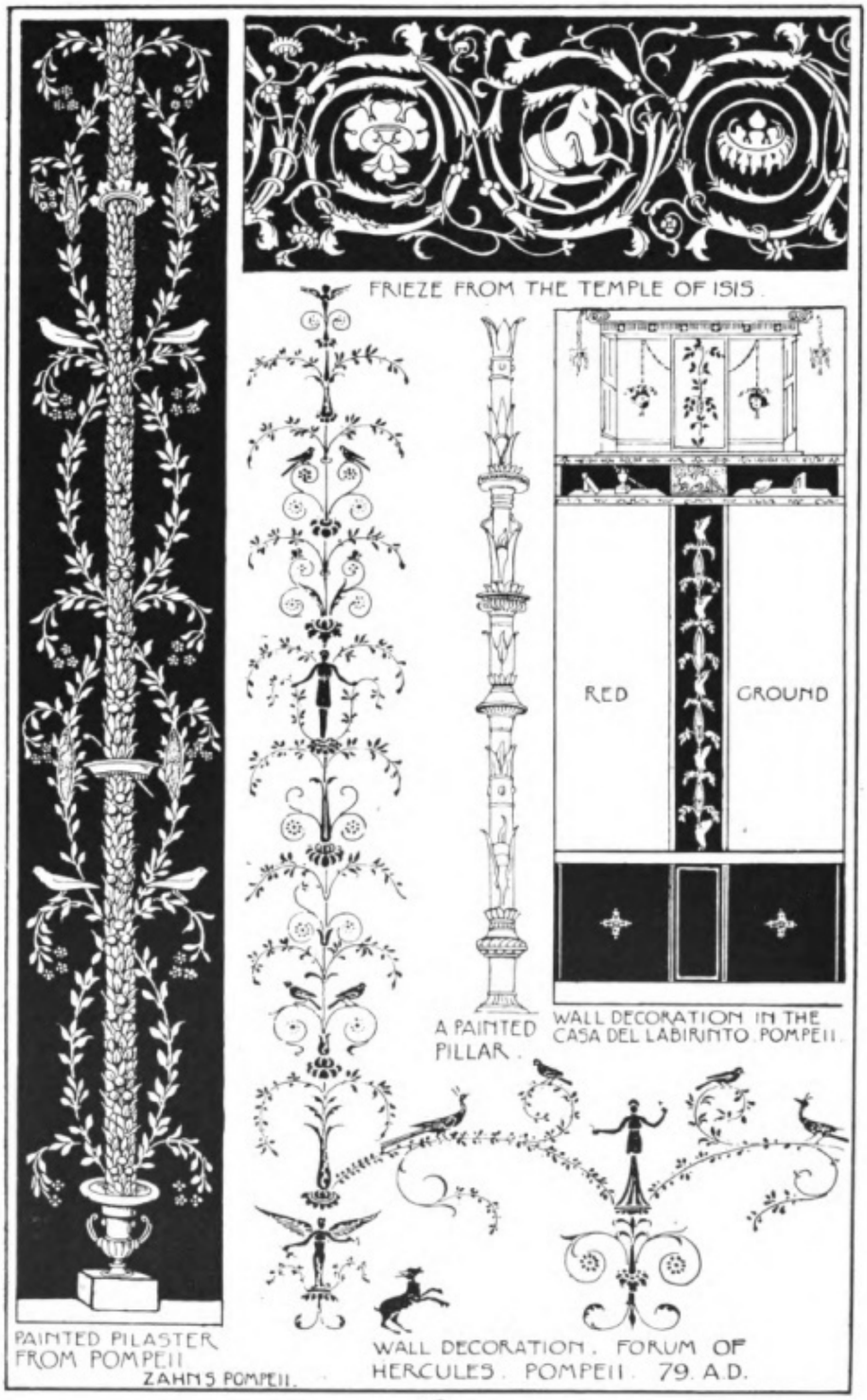

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POMPEIAN ORNAMENT.

Pompeii, Herculaneum and Stabia, Roman cities, were buried by an eruption of Vesuvius, A.D. 79. These cities had already suffered from an earthquake, A.D. 63, and were being rapidly rebuilt when they were finally destroyed by the eruption. The Younger Pliny, the historian, was a spectator of the event at Pompeii, and wrote two letters to his friend Tacitus, describing the event and his flight from the doomed city, which remained buried for seventeen centuries, with the treasures of gold and silver, bronzes of rare workmanship, mural paintings on a most magnificent scale, and floors of mosaics of marvellous execution and design; everything affording a vivid glimpse of the domestic and public life of the Romans of the 1st century A.D. Herculaneum was discovered in 1709, and Pompeii 1748, and from these cities many valuable remains of art have been taken. In the museum at Naples there are over 1,000 mural paintings, some 13,000 small bronzes, over 150 large bronzes of figures and busts, and 70 fine large mosaics.

A plan of a Roman house is given on page 23 showing the arrangement and use of the rooms. The floors covered with mosaics (see plate 33), those of the vestibule, corridors, and small rooms having simple patterns enclosed with borders of the key pattern, or the Guilloche in black, red, grey, and white tesseriæ. The floor of the triclinium, or dining room, was often a magnificent mosaic representing some mythological or classical subject. The walls were painted in colour, usually with a dado ⅙th the height of the wall, with pilasters dividing the wall into rectangular panels and a frieze above (plate 10). The general scheme of colour was, the dado and pilasters black, the panels red, and the frieze white; or black dado, red pilasters and frieze, with white or yellow panels. The decorations upon these various coloured grounds was light and fanciful, and painted with great delicacy. Representations of architectural forms, such as columns and entablatures, are often rendered in perspective upon the painted walls.

The painted ornament has somewhat the same characteristics as the Roman relief work, but is usually much more delicate in treatment. The spiral form and the sheath are always prevalent, and from these sheaths and cups grow the finer tendrils or delicately painted spray of foliage, upon which birds are placed.

Stucco enrichments, such as ornamental string courses and mouldings, were frequently combined with the painted ornament; they consist of small details, such as the water-leaf, the egg and dart, and the anthemion, and are repeated in a regular series.

Herculaneum differed considerably from Pompeii, for the finest works of art and innumerable MSS. have been found, shewing that a higher intellectual life existed than that at Pompeii, where not a single MS. has been found. It is probable that Herculaneum was equal to Athens itself in the wealth of its art treasures.

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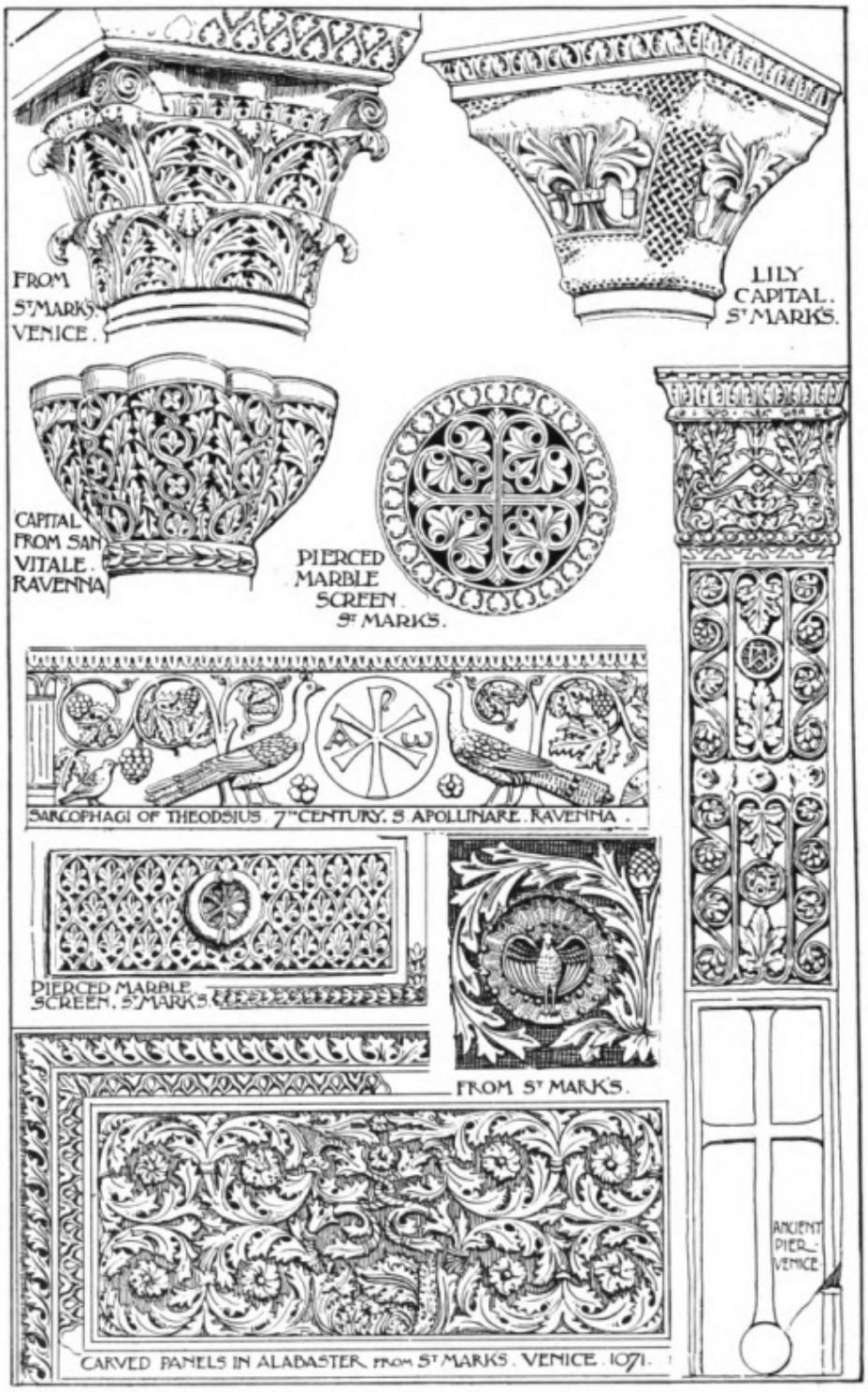

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BYZANTINE ORNAMENT.

The decline of the Roman empire, in the 3rd and 4th centuries A.D., had its inevitable influence upon contemporary art, but perhaps a more potent influence was that of Christianity, which, under the reign of Constantine, received state recognition and support; and when this Emperor removed the seat of government from Rome to Byzantium, the traditional Greek and Roman arts were assimilated with those of Persia and Syria, but moulded and influenced by the new religion, giving that strong vitality, deep significance, and symbolism which is so remarkable a feature of the Byzantine style.

The change of style did not take place immediately, for most of the buildings erected by Constantine were in the traditional Roman style, but the arts were gradually perfected until they culminated in the building of S. Sophia, by Anthemius of Tralles and Isidorus of Miletus, during the reign of Justinian, A.D. 538. This building is remarkable for its splendid dome, supported by semi-domes and pendentives on a square plan (see plate 54), its embellishment with mosaics of glorious colours, and the great inventiveness and symbolism of the detail. The traditional sharp acanthus foliage of the Greeks was united with the emblems of Christianity, such as the circle, the cross, the vine, and the dove: the peacock also is frequently seen. Figure sculpture was rarely used, but groups of figures were used in great profusion in the gold-ground mosaics that covered the upper part of the walls and the vaults and domes of the magnificent Byzantine buildings. The churches of Ravenna, in Italy, have somewhat similar characteristics: S. Vitale, A.D. 535, the basilica churches of S. Apollinare Nuovo, A.D. 493-525, S. Apollinare in Classe, A.D. 535-45, together with the Baptisteries, are rich in mosaics and sculptured capitals of the 6th and 7th centuries. In the cathedrals of Torcello, A.D. 670, and Murano, and the beautiful S. Mark's at Venice, marbles and mosaics were used in great profusion to enhance the architecture. The sketch plans given on plate 53 are typical of Byzantine planning, in which the symbolism of the circle and cross are used as constructive features. This symbolism is a marked feature in Byzantine ornament; interlacing circles and crosses mingle with the acanthus or the vine, and are cut with a peculiar V-shaped section. The circular drill is largely used at the sinking of the leaves, and but little of the background is visible in the sculptured ornament of this period.

Pierced marble screens of interlaced foliage, or the fret in combination with the circle, were frequently used (see plate 53). A large number of pierced parapets in S. Mark's are carved in low relief, with various modifications of the interlacing Guilloche, or circles.

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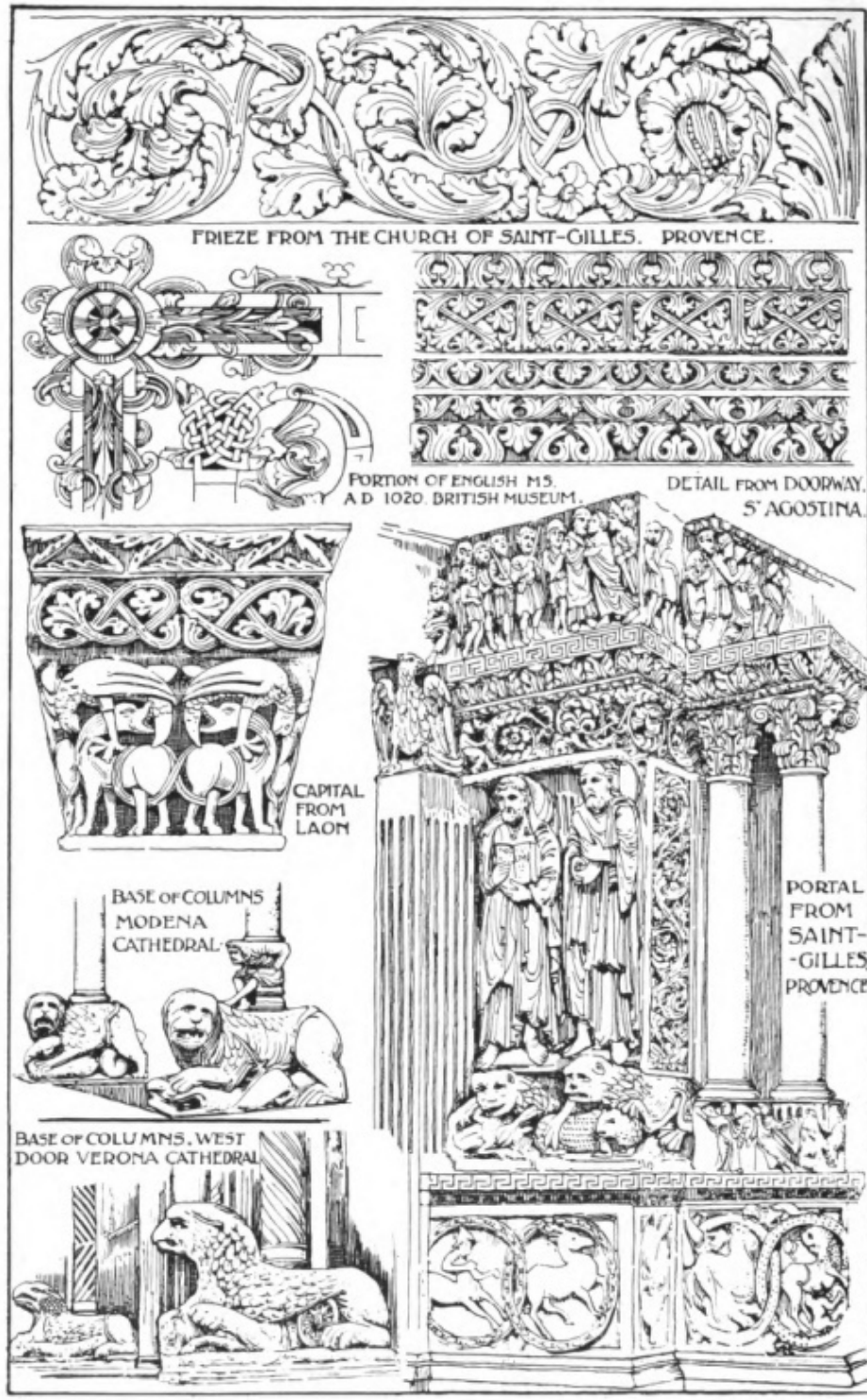

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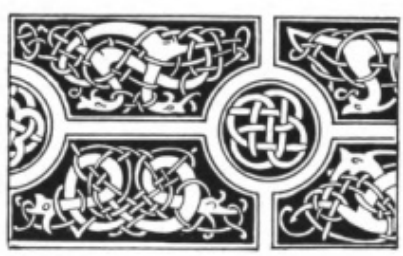
CELTIC ORNAMENT.

No period in the history of art is more remarkable than the Celtic. The carved stone architecture and crosses, the bronzes, enamels, and silversmith's work, the splendid illuminated books and manuscripts with capitals and borders, full of imagery and intricacy of detail, and the clear and accurate writing of the text are all indications of the culture and love of ornament of the early Irish people, showing a remarkable preference for the spiral and interlacing forms. The bronze shield (fig. 6), with its spirals and bosses of enamel enriched with the northern "Fylfot" is a typical example of the 2nd or 3rd century, A.D. Then comes the trumpet pattern or divergent spiral, which, seen in its infancy on the bronze shield, reached a great degree of elaboration in the 8th and 9th centuries, A.D. (figs. 2 to 7), being typical of Celtic work up to the middle of the 11th century when all trace of this spiral is lost. The interlacing bird and animal forms used from the 8th to the 14th centuries are doubtless derived from Byzantine and Lombardic sources. The serpent or dragon, which is such a marked feature from the 7th to the 15th century must have been borrowed from the north, as Ireland had no traditions of snakes or dragons, and it is to Scandinavia, with its legend of Fafni, that we must look for the origin of the dracontine treatment. It is this Zormorpic character that distinguishes the Celtic from all other styles of ornament except Scandinavian. The obverse of the magnificent processional Cross of Cong (A.D. 1123), is divided into 46 panels of decorations, and convoluted snakes occupy 38 of them.



The illustrations given here from the Lismore crosier are typical examples of this Celtic dracontine treatment. The early or Pagan period is noted for its bronze work, cast and wrought, and enriched with Champleve enamels. The fine chalice of Ardagh (page 116) and the Tara Brooch (plate 40) 7th century, are splendid examples of the Christian period dating from St. Patrick, A.D. 440-460. The beautiful Book of Kells, the Book of Armagh, the Book of Durrow, manuscripts of the early part of the 9th century (Trinity College, Dublin), and the Book of Durham, called the Lindisfarne Gospels, A.D. 689-721, written by Eadfrith, and illuminated by Ethelwald, are a tribute to the vitality, assimilation of ideas, and the culture and wonderful craftmanship of the early Irish people. In Irish manuscripts gold is not used, except in the Lindisfarne Gospels, where a minute quantity is used.

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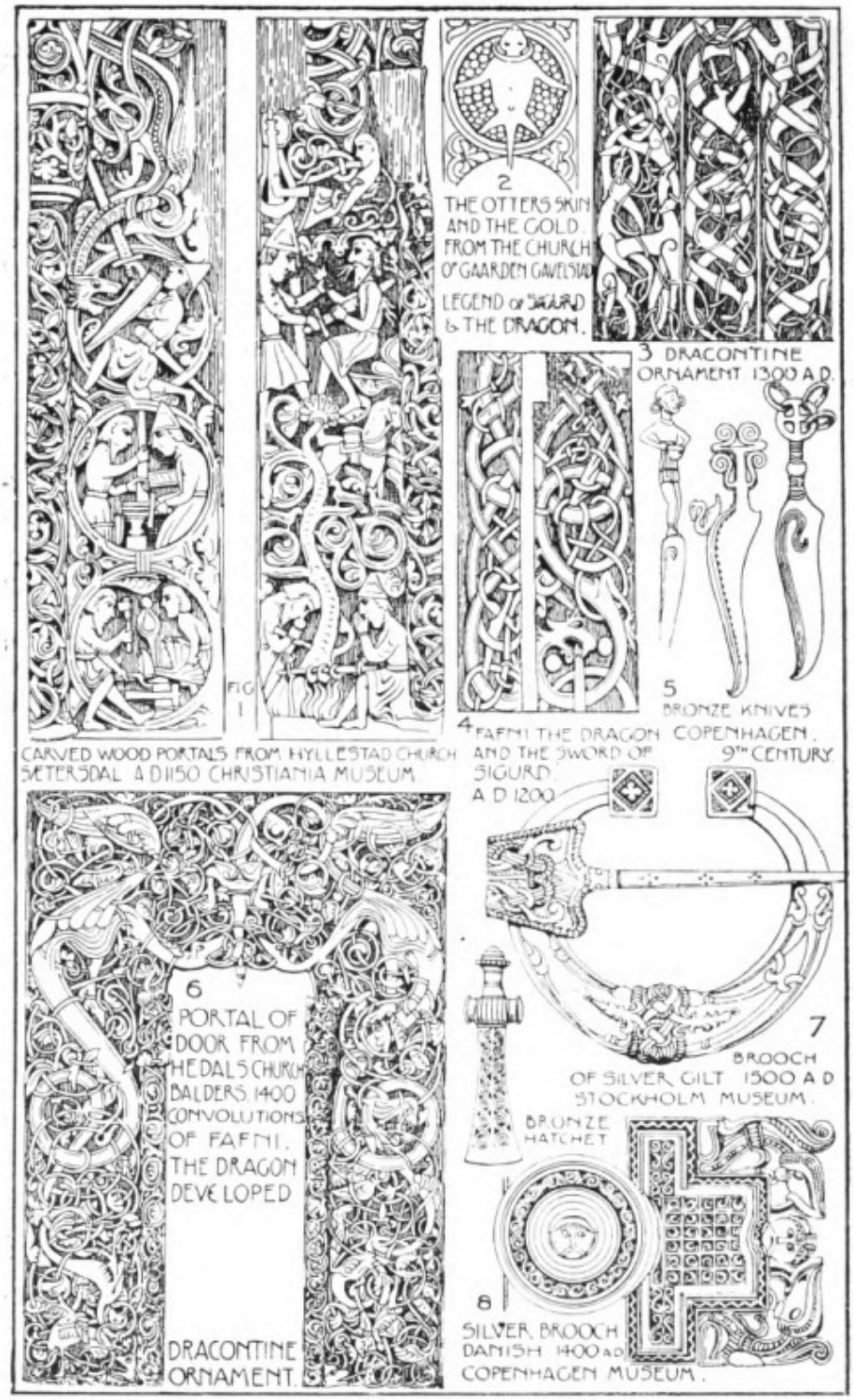
SCANDINAVIAN ORNAMENT. Plate 14.



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NORMAN & GOTHIC ARCHITECTURE.

English Gothic architecture has been broadly divided into periods for the purpose of classifying the styles, the following being the most generally accepted :—

By Sharpe.[1]

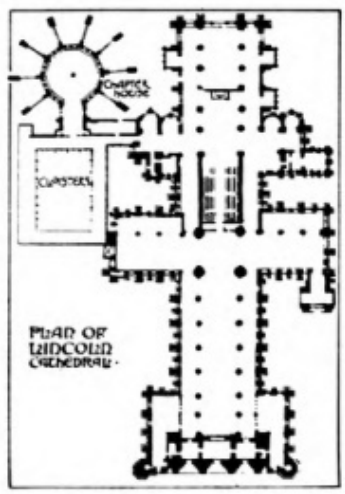
		A.D.
Romanesque	Saxon	1066
	Norman	1066-1145
Gothic	Transitional	1145-1190
	Lancet	1190-1245
	Curvilinear	1245-1360
	Rectilinear	1360-1550

By Rickman.[2]

	A.D.
Norman	1066-1189
Early English	1189-1307
Decorated	1307-1379
Perpendicular	1379-1483
Tudor	1483-1546

Most of our magnificent cathedrals were founded, A.D. 1066-1170, by Norman bishops, some upon the old Saxon foundations, such as Canterbury and York, or near the original Saxon buildings, as at Winchester, or upon new sites, such as Norwich and Peterborough; and were without exception more magnificent erections than those of the anterior period, portions of the older style still existing in many cathedrals, showing the fusion of Roman and Byzantine architecture with the more personal and vigorous art of the Celtic, Saxon, and Scandinavian peoples.

Lincoln is a typical English plan, showing no trace of the semi-circular apsidal arrangement so universal in Norman and French cathedrals. Each vertical division in the nave, the choir, and transept is termed a bay. On plate 15 is an illustration of four typical bays of English cathedrals, showing the development of style from the 12th to the 15th century. The general characteristic of each bay is given separately, but obviously it can only be approximate, as the building of each cathedral was influenced by local considerations, each period necessarily overlapping its predecessor, thus forming a transitional style. For instance, in the choir of Ripon Cathedral the aisle and clearstory have semi-circular Norman windows, and the nave arcading has pointed arches. In the triforium and clearstory arcading, round arches are seen side by side with the pointed arch.



The Piers—sometimes termed columns—of these bays have

[1] "The Seven Periods of Church Architecture," by Edmund Sharpe.
[2] "Gothic Architecture," by Thomas Rickman.

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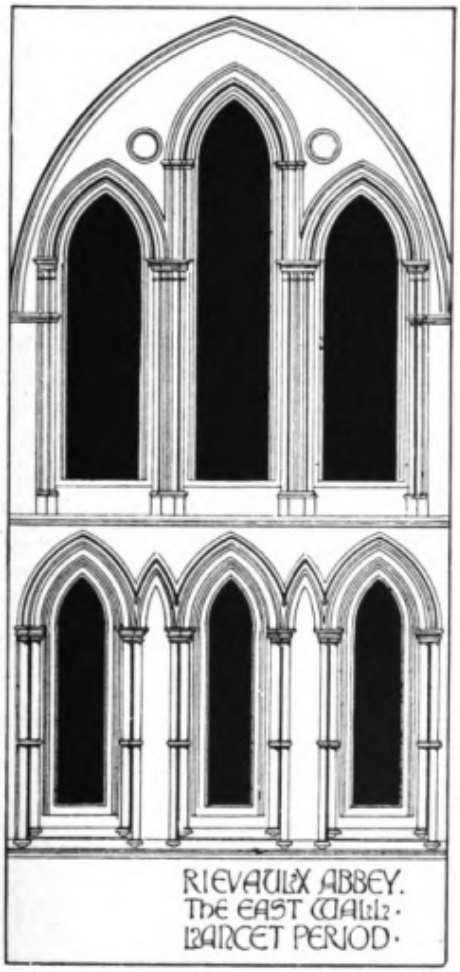
distinctive features which are characteristic of each period of the Gothic development.

Sketch plans are here given showing the changes that took place in the section of the pier from 1066 to 1500. The same general characteristics are observed in the arch mouldings and string courses.

CHARACTERISTICS OF THE NORMAN PERIOD.

NAVE ARCADING.—The universal use of the round arch, cylindrical or rectangular piers, with semi-circular shafts attached to each face. Capitals cubical and cushion-shaped. Arch mouldings enriched with concentric rows of Chevron and Billet ornament.



TRIFORIUM.—In early work, of one arch. In later work, two or four small arches carried on single shafts under one large semi-circular arch.

CLEARSTORY.—One window, with an open arcading in front, of three arches, the centre one larger and often stilted. This arcade forms a narrow gallery in the thickness of the Clearstory wall. The roof of the nave of wood, flat and panelled, roof of the aisles semi-circular quadripartite vaulting. An arcading of semi-circular arches was usually placed upon the wall, under the aisle windows. Early windows are narrow, flush with the external wall, and deeply splayed on the inside. Later windows are recessed externally, with jamb-shafts and capitals supporting an enriched moulded arch. A few semi-circular rose windows still remain, of which a fine example is to be found in Barfrestone Church, Kent.

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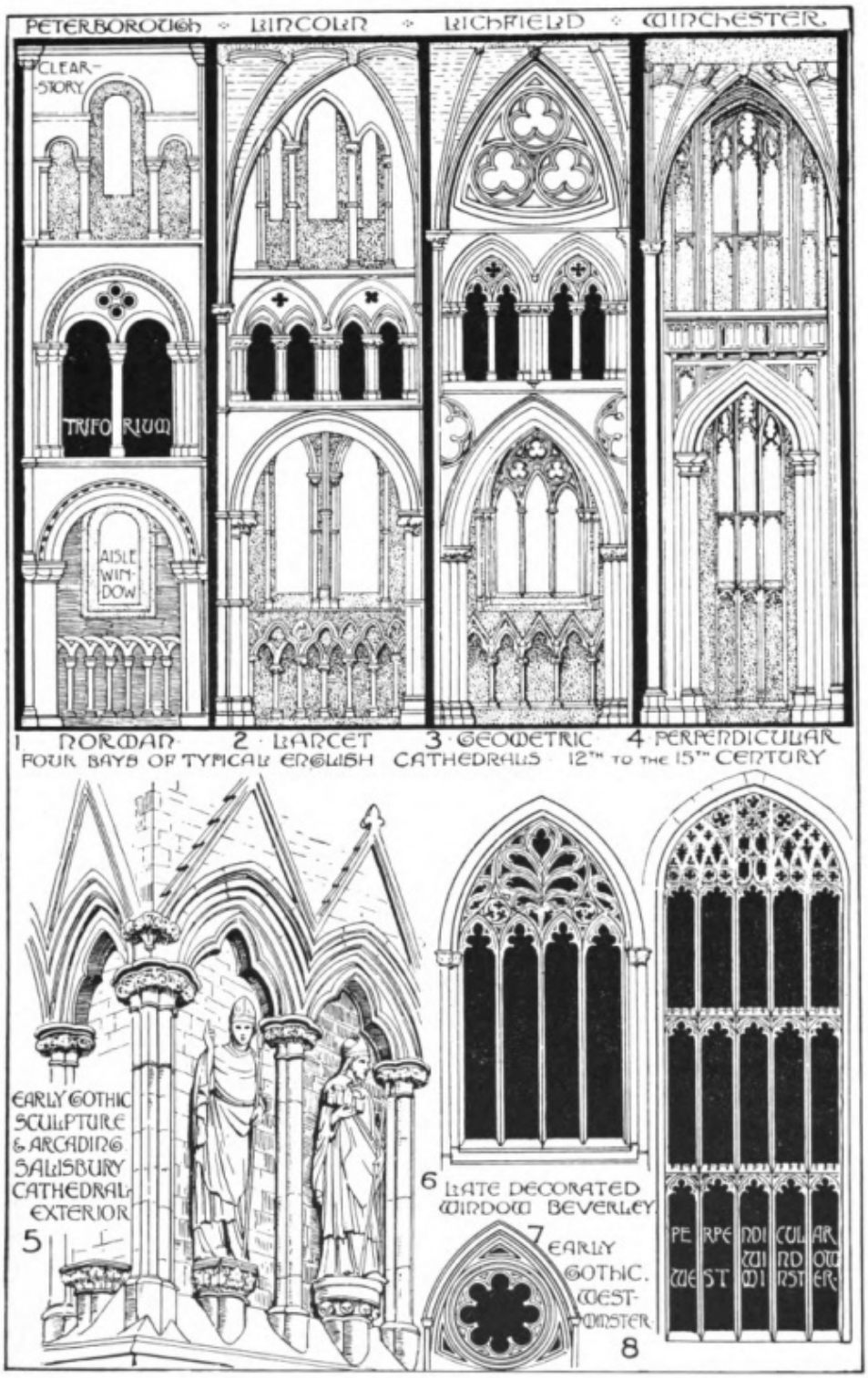
THE TRIFORIUM & CLEARSTORY. Plate 15.



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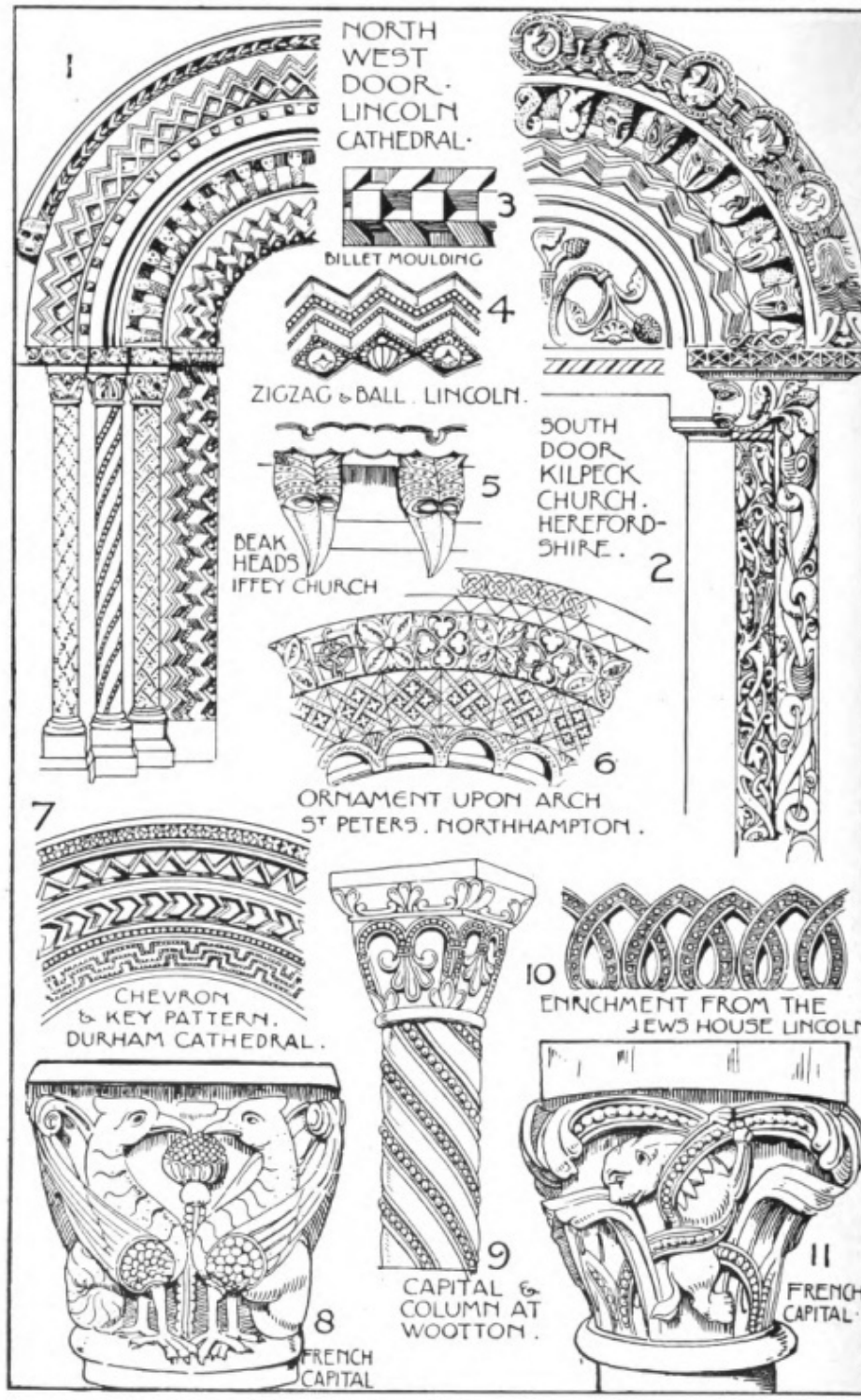

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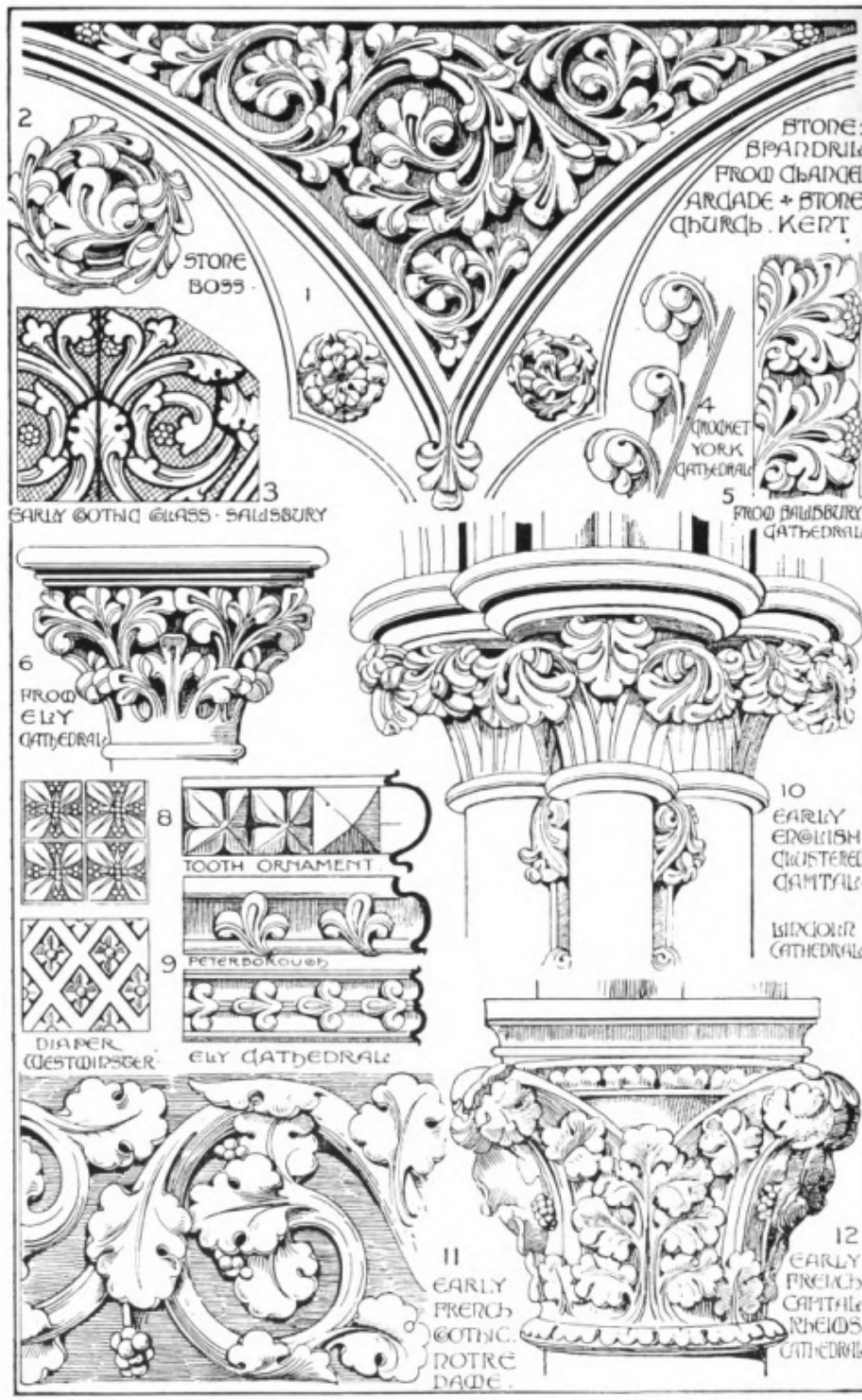

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EARLY GOTHIC.

The NORMAN style was succeeded by the pointed, or GOTHIC style, remarkable for its variety, its beauty of proportion, and the singular grace and vigour of its ornament. Showing no traditions, beyond Sicilian and Arabian influence, it grew rapidly, and reached a high degree of perfection in France and England. The massive and barbaric character of the Norman style gave place to the light clustered shafts and well-proportioned mouldings of the early English Gothic, with its capitals characterised by a circular abacus, and the typical three-lobed foliage growing upwards from the necking of the shafts, thence spreading out in beautiful curves and spirals under the abacus. This tendency to the spiral line is peculiar to the early Gothic, and differentiates it from the Decorated and Perpendicular Period. The diagrams of the three crockets here given show the distinctive character of English Gothic ornament.

Early Gothic, three-lobed leaves arranged in spiral lines. Decorated Gothic, with natural types of foliage, such as the oak and maple, with a flowing indulating line. Perpendicular Gothic, showing the vine and leaves as elements, and arranged in a square and angular manner. The same features and characteristics are observed in the borders here given. The beautiful carved spandril from the Chancel Arcade, Stone Church, Kent (fig. 1), is one of the most beautiful examples of English ornament, remarkable for the vigour and flexibility of curve, its recurring forms of ornamentation, and admirable spacing, typical of much of our early English foliage from about 1170-1280.

The type of foliage in early English stained glass is somewhat similar to contemporary carved work, but showing more of the profile of the leaf, and it has a geometric or radiating arrangement in addition to the spiral forms of foliage (plate 39), and the admirable spacing of the ornament shows the skill in design that the mediæval craftsman possessed.

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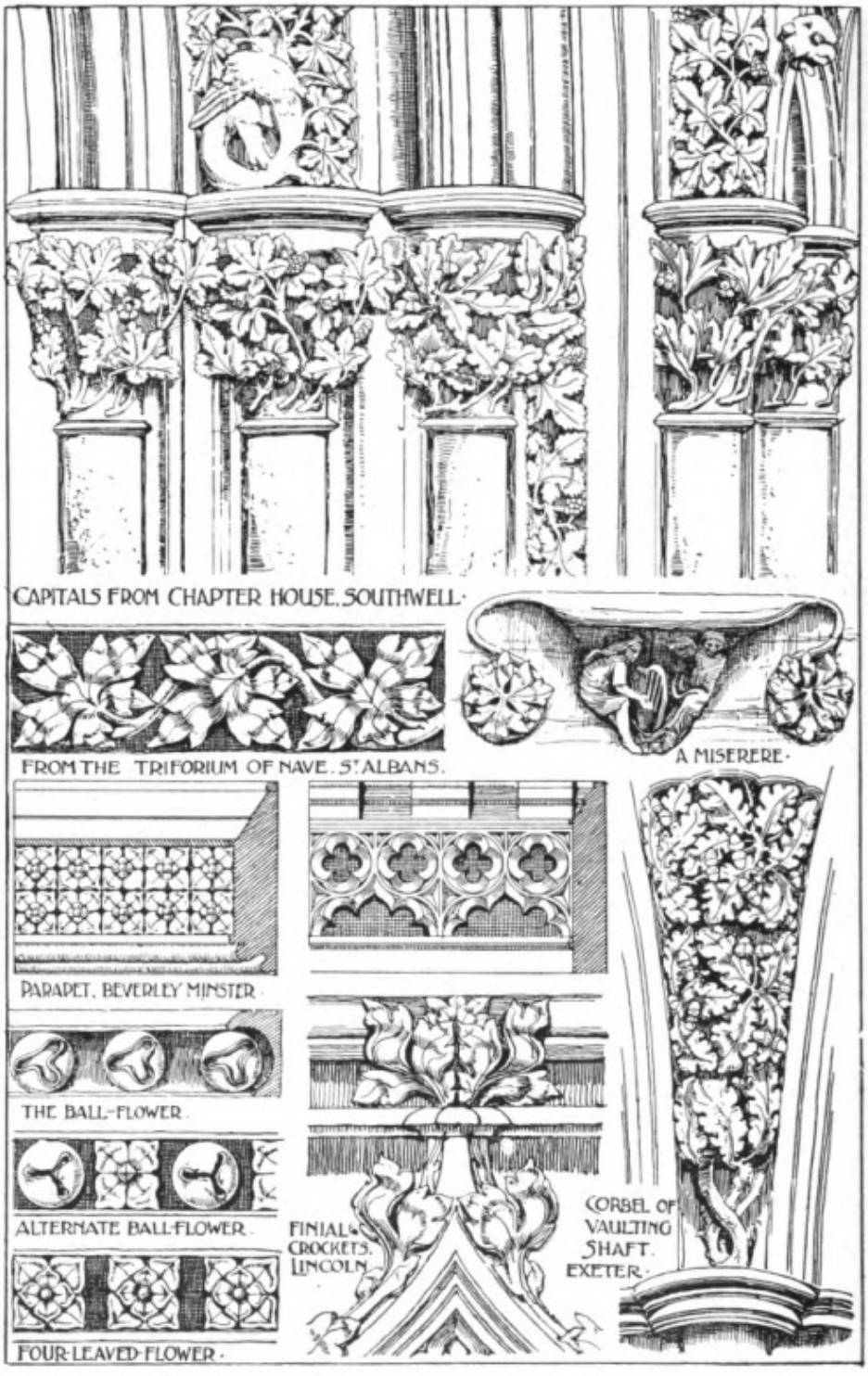
DECORATED GOTHIC DETAILS. Plate 18.



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DECORATED OR GEOMETRIC GOTHIC.

Decorated Gothic is remarkable for its geometric tracery, its natural types of foliage, and the undulating character of line and form, in its ornamental details. The foliage of the oak, the vine, the maple, the rose, and the ivy were introduced in much luxuriance and profusion, being carved with great delicacy and accuracy. Lacking the dignity and architectonic qualities of the early Gothic foliage, it surpassed it in brilliancy and inventiveness of detail. The capitals, enriched with adaptations from nature, carved with admirable precision, were simply attached round the bell, giving variety and charm of modelling, but lacking that unity which was so characteristic of early work.

The illustrations from Southwell are characteristic examples of the richly-carved clustered capitals of this period. The arch mouldings were also enriched with foliage of a similar type, and at the springing of the vaulting shaft of the nave, beautiful carved corbels, such as those at Exeter, were used, while the walls, screens, and parapets, were diapered with low relief carving.

Crockets and finials, which were introduced in the early Gothic period, were now treated with exceeding richness and used in the greatest profusion. A characteristic example is given here from Exeter Cathedral.

The Queen Eleanor crosses (erected 1291-4), are perhaps the richest examples of the decorated period, showing the exuberance of modelling and the versatility and skill of the English craftsman in the finest period of Naturalistic foliage (1280-1315).

The "Ball Flower" so characteristic of the decorated period, replaced the equally characteristic "Tooth Ornament" of the preceding style, and was much used in some buildings, even to excess—as in the south aisle of Gloucester Cathedral. It is found in the hollows round doorways, windows, arches, and canopies, and it frequently alternates with the "Four-petalled Flower."

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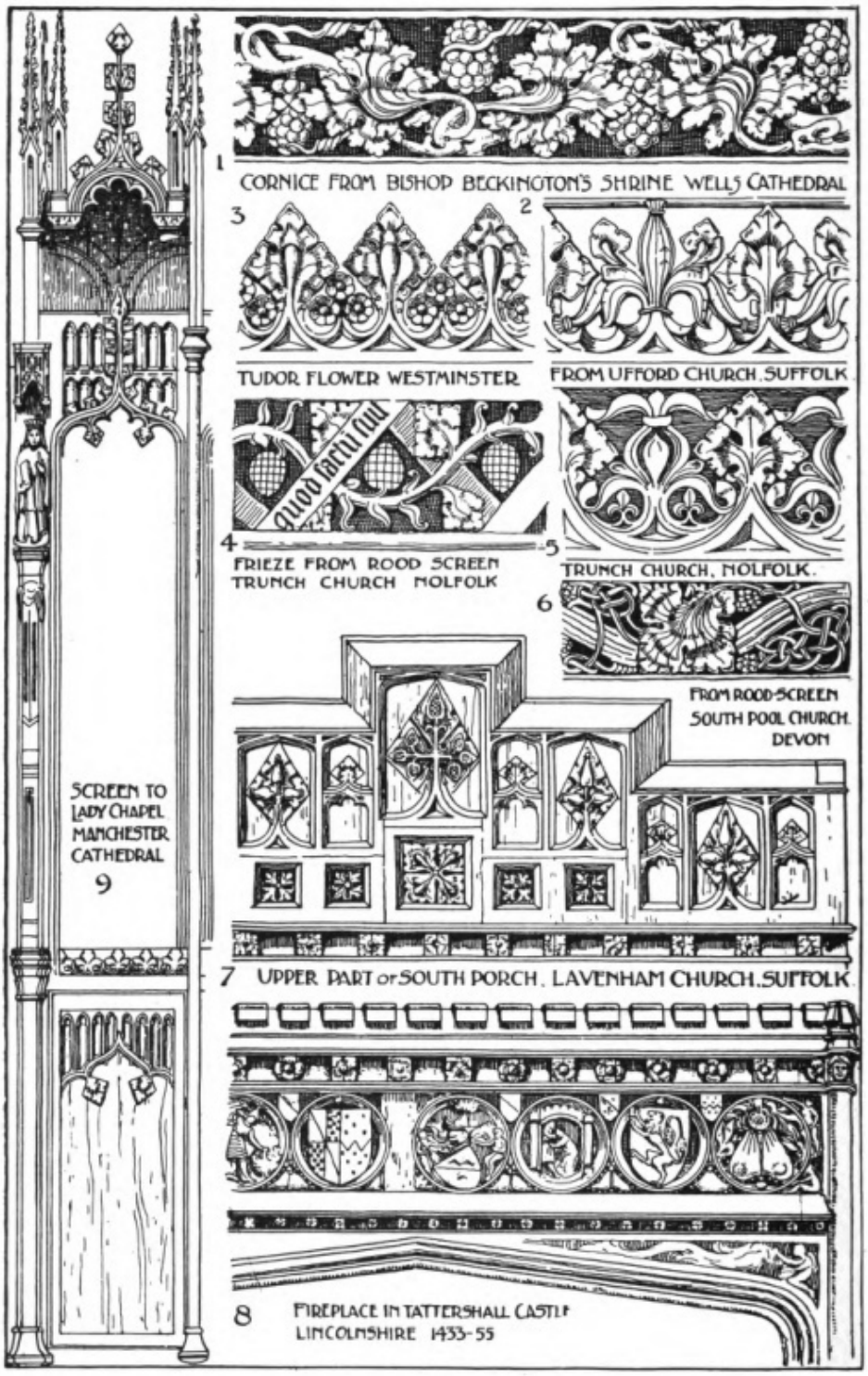

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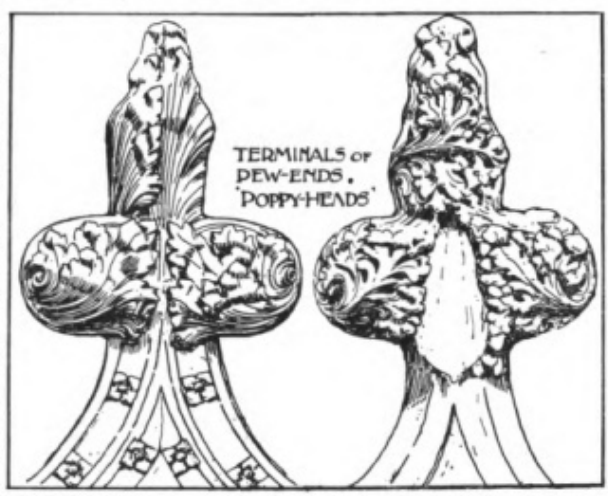
PERPENDICULAR GOTHIC.

Late or rectilinear Gothic is characterized by a rigidity of line in construction and ornament. The one exception is the beautiful fan-vaulting, such as that in the cloisters at Gloucester Cathedral, and in Henry VIII. Chapel at Westminster, which are not approached by any Continental example for beauty of craftsmanship or the scientific precision of their masonry. The many splendid towers, having elaborate panelled tracery, and capped with pinnacles, open parapets, and battlements, such as those at Wrexham and S. Mary's, Taunton, are also characteristic of this period. The windows, with vertical mullions running to the window-head, which is frequently a four-centred arch, have one or more transoms, enriched with battlements or Tudor flowers, to divide the lofty windows horizontally (plate 15). The many choir screens and stalls, with their canopies, have panels, friezes, crestings, and finials, and are frequently carved with an angular treatment of the vine and its tendrils, more or less conventionalized (figs. 1-7), the Tudor flower being perhaps the most prevalent. The freedom and flexibility of the modelling and carving of the middle period of Gothic, was replaced by a stiff symmetrical arrangement of foliage, and the painted diapers succeeded the carved ones of the earlier period. The terminals of the ends of pews were frequently enriched with foliated "Poppy-heads," often of great beauty.



Heraldic forms, such as shields, with their supporters, together with badges and crests, were largely associated with the ornament in the richer buildings of this period, such as King's College Chapel at Cambridge, and Henry VIII.'s Chapel at Westminster.

The piers of the nave are usually rectangular or lozenge in section, consisting of a few rounds and double ogee moulds, which are frequently carried round the arch without the intervening capital; or an octagonal capital, with the typical square foliated ornament, is carried by some of the round members of the pier; or a series of moulded capitals, without enrichment, is employed. The only enrichment in the hollows of the strings and arch-mouldings is a four-petalled flower, alternate square and circular (figs. 7 and 8).

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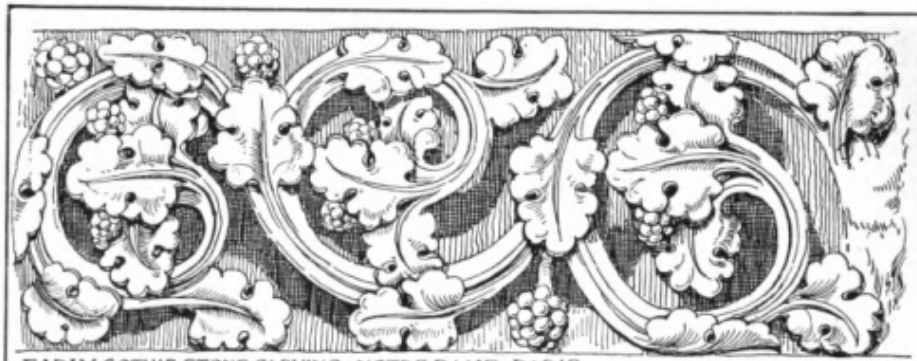
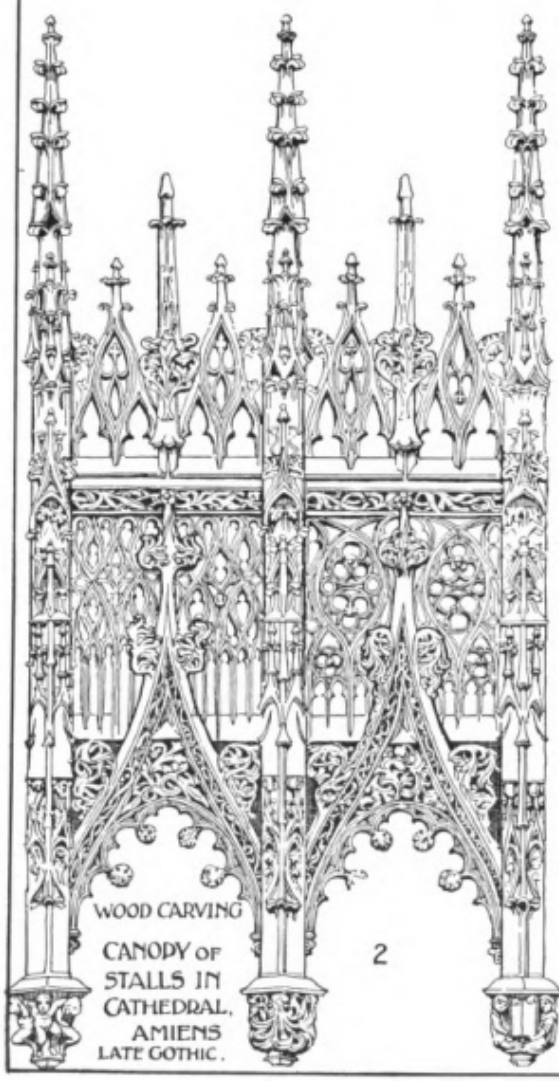
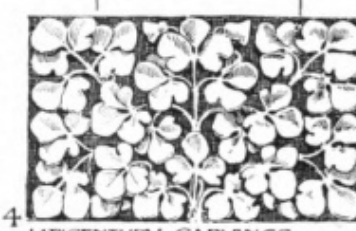


EARLY GOTHIC STONE CARVING. NOTRE DAME. PARIS.
1



WOOD CARVING
CANOPY OF STALLS IN CATHEDRAL, AMIENS
LATE GOTHIC.
2

3
13TH CENTURY CAPITAL



4
14TH CENTURY CARVINGS.

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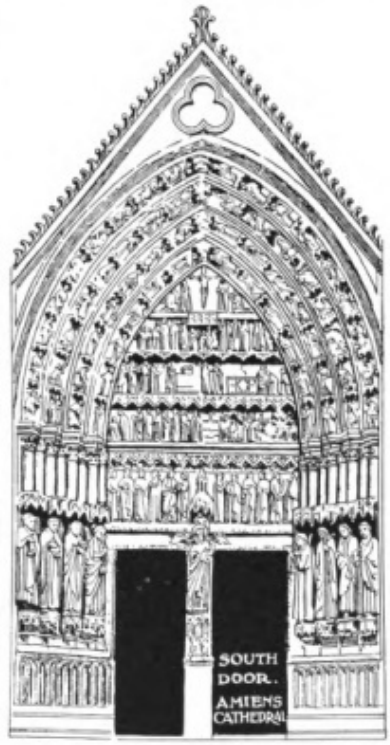
FRENCH GOTHIC.

French cathedrals show a marked contrast in scale and enrichment to those of England, being wider, shorter, and higher in proportion, and the sculpture bolder, more profuse, and larger in scale than in contemporary English cathedrals. The principal doorways are also on a large scale, and are usually enriched with numerous statues, placed under canopies, which cover the whole of the recessed arch; whilst the central pier of the door, carrying the figure of the Madonna or a bishop, supports the tympanum (the space within the arch), which is also covered with horizontal bands of sculpture. The figure sculpture of the late 13th and early 14th centuries has considerable skill of composition, and well-arranged draperies; broad and simple in mass, and vigorous in execution.



The gables of the doors are frequently enriched with crockets and finials, or with beautiful open tracery —as in the west doors of Rouen Cathedral. The Cathedral of Amiens has a delightful series of sculptured reliefs of Biblical subjects, called the Bible of Amiens, enclosed within quatre-foil panels, which extends across the lower part of the façade.

The early relief ornament of the 13th century is remarkable for its vigorous carving and boldness of relief. It differs from contemporary English work in having a rounder form of leaf, divided into lobes, with strongly-marked radiating mid-ribs (compare fig. 1, plate 20, with fig. 1, plate 17). The capitals, with the foliage clinging closely to the bell (fig. 3), have not the spiral tendency that characterized English ornament of the same period. The abacus is generally square (page 153), and the clustered pillars and the bell-shaped moulded capitals, without foliage, which are typical of English work, are almost unknown in France. In the 14th century, the foliage, like contemporary carving in England, is naturalistic (figs. 4 and 5, plate 20, and page 157), with a ribbed tool-mark following the direction of the leaf.

Among the many splendid examples of the 15th century, or flamboyant period, are the stalls of Amiens (fig. 2), where flowing tracery is intermingled with rich cusped-arches, open gables, and crocketed pinnacles.

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A PORTION OF THE ARCHITRAVE FROM THE BRONZE GATES OF THE BAPTISTERY FLORENCE.
BY LORENZO GHIBERTI. 1425-52. QUATTROCENTO PERIOD.

8 INCHES

2

CORBEL DUCALE PALACE, URBINO

3

MARBLE TABERNACLE OR SHRINE BY ANDREA FERRUCCI 1528.
FROM THE CHURCH OF SAN GIROLAMO AT FIESOLE

4

DRAWING FOR A FRIEZE BY GIOLAMO CURTI 16th Century IN THE UFFIZI GALLERY FLORENCE

5

PAGE FROM THE BOOK OF HOURS OF BONA SFORZA, DUCHESS OF MILAN 1477-90 BRITISH MUSEUM.

4½ INCHES

6

10 INCHES

BORDER FROM THE GRENVILLE SFORZIADA. 1490. BRITISH MUSEUM

7

ORNAMENT FROM THE BERNARDO MONUMENT IN THE CHURCH OF SANTA MARIA DE' FRARI, VENICE. 1540.

8

ENAMELLED TERRA-COTTA OR DELLA ROBBIA WARE BY LUCA DELLA ROBBIA, 1450 IN THE CHURCH OF S ONOFRIO ROME.

9

PAINTED ORNAMENT FROM THE DUCAL PALACE MANTUA BY GIOVANNI DA UDINE AND JULIO ROMANO 1530

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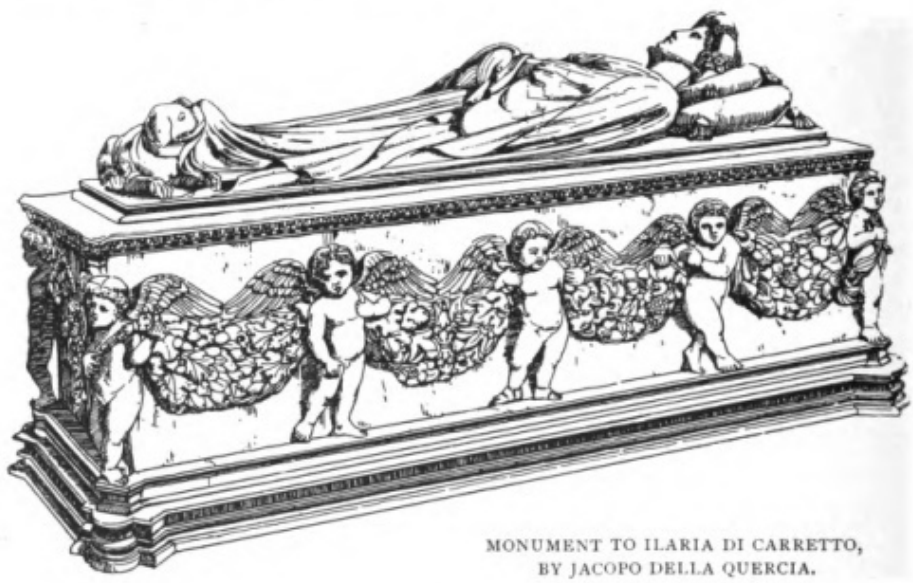
The Cathedral at Florence, with its panelling, pointed arches, and rich tracery, was by Arnolfo di Cambio (died 1300), and Francesco Talenti, who completed the nave, choir, and apses in 1321. Arnolfo and Talenti were also the architects for the Church of Santo Croce (1294-1442), and the Palazzo Vecchio, Florence, (1290), where, in 1434, Michelozzo added the beautiful cortile, and C. Salviati and De Faenza, pupils of Vasari, enriched the circular and octagonal pillars with beautiful stucco ornamentation (fig. 2. plate 22), in 1565.

The beautiful campanile by Giotto (1336), Andrea Pisano, and Francesco Talenti, who introduced the upper Gothic windows, is a noble accessory to the Cathedral of Florence. A charming illustration of one of these windows is given in the "Seven Lamps of Architecture," by John Ruskin.

In 1283 Arnolfo introduced some Prato marble pilasters at the angles of "San Giovanni," the octagonal Florentine Baptistery, an ancient building where many of the great citizens of the Republic received their baptism, and it was here that Dante was baptised in May, 1265.

The last of the tre-cento masters was Andrea Pisano (1270-1345), who made the first bronze gate of "San Giovanni," or the Baptistery of Florence. This gate has 28 quatre-foil panels in relief, and bears the inscription "ANDREAS UGOLINI NINI ME FECIT, A.D. MCCCXXX."

The true Renascence or quattro-cento period is remarkable for the vitality of the arts, and the naturalism and versatility of its craftsmen. Brunelleschi (1377-1446), is the first architect (page 64), and Lorenzo Ghiberti (1381-1465) the ornamentist and sculptor, whose chief works are the two bronze gates for the Florentine Baptistery. The first gate (1403-24), has 28 quatre-foil panels similar to the



MONUMENT TO ILARIA DI CARRETTO, BY JACOPO DELLA QUERCIA.

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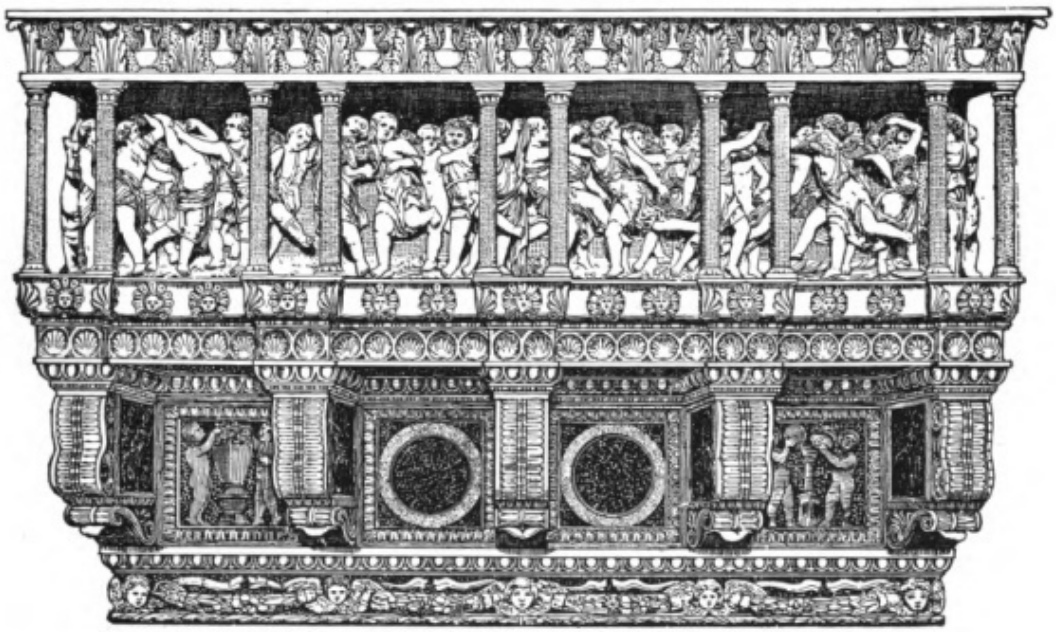
one by Andrea Pisano, and the last gate (1425-59), has 10 rectangular panels with incidents from the Old Testament in high relief (plate 43).

The styles or framework of these gates, have a series of single figures in niches with circular medallions between them.

The bronze architrave round each of the Ghiberti gates and the earlier gate by Andrea Pisano, are rich examples of quattro-cento design. The details are natural fruits, flowers and foliage, banded together with ribbons, with the introduction of birds, squirrels, etc. The egg-plant and pomegranate portion (fig. 1) is a familiar example.

Other masters of this period were Jacopo della Quercia (1371-1438), who executed the beautiful monument shown on the previous page, to Ilaria di Carretto, in the Cathedral at Lucca. The recumbent figure of Ilaria is sculptured in white marble with perfect simplicity and beauty; another famous work of Jacopo, was the fountain at Siena.



THE "CANTORIA," OR SINGING GALLERY, BY DONATELLO.

Luca della Robbia (1400-82), executed a beautiful organ gallery in marble for the Cathedral at Florence (1431-40), now in the museum of the Opera del Duomo, Florence, with admirable singing and dancing figures, in relief. Donatello (1386-1466), was remarkable for the singular grace and sincerity of his portraiture, especially of children. The dancing figures in relief on the panels of the singing gallery of the Cathedral of Florence are perfect examples of his art.

This frieze of children is a delightful example of one phase of Donatello's craftsmanship, showing the vitality and exuberance of his conception. The peculiar relief, called "*stacciato*," of the figures,

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S. GEORGE, BY DONATELLO.

which shows a series of almost flat surfaces, upon which is carved exquisitely delicate reliefs, contrasted with an abrupt contour giving strongly-marked shadows, is typical of much of Donatello's relief-work. An illustration is also given of the famous S. George, from the Gothic church or oratory of Or San Michele, Florence. This church has niches and canopies on the external walls, each with its statue by great quattro-cento masters. Three statues in marble of S. Peter (1412), S. Mark (1412), and S. George (1415), are by Donatello; three in marble, S. Philip (1408), Four Crowned Martyrs, and S. Eligius (1415), by Nanni di Banco; S. John (1415) and S. Matthew (1422), in bronze, by Ghiberti; Christ and S. Thomas (1483), bronze, by Verrochio; and S. Luke (1601), in bronze, by Giovanni da Bologne.

The Monastery of San Marco is one of the remarkable buildings in Florence. Built in 1437-50 by Michelozzo for Cosimo de Medici, it was enriched with the most beautiful frescoes by Fra Angelico (1387-1455).

Savonarola, the great preacher and reformer, was Prior of San Marco from 1489-98.

The art of the medallist, which had declined since the Roman period, now took its position among the arts of the quattro-cento period, under Vittore Pisano, called Pisanello (1380-1451). The vigour of his modelling

RELIEFS FROM THE SINGING GALLERY, BY DONATELLO, IN THE MUSEUM OF THE OPERA DEL DUOMO, FLORENCE.

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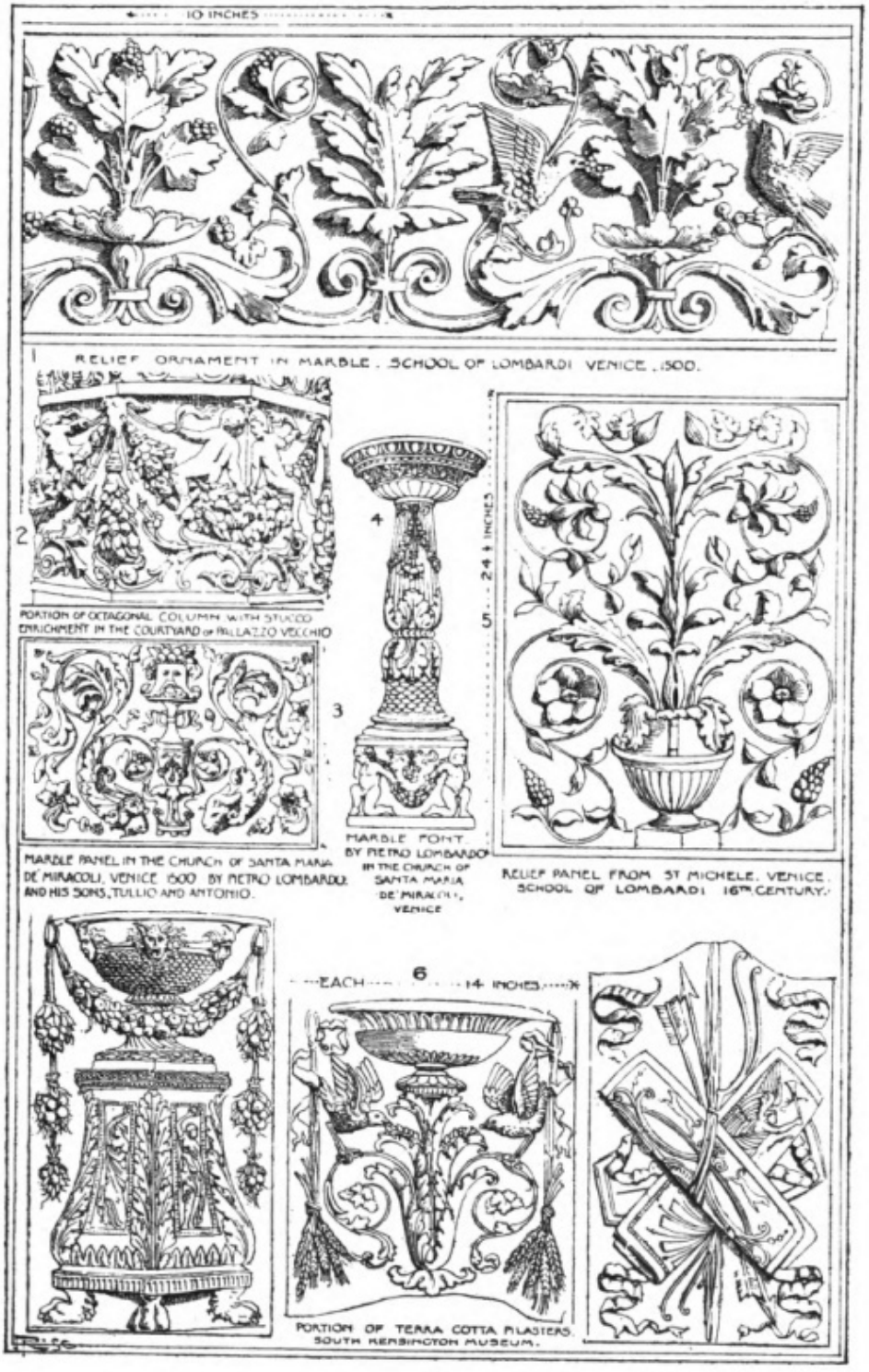

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and the individuality of his medals of the contemporary princes of Italy, are exceedingly fine. Among other remarkable medallists, were Sperandio of Verona (1423-90), Caradossa of Milan (1480-1545), Vincentine of Vicenza (1468-1546), Benvenuto Cellini of Florence (1500-71), Lione Leoni (1498-1560), Pompeoni Leoni (1530-1610), and Pastorino of Siena (1510-91).

Other names of this period were Desiderio da Settignano (1428-64), his masterpiece being the tomb of Carlo Marzuppini, in the Church of Santa Croce, Florence; Mino da Fiesole (1430-84, see frontispiece); Andrea Verrocchio (1435-88), the author of the fine equestrian statue of Bartolommeo Colleone at Venice (see Bronzes); Matteo Civitali (1435-1501); and the Rossellini, a remarkable family of five brothers, of which the most famous was Antonio Rossellini (1427-79), who executed a charming tomb to Cardinal Jacopo di Portogallo, in the Church of the Nunziata, Florence.

The cinque-cento period was the culmination of the Renascence, when architecture, sculpture, painting, and the decorative arts, were under the magnificent patronage of the popes and princes of Italy. Palaces, churches, and public buildings were completed (see Renascence Architecture, pages 64-67), and embellished with beautiful sculptures and decorations; hung with the most sumptuous fabrics of the Venetian, Florentine, and Genoese looms; decorated with altar paintings and mural decorations by the most renowned of painters; and enriched with the magnificent productions of the gold and silversmiths' art, and the loveliest of intarsia, or inlaid woodwork.

The Sistine chapel, built for Sixtus IV., in 1473, by Baccio Pintelli, is decorated with fresco paintings on the walls by the great cinque-cento masters, Luca Signorelli (1441-1524), Sandro Botticelli (1447-1515), Cosimo Rosselli (1439-1506), Perugino, the master of Raphael (1446-1524), Domenico Ghirlandajo (1449-98), and Michel Angelo (1475-1564), who painted "The Last Judgment," on the end wall, and the famous ceiling, with incidents from the Old Testament, and with the prophets Joel, Ezekiel, Jeremiah, Jonah, Daniel, Isaiah, and Zechariah, and the sibyls Erithræa, Perscia, Lybica, Cumæa, and Delphica. These are splendid examples of decorative painting, where unity and dignity of conception, powerful draughtsmanship, and marvellous execution are shown in a remarkable degree.

The New Sacristy of San Lorenzo, Florence, designed and executed by Michel Angelo, having the magnificent tombs of Lorenzo and

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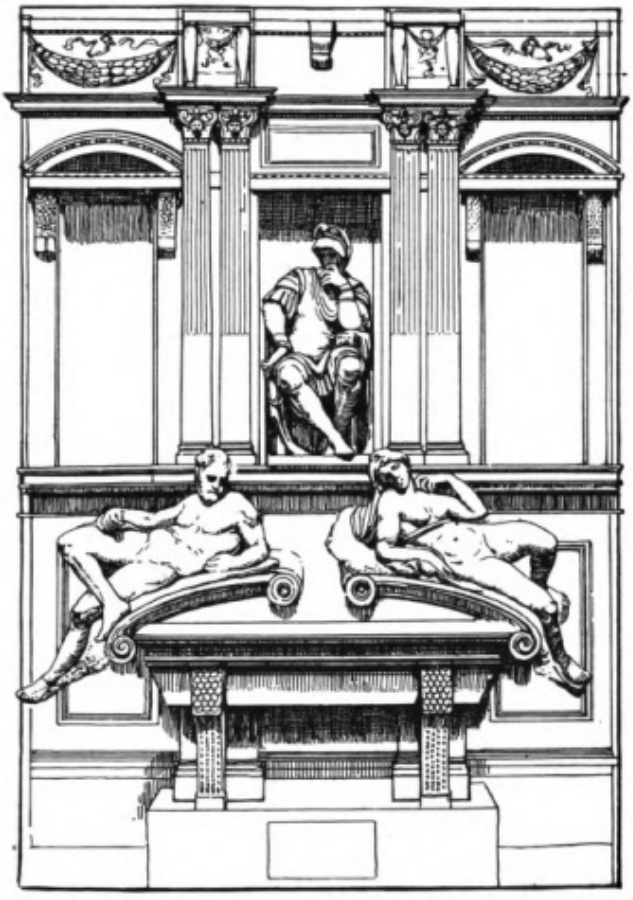

TOMB OF LORENZO DE MEDICI.

Guiliano de Medici, with the reclining figures of Dawn and Twilight, Day and Night, show his remarkable versatility, power, and conception of art.

Contemporary with Michel Angelo was Raphael (1483-1520), who displayed the highest capacity for grace and refinement in painting. His chief decorative works are in the Stanze of the Vatican, a series of four rooms. His first Mural painting here was the "Disputa" (1508), in the Camera della Segnatura, followed by the "Poetry, Philosophy, or School of Athens" and "Jurisprudence," the ceiling being painted with figures and arabesques by Sodoma (Bazzi). The Stanza of Heliodorus (1514) has the "Expulsion of Heliodorus from the Temple," "Miracle of Bolsena," "Leo I. and Attila," and the "Deliverance of S. Peter." In the Stanza Incendio del Borgo (1517), are the "Incendio del Borgo Vecchio," the "Justification of Leo III., before Charlemagne," the "Coronation of Charlemagne by Leo III.," and the "Victory of Leo IV. over the Saracens." Perino del Vaga (1500-47) and Giovanni da Udine (1494-1564) assisted Raphael in the last two paintings.

The Mural paintings for the Sala of Constantine, were designed and commenced by Raphael, but were carried out by his pupils, Giulio Romano (1492-1546), Francesco Penni (1488-1528), and Raffaelle del Colle. The Loggie of the Vatican, by Bramante, was also decorated by Raphael and his pupils. The then-recent discoveries of the baths of Titus and house of Livia, with their Roman Mural painting, influenced in a remarkable degree the decorative painting of the cinque-cento period. These arabesques —or as they were termed *grotteschi*, being found in the grottos of

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Roman gardens—were utilised by Raphael in the decoration of the pilasters, piers, and walls of the Loggie. The designs were painted with a fine range of colour upon white ground, and enclosed within borders of modelled stucco ornaments. In the panels upon the ceiling, Raphael painted a series of fifty-two incidents of the Bible. These are spoken of as "Raphael's Bible." Raphael was assisted in this work by many contemporary artists and pupils; Giovanni da Udine, Giulio Romano, Francesco Penni, Perino del Vaga, and Primaticcio (1490-1580,) who completed the work after Raphael's death. These artists carried the traditions and methods to other parts of Italy. Giulio Romano executed some fine Mural paintings at the Villa Madama, Rome; and for Federigo Gonzaga, Duke of Mantua, he enriched with beautiful paintings and arabesques the Palazzo Ducale, and the Palazzo del Te. These arabesques were upon richly-coloured or parti-coloured grounds (see plates 86-9, "Grammar of Ornament," by Owen Jones).

ARABESQUE DECORATION· VATICAN· ROME.

Perino del Vaga carried the art to Genoa, where at the Palazzo Andrea Doria he executed many admirable examples of coloured arabesques (see plates 43-9, "Palast-Architakur, Genua").

These painted arabesques show a great inventiveness and skilful combination of parts, but they are not to be compared with the refined and beautiful modelling, and harmonious composition of the contemporary carved reliefs by Andrea Sansovino (1460-1528), Jacopo Sansovino (1486-1570), Agostino Busti, Pietro Lombardo (1500), and his sons, Tullio and Antonio. These delicate reliefs have the traditional Roman acanthus, but treated with a refined feeling for modelling, and beauty and symmetry of line and mass.

In many examples, vases, masks, shields, and similar accessories are found in profusion (plate 19). The composition of the cinquecento ornament is usually symmetrical, the details being varied and interesting in the best examples; and whilst lacking the vigour and

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symbolism of the Lombardic and Byzantine styles, it excelled them in its absolute adaptation to architectural conditions, with perfection of design and craftsmanship.

Magnificent examples of decoration by Pinturicchio are in the Sala Piccolomini, Siena, and by Perugino in the Sala del Cambio, Perugia, where some of the earliest painted arabesques are upon a dark ground.

Andrea Mantegna (1431-1517) executed nine paintings or cartoons in tempera upon linen, representing the triumphs of Julius Cæsar, which are a portion of a frieze 9 ft. high and 80 ft. long, painted for Lodovico Gonzaga's Palace of S. Sebastian, at Mantua. They were purchased by Charles I., and are now at Hampton Court. An illustration of this frieze, from an engraving upon copper in the British Museum, is given here. It was also engraved on wood by Andrea Andreani in 1599.

To Mantegna is also ascribed the illustrations to the "Hypnerotomachia, or Dream of Poliphilus," printed in 1499, at Venice, by Aldus Manutius.

Good reproductions of many of these early illustrated books are given in the "Italian Book Illustrations," by A. W. Pollard, No. 12 of the Portfolio, December 1894; and in "The Decorative Illustration of Books," by Walter Crane.

The study of classical architecture was stimulated by the publication at Rome, in 1486, of the treatise by Vitruvius, an architect of the time of Augustus; an edition was also published at Florence in 1496, and at Venice in 1511. In 1570, Fra Giocondo, at Venice, published "The Five Books of Architecture," by Andrea Palladio (1518-80). Another treatise upon architecture, by Serlio (1500-52), was also published at Venice in 1537 and 1540.

Beautiful types of the Renascence decorative art were the Venetian well-heads, situated as they were in most of the public squares of Venice, and in many of the court-yards of her princely palaces. Designed with details of the most varied and beautiful character by such artists as Andrea Sansovino, Pietro Lombardo, and his sons Tullio and Antonio, the Venetian well-head became a type of beauty, diversified in its treatment, but never losing its characteristics or its usefulness. Venetian well-heads display a great variety of form and decoration, and are a tribute to the vivacity and artistic feeling of the Venetian Republic.

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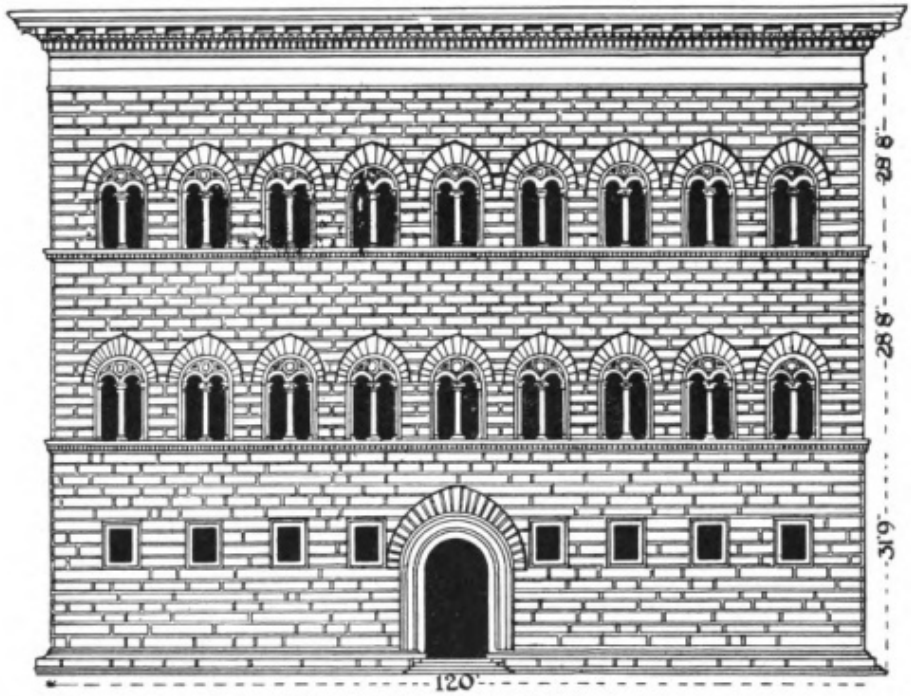

THE STROZZI PALACE, FLORENCE.

The Renascence in Italy was distinguished by the many magnificent ecclesiastical and secular buildings erected during the 15th and 16th centuries in the chief cities in Italy. Florence was the first to show activity, and with Brunelleschi (1377-1446), the history of Renascence architecture commences. The great dome of the Cathedral (1420-34), the Pazzi Chapel (with a fine frieze of cherubs' heads by Donatello and Settigiano) at S. Croce (1420), and the Church of S. Lorenzo (1425), were his first works, and were followed by S. Spirito (1433) and the Pitti Palace.

The severe dignity of the bold rusticated stone work, which was usually varied in each story, the circular-headed windows, and cornices of great depth and projection, became the type of the early palaces of Florence and Siena.

The first Renascence palace was the Riccardi, built for Cosimo de Medici, in 1430, by Michelozzi: and it was followed by the Pitti (1435) and the Quaratesi (1442), by Brunelleschi; the Rucellai (1451), by Leon Battista Alberti (1404-72), where pilasters with their entablature were used for the first time in a Renascence façade; the Strozzi (1489), by M. da Majano and Cronaca; the Gondi (1490), by G. da Sangallo; the Guadagni (1490), with *sgraffito* decorations in grey and white plaster; and the Nicolini, by Bramante (1444-1514); the Pandolfini (1520), by Raphael; and the Bartolini (1520), by Baccio d'Agnolo. The plan of these palaces was usually a rectangle, having an internal cortile, with open arcades on the ground floor, the next floor having windows, while the upper story was frequently open.

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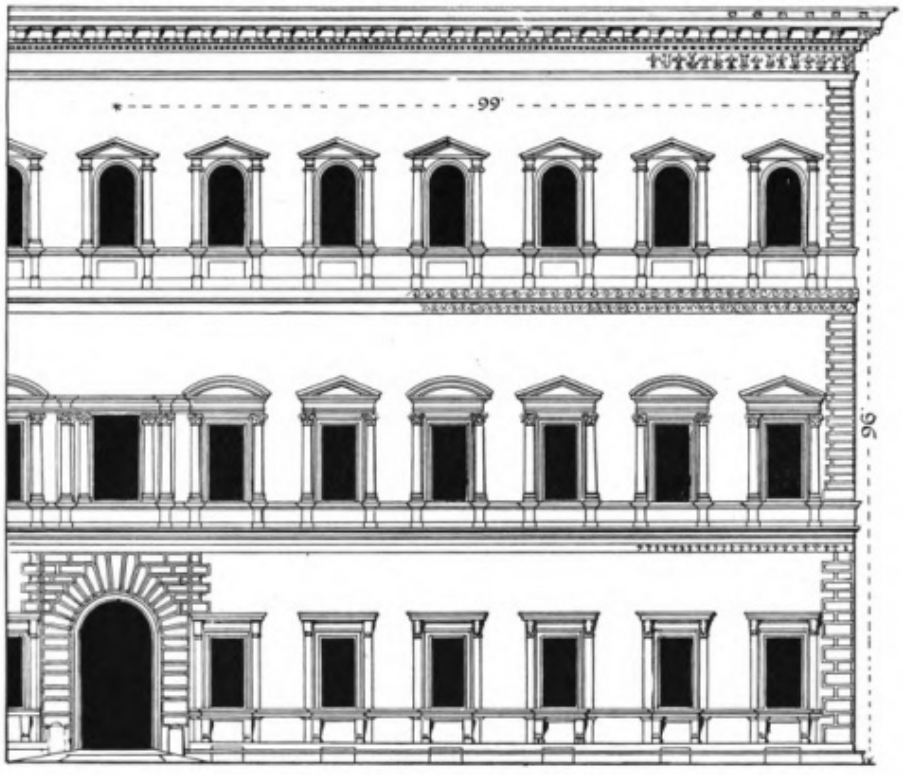

THE FARNESE PALACE, ROME.

In Rome the palaces were characterized by largeness of scale, the frequent use of the pilaster or attached super-imposed columns, and square-headed windows, with triangular or segmental pediments. The plan is rectangular, with a cortile of one or more stories of open arcades of semi-circular arches, springing direct from the capital, as in the Cancelleria Palace.

The chief palaces are the Cancelleria (1495) and the Giraud (1503), by Bramante (1444-1514); the Farnesina (1511), the Massimi (1529), and the Villa Ossoli (1525), by Baldassare Peruzzi (1481-1536); the Palma and the Farnese (1517), by Antonio Sangallo (1476-1546); the Villa Madama (1516), by Raffaello and Giulio Romano; the Borghese (1590), by Martino Lunghi; the Laterano (1586), by Fontana; and the Barberini (1626), by Maderna, Borromini, and Bernini.

The chief ecclesiastical building is S. Peter's (plan, plate 53,) commenced in 1450 by Alberti and Rossellino for Pope Nicolas V.; then carried on by Bramante and San Gallo (1503), Raphael and Peruzzi (1514-20), Antonio da San Gallo (1534), Michel Angelo (1546), Vignola (1556), Giacomo della Porta (1590), and Carlo Maderna (1608). In 1627 S. Peter's was dedicated by Urban VIII., and in 1667 the colonnade in the piazza was erected by Bernini.

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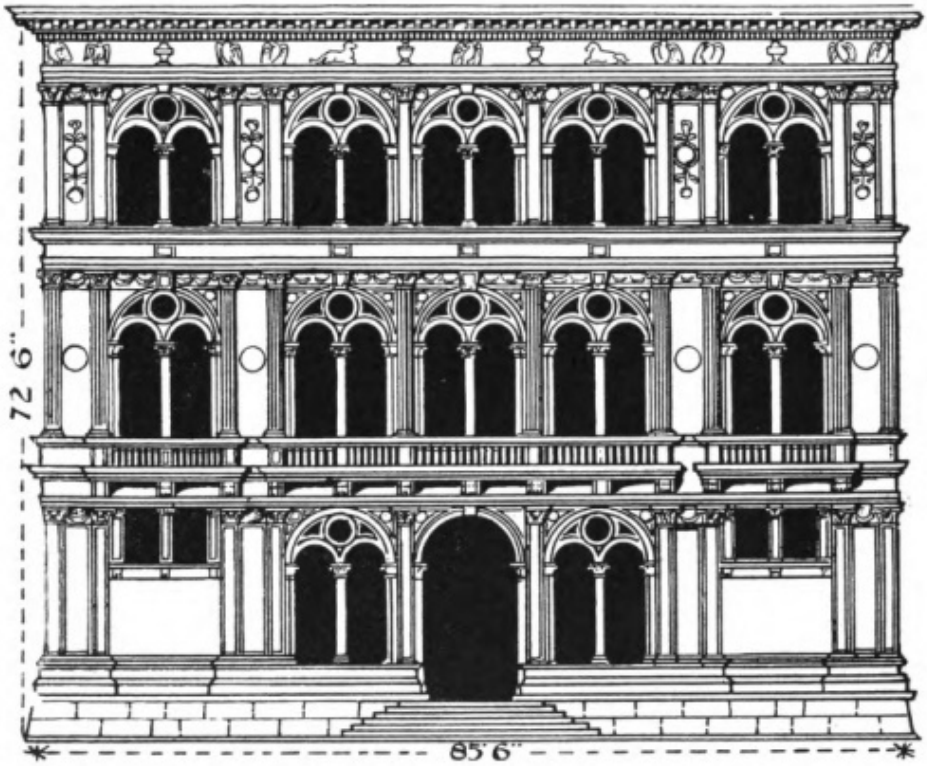

THE PALAZZO VENDRAMINI, VENICE, BY PIETRO LOMBARDO.

The architecture of Venice is rich and varied in style, and the great *palazzi* of the Byzantine, Gothic, and Renascence periods bear tribute to the versatility and skill of the Venetian architects and craftsmen.

The Renascence period may be said to commence with Pietro Lombardo, who built Santa Maria dei Miracoli (1480), a building remarkable for the singular grace and refinement of the internal carved enrichments. Another work by Lombardo was the Spinelli Palace (1480), which has mullioned windows, grouped centrally as in the Gothic palace. This feature, together with the use of pilasters or attached columns, became the type of the later Renascence palaces, such as the Palazzo Vendramini, also by Pietro Lombardo. Then followed the rebuilding of the court-yard of the Ducal Palace by Antonio-Bregni (1485), which was completed in 1550 by Scarpagnino; the Scuolo di San Marco (1485) by Martino Lombardo; the Palazzo Cornaro (1532), La Zecca (1536), the Loggetta of the Campanile (1540), destroyed by the falling of the Campanile in 1905, and the Library of S. Mark (1536), by Jacopo Sansovino; the Grimani Palace (1549) by San Michel; the Pesaro Palace (1650) and the Church of Santa Maria della Salute (1631) by Baldassare Longhena.

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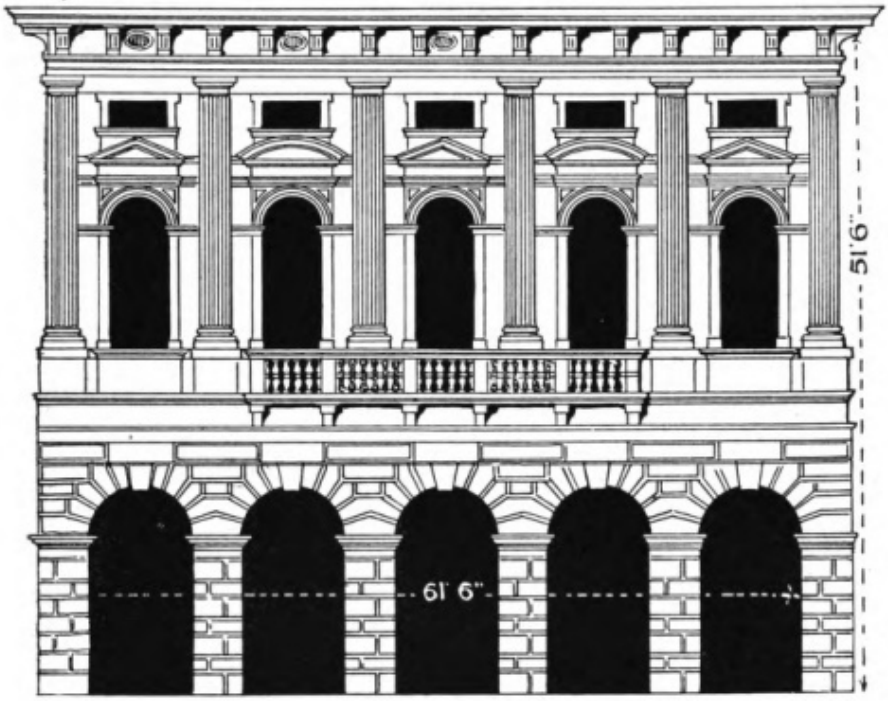
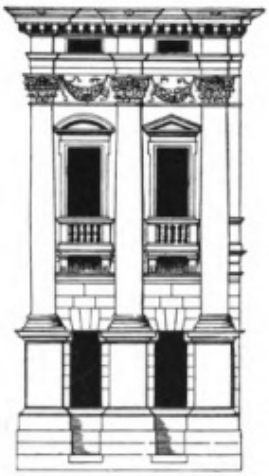


PALAZZO VERZI, VERONA.

Andre Palladio (1518-80), of Vicenza, was the most famous of the later architects of the Renascence. His chief works are the Basilica Vicenza (1549), which has a fine elevation of two super-imposed orders of attached columns, with arched openings and coupled columns in each story; the Valmarana (1556), the Chiericati (1560), and the Tiene (1565) palaces; and the Teatro Olimpico (1580); all of which are in Vicenza.



CASA DEL DIAVOLO.

In his later work, which is frequently built of brick and stucco, he adopted the device occasionally used by Peruzzi and San Michel, of an attached column, with or without pedestal, reaching throughout the two stories of the full height of the building, as in the Casa del Diavolo.

Scamozzi (1552-1616), of Vicenza, succeeded Palladio. He built the Trissino at Vicenza (1588), the Procuratie Nuove (1584) at Venice, and completed Palladio's Church of San Giorgio Maggiore at Venice.

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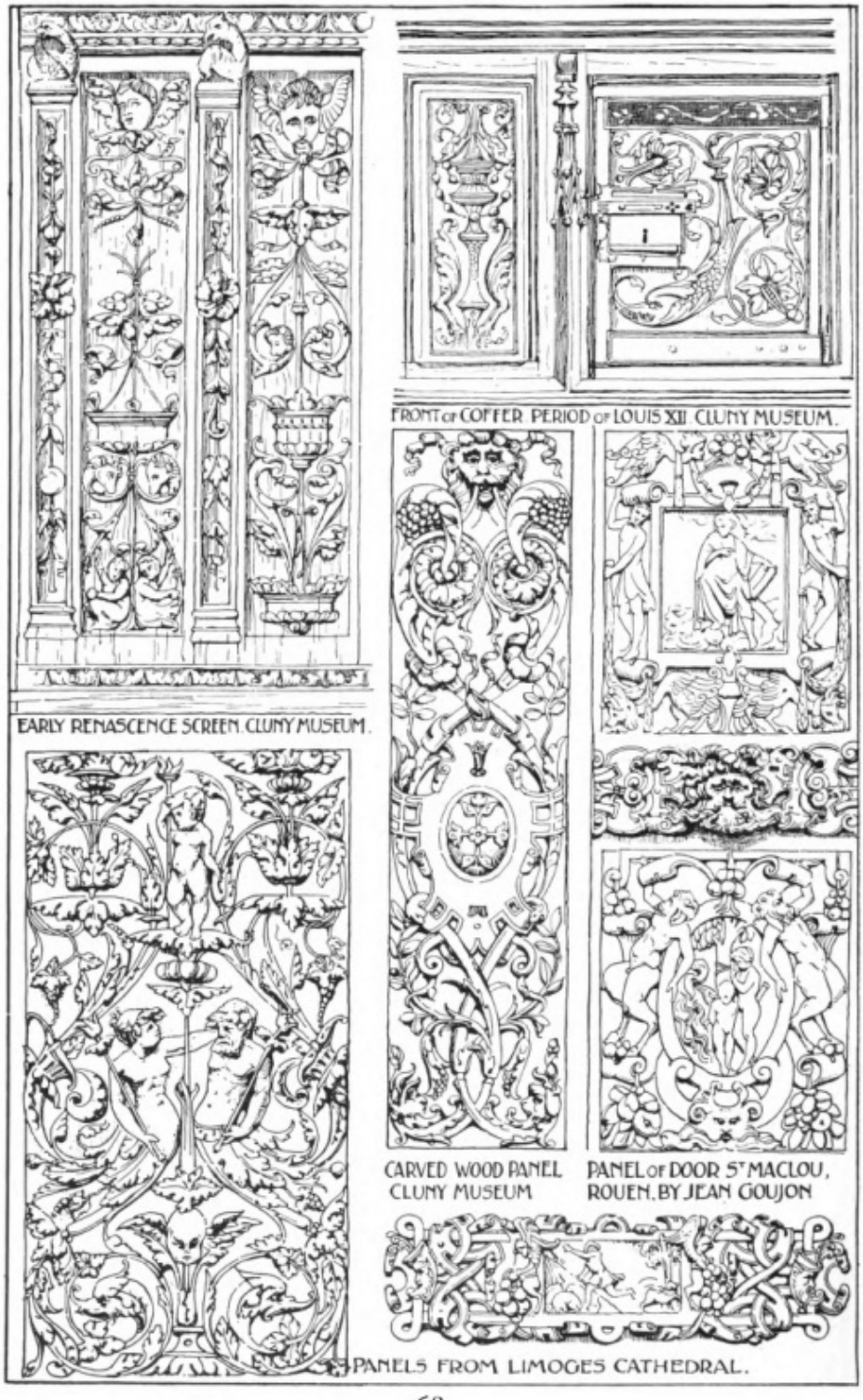
EARLY FRENCH RENASCENCE. Plate 23.



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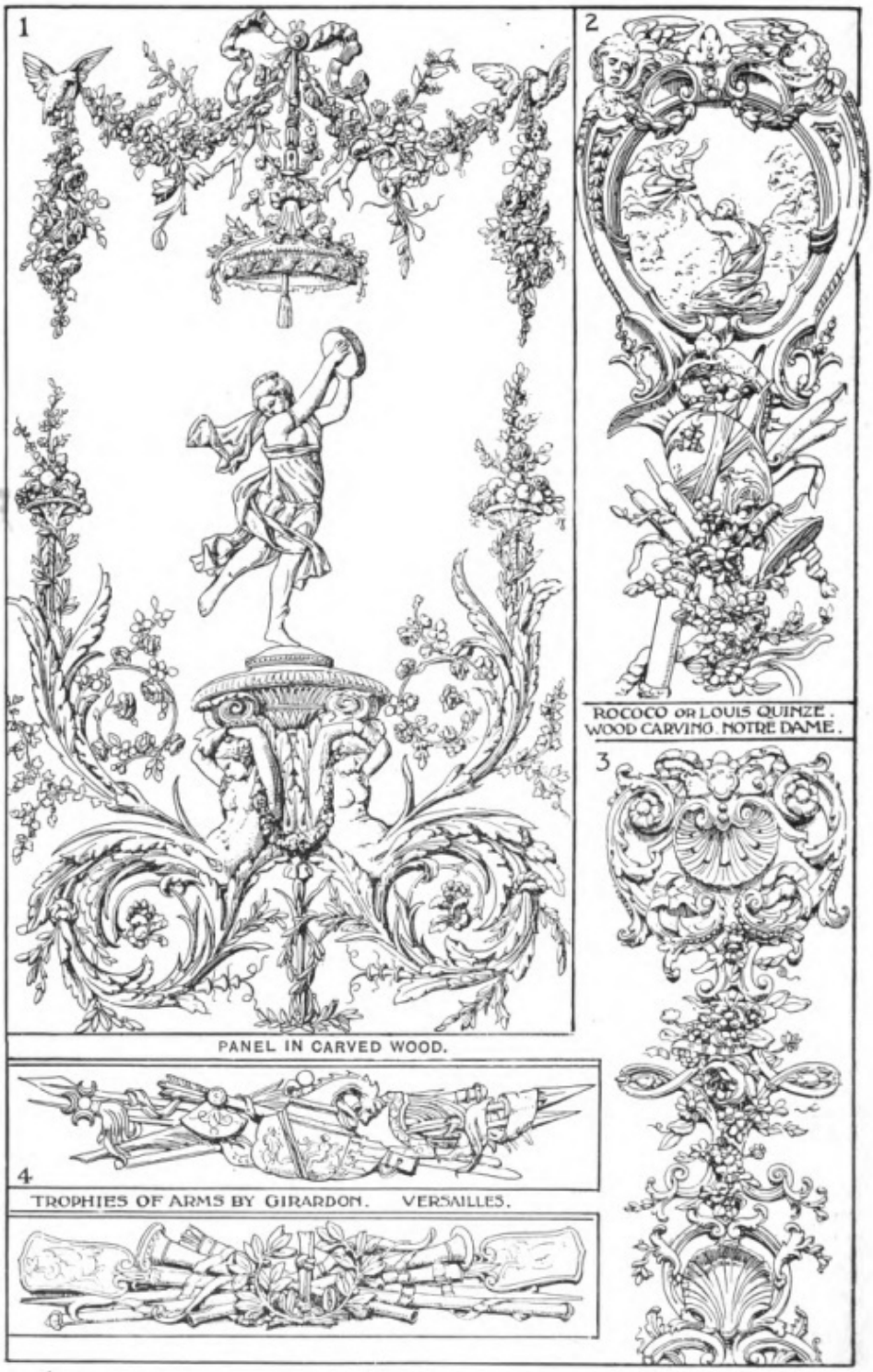

PANEL IN CARVED WOOD.

ROCOCO OR LOUIS QUINZE.
WOOD CARVING NOTRE DAME.

TROPHIES OF ARMS BY GIRARDON. VERSAILLES.

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for stained glass for Sainte Chapelle at Vincennes, and the fine statue of Admiral Chabot. Of the architecture of this period, the Tuileries was commenced in 1564 by Philibert de Lorme (1500-78), De Carreau and Duperie continued the Louvre, and the Luxembourg was built by De Brosse in 1611.

THE LOUIS TREIZE. — The beautiful tooled bindings by Nicolas and Clovis Eve (plate 47), and the delicate *pointelle* tooling by Le Gascon, are fine examples of the ornament of this period.

THE LOUIS QUATORZE.—The Palace of Versailles, by François (1598-1666) and Jules Mansard (1645-1708), is the great repertory of this period. It is enriched internally with coloured and gilded stucco, paintings by Le Brun (1619-90) and Mignard, magnificent Gobelins' tapestries, and decorative furniture of tortoise-shell and brass marquetry by André Boule. The beautiful Rouen pottery, the splendid woven fabrics of Lyons (plate 50), and the decorative compositions of Le Pautre, are some of the best examples of the period known as the *Barocque*. A fine example of the architecture is the colonnade and south front of the Louvre, by Claude Perrault (1666).

THE LOUIS QUINZE.—The *Rococo*, introduced in 1725 by Gilles Marie Oppenord, was paramount in this period, and the ornament was composed of the scroll, shell, and flowers, showing no restraint or reticence in composition or in detail. Symmetry was avoided, and brilliancy and playfulness of effect were sought for (plate 24). The pastoral scenes by the painter Watteau (1684-1721), and the fine inlaid furniture made by Jean François Ochen (1754-68) for Madame de Pompadour, are some of the better examples of this period.

THE LOUIS SEIZE is distinguished by its severity of line and reticence of detail. Room decorations were frequently in white and gold, with refined and delicately-painted or stucco ornament. Painted panels by Fragonard and Boucher, and marquetry furniture by Riesener and David Roentgen, with bronze or ormolu mountings by Gouthiére, were executed for the court of Queen Marie Antoinette. S. Geneviève (the Pantheon) by Soufflot (1755-81) represents the architecture.

THE EMPIRE.—Purely classical forms and enrichments prevailed, more pretentious perhaps, but lacking the beauty, refinement, and vitality of the Louis Seize.

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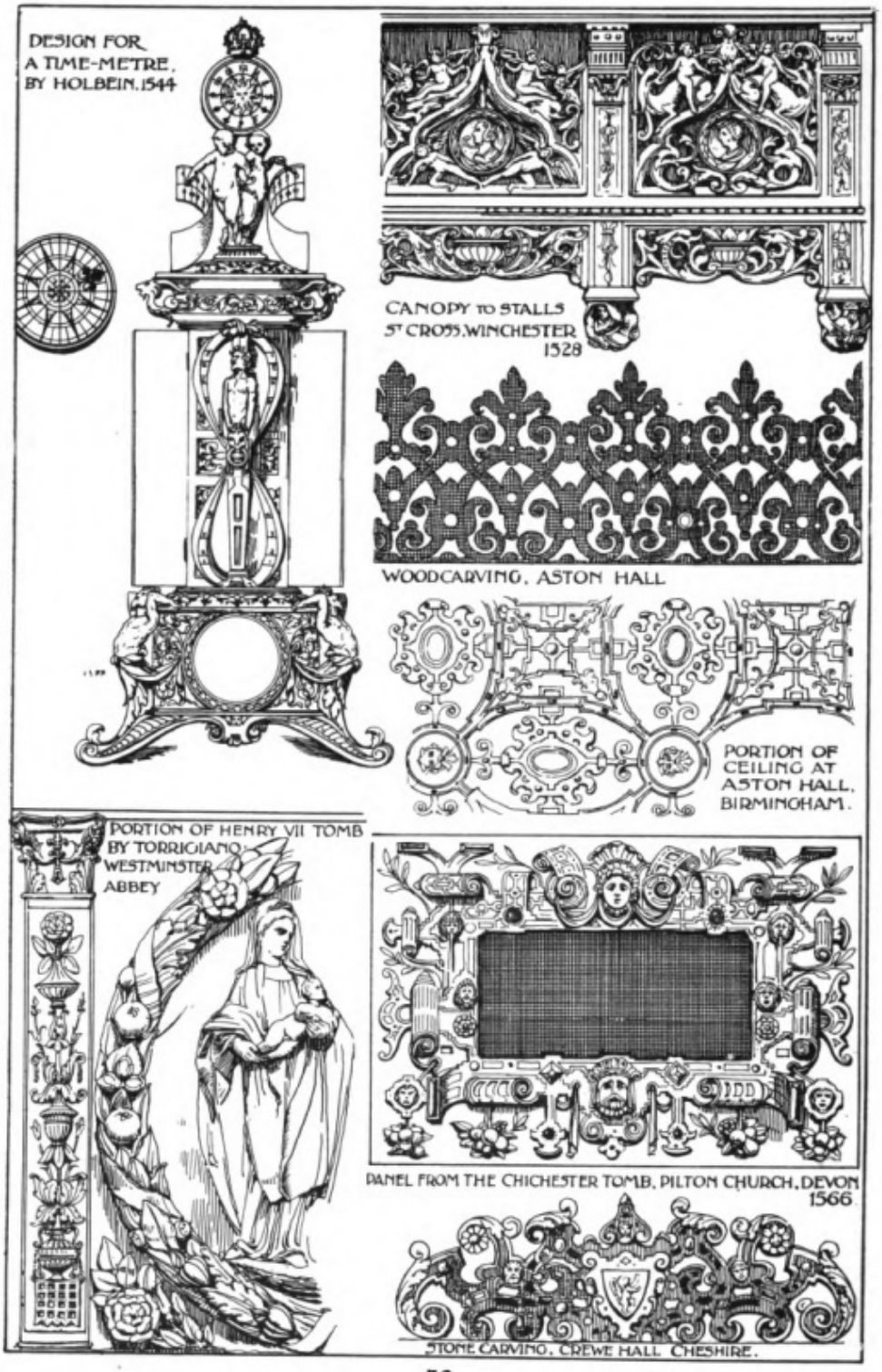

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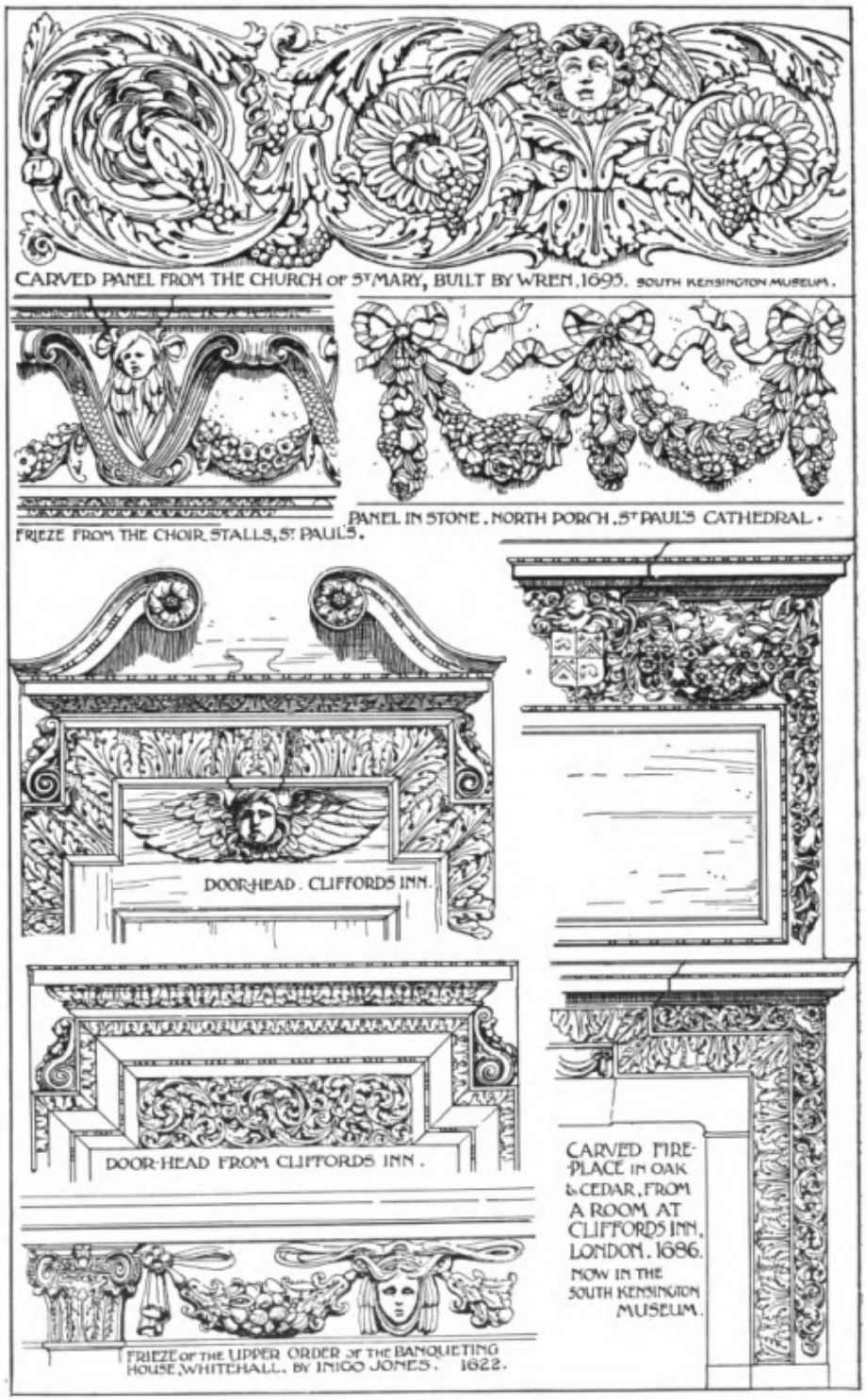

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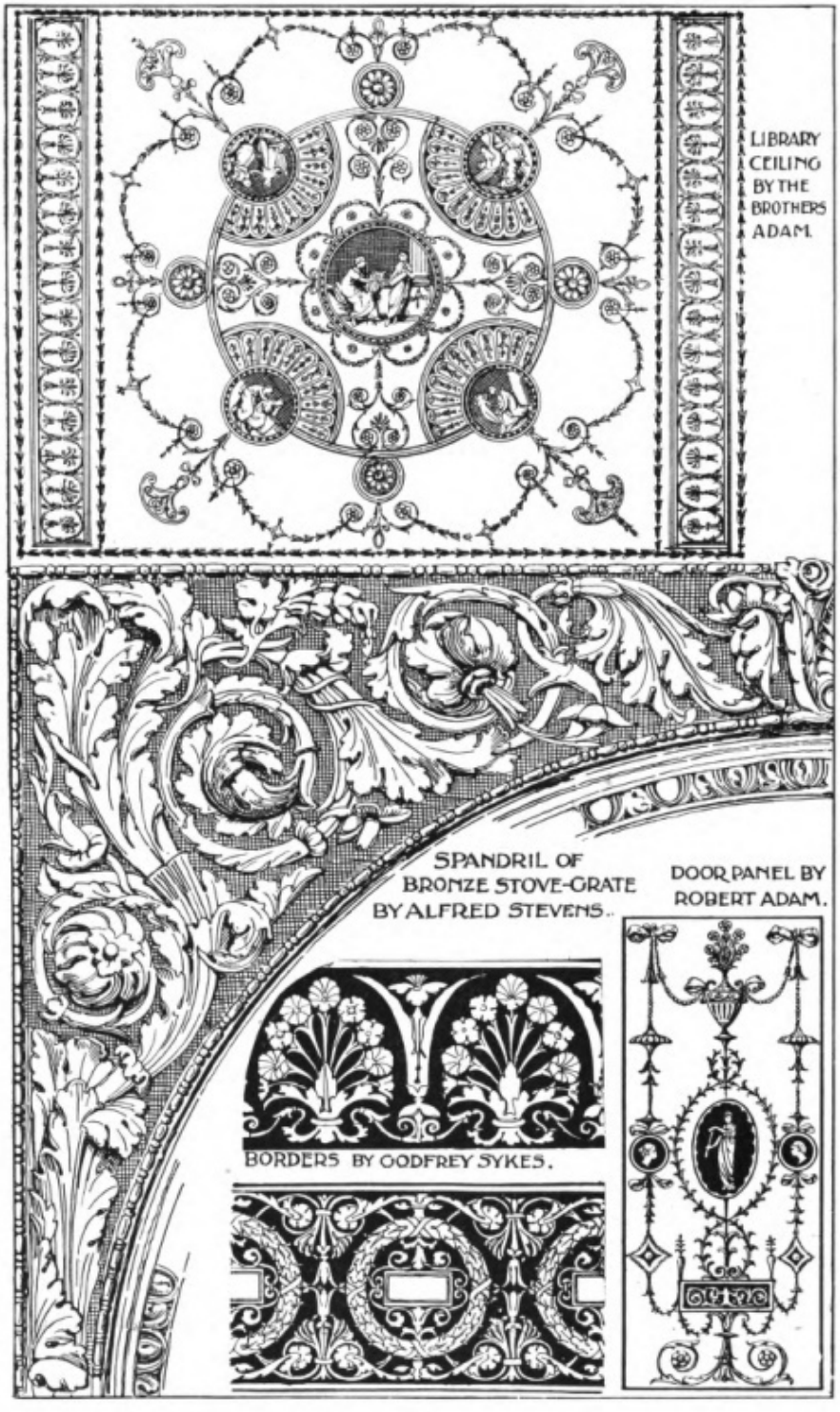

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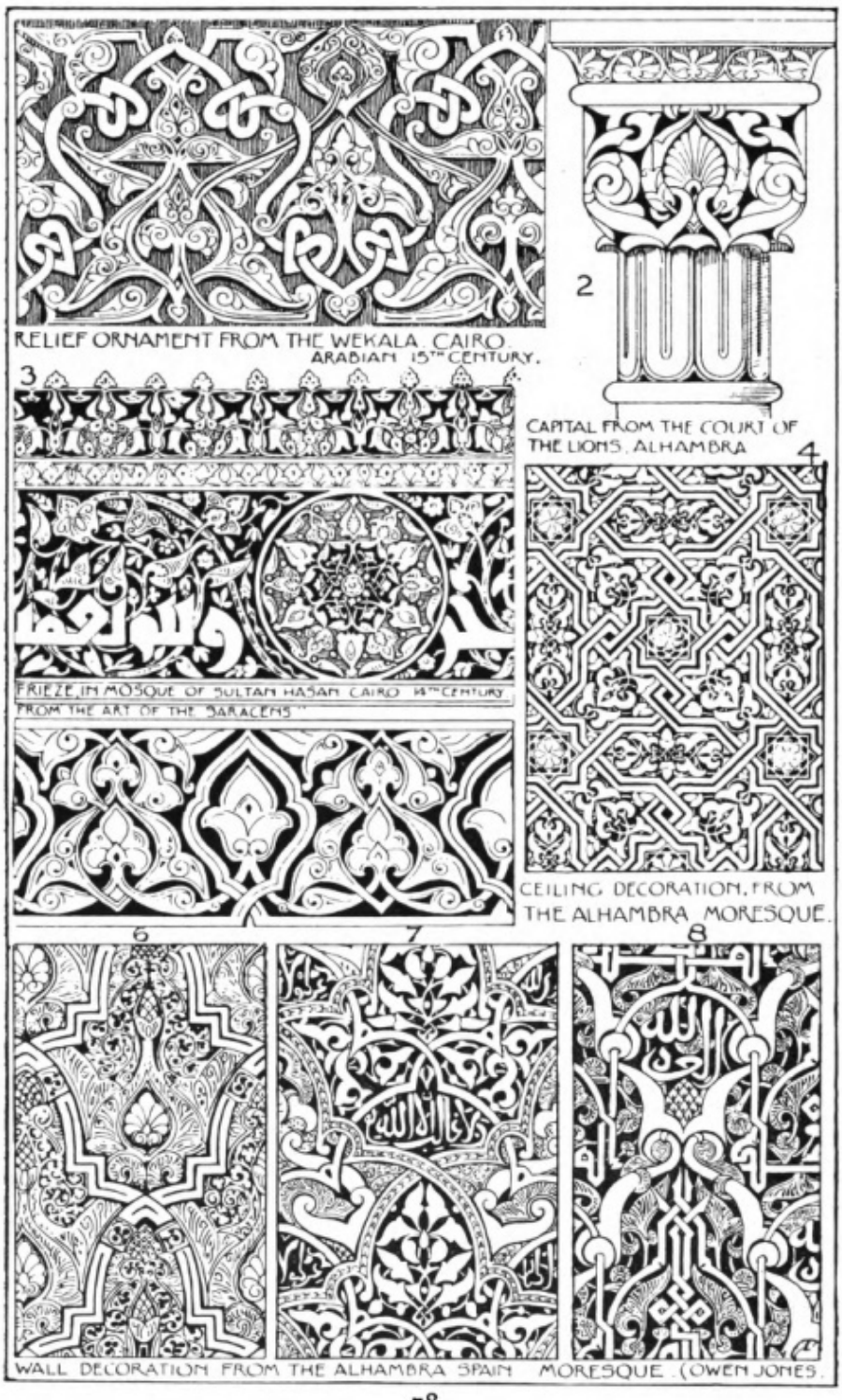

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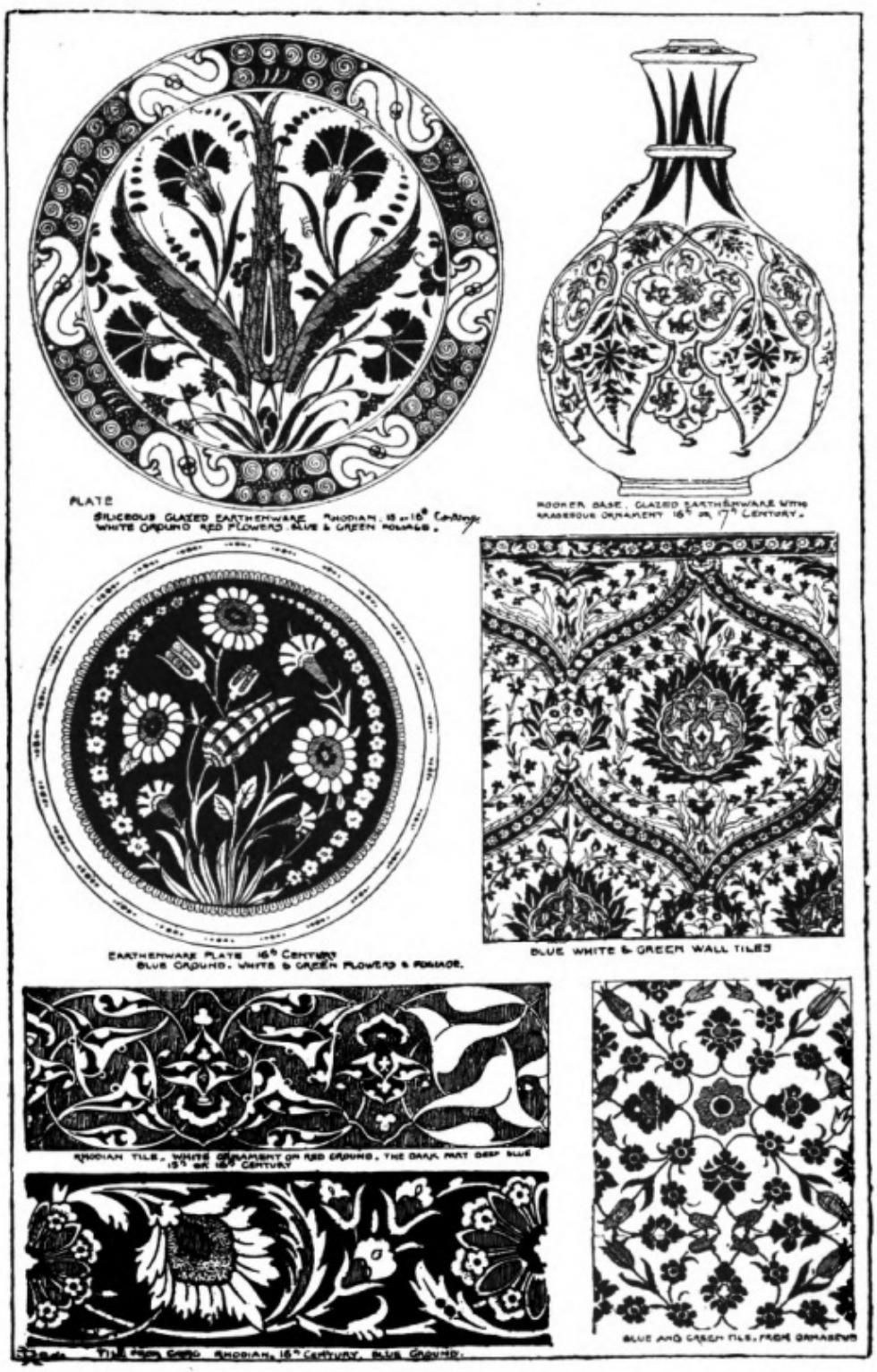

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PERSIAN ORNAMENT.

The early art of Persia was similar to that of Assyria and Babylon, having the same forms, materials, and traditions. With the accession of the Sassanides, A.D. 223, came the introduction of the elliptical dome, so typical of eastern architecture. This dome rested on pendentives, which occupied the angles of the square base. These pendentives and the elliptical dome are distinctive features in Mahometan architecture.

The industrial arts of Persia were largely influenced by the traditional arts of Assyria and Chaldea. This tradition was carried on with rare skill and selective power by the Persians, culminating in the splendid period of Shah Abbas, A.D. 1586-1625. The vitality, beauty, and interest of detail, combined with perfect decorative adaptation to material, are characteristic of the textiles, pottery, metal work, and illuminated manuscripts of the 15th, 16th, and 17th centuries.

The Mahometan conquest of Persia, A.D. 632-637, by Abu Bekr, the successor of Mohammed, largely influenced the development of the arts of the Persians, who adopted the customs and habits of contemporary races, yet preserved all the characteristics of their art; and there is no doubt that the art of the Arabs was founded upon the traditional arts of Persia.

Persian decoration is characterised by a fine feeling for form and colour, and for the singularly frank renderings of natural plants, such

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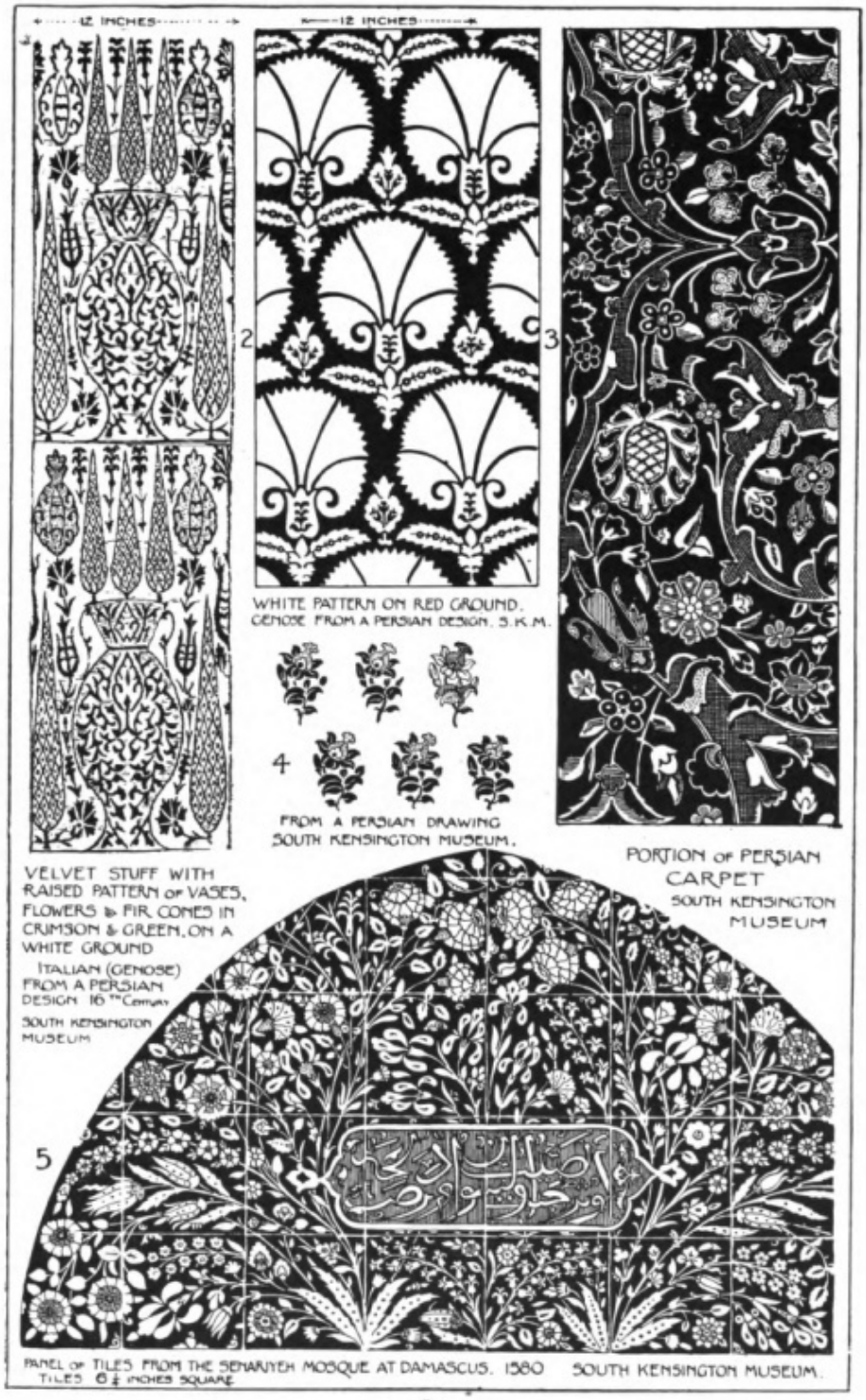

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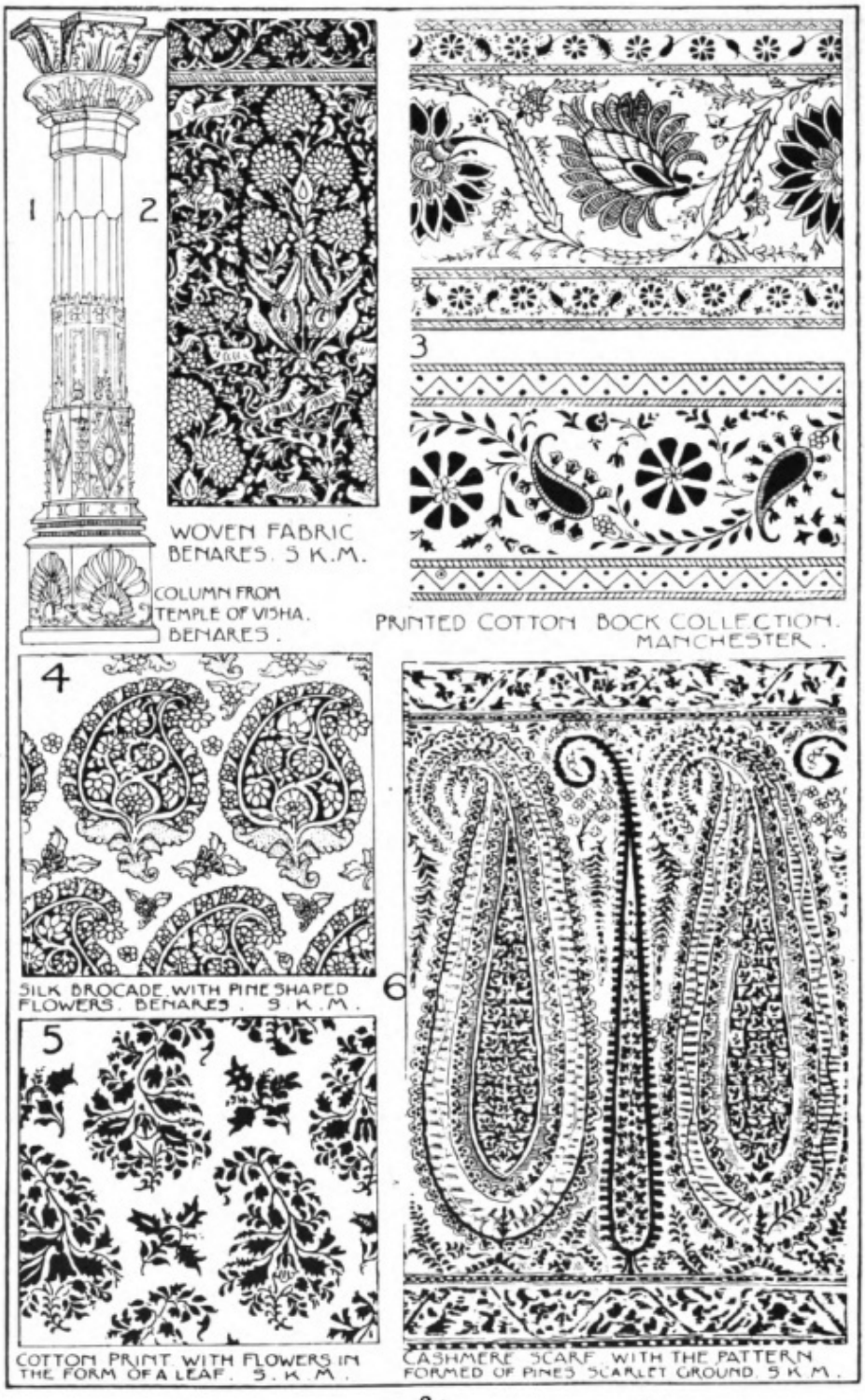

COLUMN FROM TEMPLE OF VISHA. BENARES.

WOVEN FABRIC BENARES. S K.M.

PRINTED COTTON BOCK COLLECTION. MANCHESTER.

SILK BROCADE WITH PINE SHAPED FLOWERS. BENARES. S K.M.

COTTON PRINT WITH FLOWERS IN THE FORM OF A LEAF. S. K. M.

CASHMERE SCARF WITH THE PATTERN FORMED OF PINES SCARLET GROUND. S K.M.

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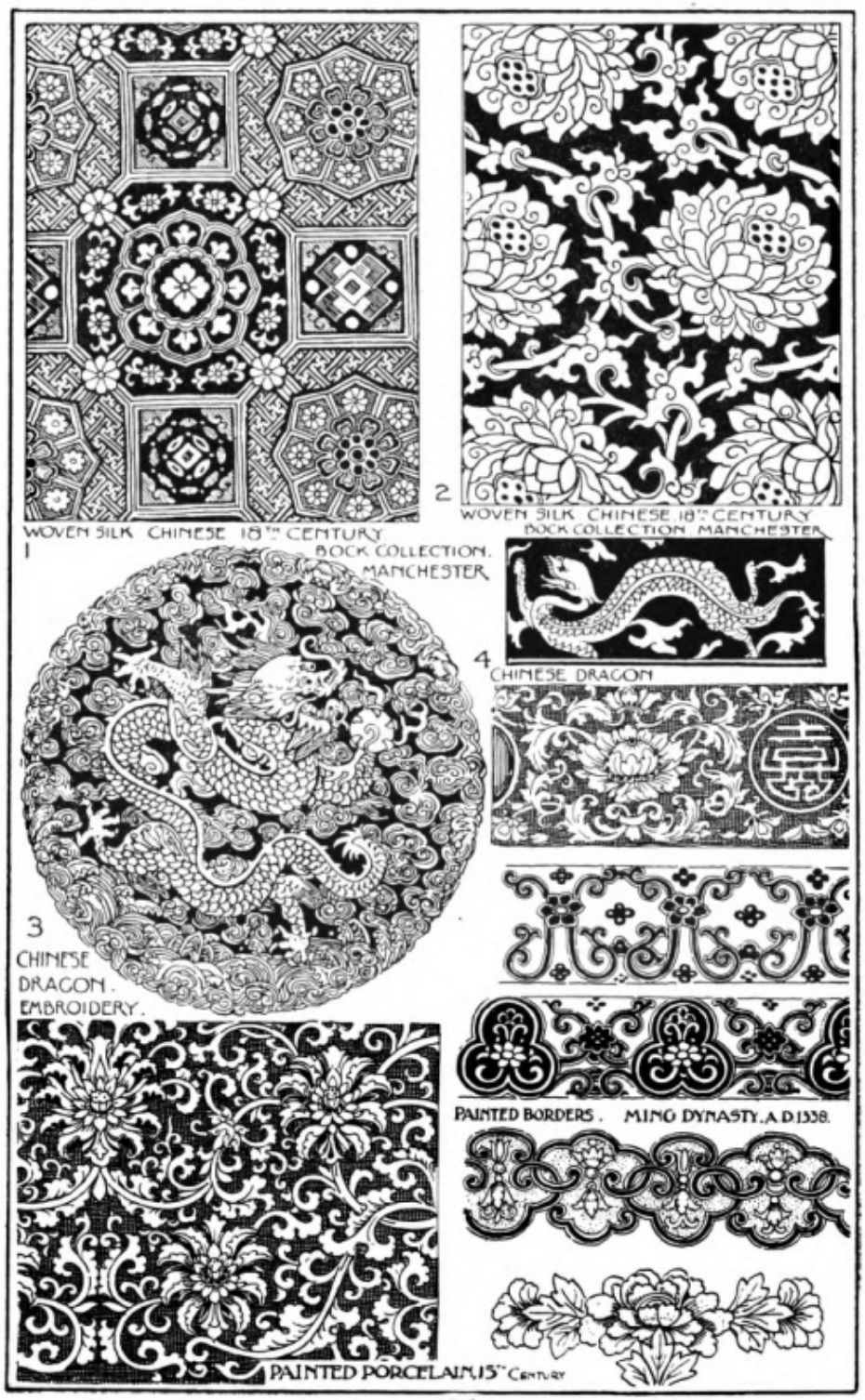

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CHINESE ORNAMENT.

The early bronzes, enamels, porcelain, and textile fabrics of China are indicative of the perfection and luxuriance of the decorative arts of that ancient empire. This perfection is shown by a splendid technique and a fine appreciation of colour and ornamentation, differentiated from the western nations by myths, traditions, and the remarkable persistency of a few typical forms through many centuries, doubtless owing to the profound ancestral worship and veneration for the past. The dragon was represented under many aspects, frequently forming vigorous lines of composition (figs. 3, 4). The beautiful flora of the country largely influenced Chinese art. The peony and chrysanthemum (frequently highly conventionalized) are typical examples, forming the elements of decorative design. Geometric forms, such as the hexagon, octagon, and the circle, enriched with flowers or the fret, are largely used. The many splendid examples of bells, gongs, and incense-burners in bronze and iron; the carvings in wood, ivory, and jade; the beautiful woven silks, richly patterned with the conventional chrysanthemum, the peony (fig. 2), or with geometrical forms, filled with the fret or rosettes (fig. 1); the magnificent fabrics, embroidered with dragons, birds, and conventional flowers, excellent in technique and colour; and the richness and purity of their porcelain, more especially the old blue and white of the Ming dynasty, A.D. 1568-1640 (plate 36, fig. 4), all testify to the versatility and vitality of the Chinese decorative arts in the past.

Their architecture was distinguished by complexity and quaintness of form, rather than beauty of proportion and detail. Their pagodas, or temples, of which numerous examples are still extant, were of wood, iron, brick, or marble; and one, the Nanking Pagoda, A.D. 1412-31, destroyed in 1854, was encased with yellow and green porcelain tiles, and had 150 bells pendant from the roof. Pagodas are from 3 to 13 stories in height; that at Peking has 13 stories and is 275 ft. high, the Nanking porcelain pagoda was 250 ft. high, and a fine brick one of 7 stories on the River Yangtsze is 140 ft. in height.

BASE OF SMALL PAGODA, CANTON

The roof of each story curves outwards and upwards, and usually supports a balcony. An illustration is given here of the lower story of the small pagoda at Canton, which is richly carved with figures and floral forms.

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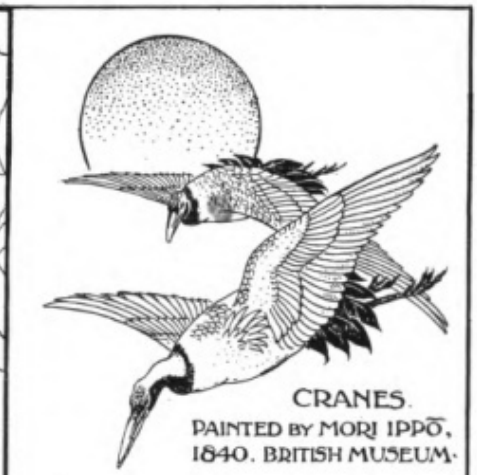
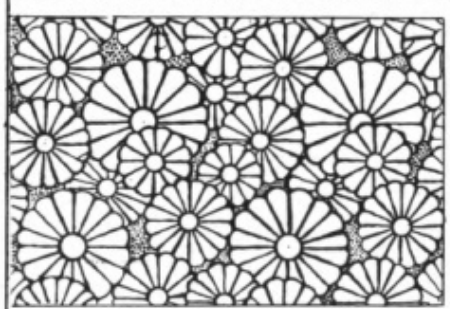
THE QUICK POSTMAN, FROM THE MANGWA, OR ROUGH SKETCHES, BY HOKUSAI. 1760-1849



CRANES.
PAINTED BY MORI IPPŌ, 1840. BRITISH MUSEUM.



WOVEN SILKS.

THE KIRI-MON & KIRU IMPERIAL CRESTS.

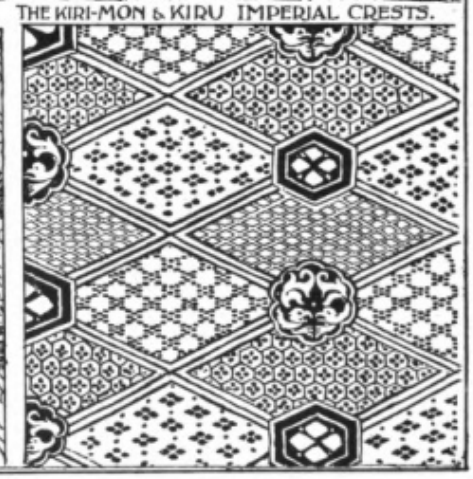


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Plate 33.

ROMAN SCROLL FROM THE FORUM OF TRAJAN.

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PART II.

The Applied Arts.

WOODCUT FROM THE GROTESQUE ALPHABET OF 1464 (FLEMISH), BRITISH MUSEUM.

ENGRAVED PANEL BY HEINRICH ALDEGREVER, ONE OF THE LITTLE MASTERS OF GERMANY.

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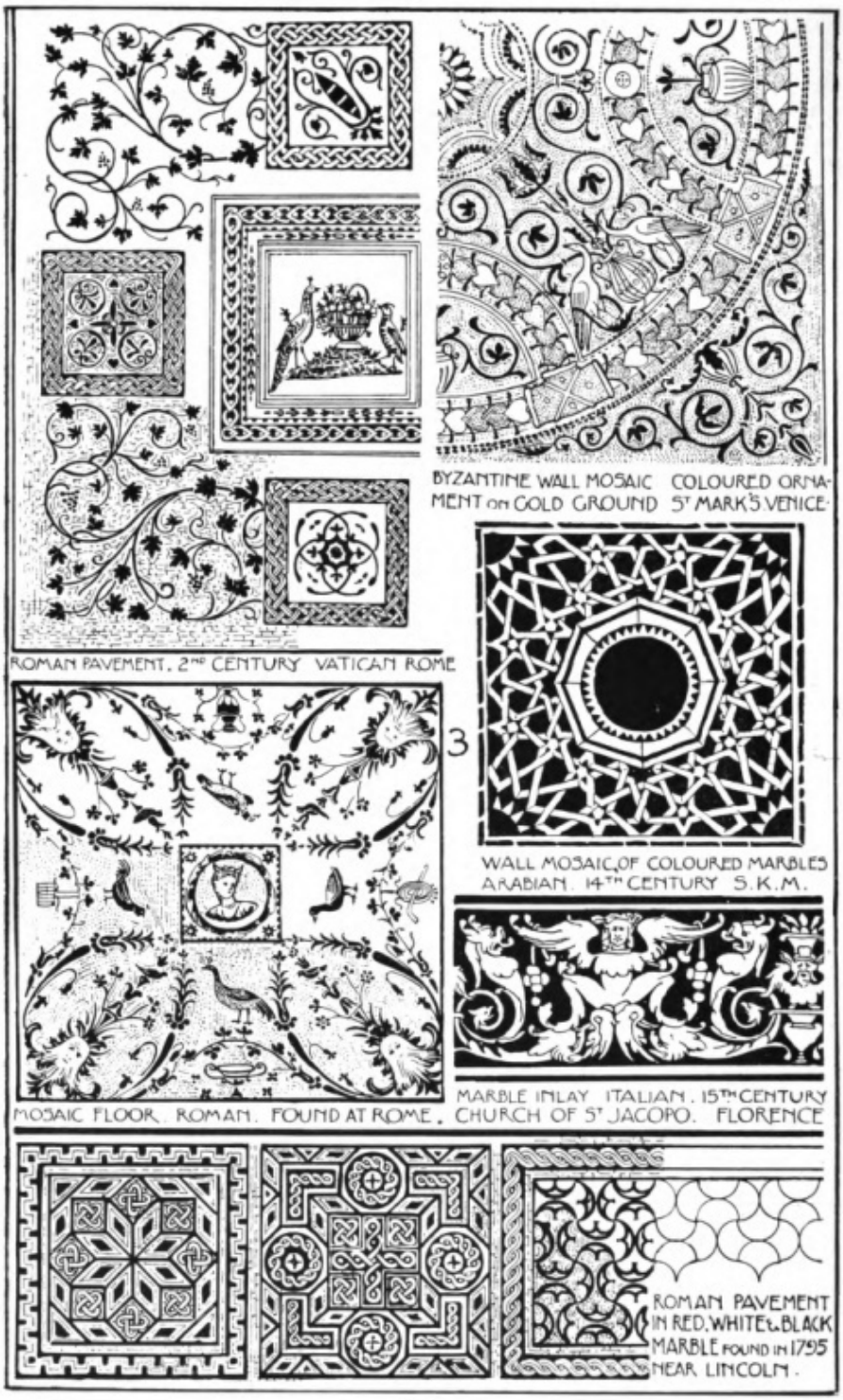

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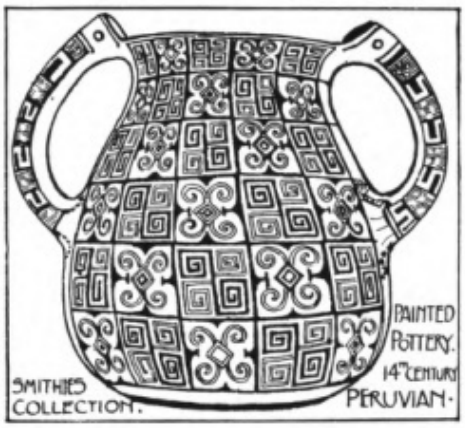
universality of the potter's art, which may be traced through man beautiful examples differentiated by racial customs and material.

The beauty of form in the Greek vase (plate 34), was but the natural outcome of a fine earthenware in the hands of an artistic people, with traditions and architecture of the highest order. In Persian pottery, form is subservient to colour, blue, turquoise, and white being used in charming combination, together with a frank yet decorative treatment of natural forms.

The Hispano-Moresque and Italian Maiolica (plate 37), are remarkable for the technical excellence of their white enamel, rich blue, yellow, and orange, the iridescence of their gold and ruby lustre, and their high technical skill in painting.

English earthenware of the 17th and 18th centuries, though traditional, showed a remarkable diversity in treatment and conception. The picturesque platter of the Toft school, with its quaint enrichment of trailing lines and heraldic forms in coloured slip, the fine red stoneware of Elers, with its graceful enrichments in delicate relief, and the varied and beautiful jasper ware of Wedgwood mark a distinct phase of the potter's art, and bear a tribute to the vitality and personality of the founders of the "*Potteries.*"



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MAIOLICA.

Maiolica or Italian faience is an earthenware, coated with a stanniferous or tin glaze, termed enamel. This is formed by the addition of oxide of tin to a silicious glaze or slip, thus rendering it white and opaque, hence its name, enamel.

The origin of this beautiful ceramic art may be traced to Chaldea and Persia, with their magnificent enamelled bricks, such as the "Frieze of Archers" from the Palace of Susa (455 B.C.), and now in the Louvre. From Persia the art was carried by the Arabians to Fustat, or old Cairo, which was destroyed A.D. 1168, and amongst the ruins many fragments of gold or copper lustred ware have been found. This enamelled ware was introduced into Spain in the 13th century, and perfected there by the Moors, giving rise to the Hispano-Moresque ware. This ware was enriched with central heraldic arms, surrounded by concentric bands of foliage, arabesques, or inscriptions in blue, with a copper lustre. This Hispano-Moresque ware was manufactured chiefly at Malaga, Talavera, Triana, and Valencia, and dates from the Moorish occupation of Granada (A.D. 1235-1492).

In the Island of Majorca, from which this beautiful ware derives its name, fine examples were manufactured at an early date by Persian and Arabian potters. After the conquest of Majorca by the Pisans (A.D. 1115), many of these examples were introduced into Italy, the art being subsequently cultivated in some of the smaller central states.

The early Italian Maiolica was usually covered with a thin white "slip" or engobe of clay, which served as a ground for the coloured patterns. It was then coated with a lead glaze, and was known as mezza or mixed Maiolica. In some examples the design was scratched or engraved through the upper layer or white engobe, showing the darker body underneath. This type of ware, known as *sgraffito*, was also glazed with the lead glaze, forming, when fired, the beautiful iridescent lustre.

Few remains of a tin enamel of Italian workmanship have been found in Italy prior to the time of Luca della Robbia (1400-1481), who discovered an enamel of peculiar whiteness and excellence. The secret of its composition was kept by him, his nephew Andrea, and his great-nephews Giovanni, Lucca, and Girolamo, until 1507. The mezza Maiolica was then superseded by the true Maiolica, or the tin enamelled wares of Caffaggiolo, Castel Durante, Urbino, Pesaro, Faenza, Forli, Diruta, Siena, and Gubbio—cities all within a limited district, lying towards the east coast of Italy, and renowned centres of the Maiolica fabrication.

The Gubbio ware is noted for its metallic ruby and golden lustre, and was signed by Maestro Georgio (Georgio Andreoli, 1518-1537):

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TERRA COTTA.

Terra cotta is usually made from pure clay, which will burn to a white or yellow colour, or from impure, which will burn to a red colour owing to the presence of oxide of iron. Pure clay is a hydrous silicate of alumina, containing 47 parts per cent. of silica, 40 of alumina, and 13 of water. Clay in this proportion is the Kaoline or china clay.

Fire clay, which is found in the coal measures, has a larger proportion of silica than Kaoline, and from it much of the terra cotta is made. When first dug out, it is hard and compact, and of a greenish-grey colour, deepening to black. It is often weathered before using; this causes it to "fall," and facilitates grinding. Old fire-clay, previously burnt ("grog" as it is called), is added to the new clay to counteract the excessive shrinkage to which all close-grained clays are liable. The coarser the clay, the less the shrinkage. Pure clay contracts as much as one-eighth from the size of the mould: one-half of this contraction takes place in drying, the other half in burning.

The colour of the clay varies according to the quantity of lime, iron, or bitumen it contains.

The moulds for terra cotta are usually piece-moulds, made of plaster of Paris, which absorbs much of the moisture of the clay. Sheet clay about two inches thick is used. This is carefully pressed into the mould, and supported by webs of clay of the same thickness. It is essential that the clay be uniform throughout, or the shrinkage would be unequal. It is then placed upon a flue to dry, for from two to six hours, when the clay will have contracted sufficiently to allow the mould to be taken off. It is then dried for a further period, and burnt in a kiln. For fine work, the kiln is "muffled"—the "muffle" being a lining of bricks to keep the clay from actual contact with fire and smoke. The dry or semi-dry process is the pressing of clay-powder into metal moulds, which obviates the excessive shrinkage of the wet process. Encaustic tiles

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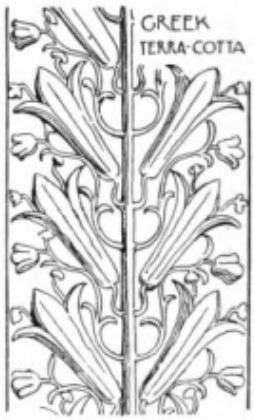
are made in this way, the ornament being run into the incised pattern with "slip." Many tiles are decorated in the same way as ordinary earthenware, that is, painted and glazed.

Terra cotta was largely used by the nations of antiquity, especially by the Assyrians, whose clay tablets or books throw so much light upon Assyrian history. With the Greek, terra cotta was extensively used for "antefixæ," and the many beautiful Tanagra figures now treasured in our museums show the exquisite modelling by the Greeks, in such a material as terra cotta.



This material was used by the Etruscans for their sarcophagi and recumbent figures. The Pompeians tiled their roofs with terra cotta. It was used for votive statues and offerings, and for lamps, some of which were dipped in molten glass.

During the revival of art in Italy in the 15th and 16th centuries, terra cotta was extensively used by the Della Robbia family. Luca della Robbia (1400-82) produced many beautiful terra cotta reliefs, coated with the white tin enamel, and enriched with coloured enamels. Among his numerous works was the marble "Cantoria" or Singing Gallery (1431-40), with its ten panels of singing and dancing figures in relief, which was placed by the organ of S. Maria del Fiore, or Cathedral of Florence. Donatello's "Cantoria" was also placed here (page 57). They are now both in the museum of the Opera del Duomo. Lucca also executed five marble reliefs, in 1437, for the Campanile, from designs by Giotto, and the two kneeling angels holding candelabra, in the Sacristy of the Cathedral, Florence, are the only figures in the round by this master.

A BAMBINO BY LUCCA S. ANDREA DELLA ROBBIA

Among his many beautiful examples of terra cotta are the "Resurrection" and the "Ascension," over the doors of the Sacristy

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in the Cathedral; the splendid monument to Bishop Federighi, with its beautiful recumbent figure of marble, in the Church of S. Trinita, Flòrence; the Tabernacle of Peretola; the Madonna of Or San Michele; and the many fine heraldic medallions, with the arms or emblems of the various Guilds, that enrich this beautiful Oratory of Florence (see page 58).

TERRA COTTA RELIEF BY ANDREA DELLA ROBBIA

Other heraldic medallions in Florence are the Pazzi and Serristori arms for the Quaratesi Palace, and in the South Kensington Museum are some fine medallions with the arms of King Renè d'Anjou, and twelve medallions representing the months. Most of these examples have the typical quattrocento borders of fruit, flowers, and foliage or fir-cones (fig. 8, plate 21), and are enamelled in brilliant colours.

Ottaviano and Agostino Duccio, contemporary sculptors of repute, also collaborated with Lucca in the production of this ware. Andrea della Robbia (1435-1525), the nephew of Luca, carried on the traditions with rare selective power and artistic skill. Among his early works are the medallions with the *bambini*, for the Loggia of the Spedale degli Innocenti, or Foundling Hospital, at Florence, in collaboration with his uncle, Lucca, and Brunelleschi, the architect. The Adoration and the Annunciation were familiar subjects with Andrea. There is a splendid "Adoration" in the South Kensington Museum.

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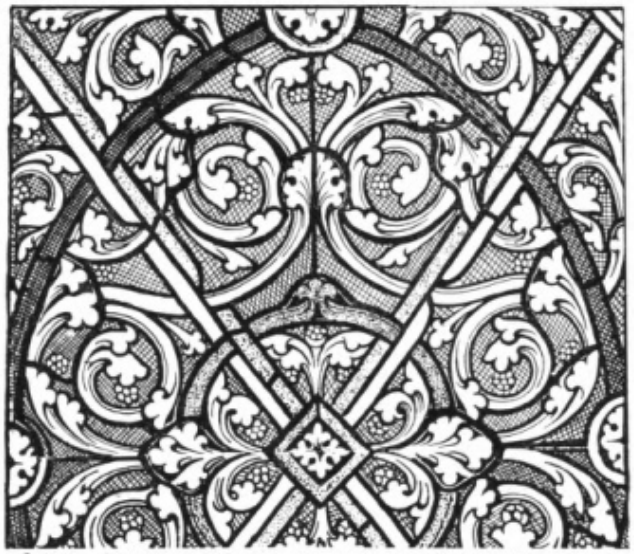
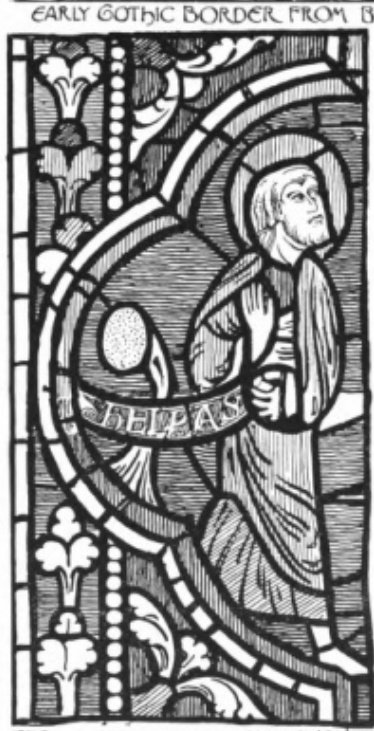


EARLY GRISAILLE GLASS. SALISBURY CATHEDRAL

EARLY GOTHIC BORDER FROM BOURGES CATHEDRAL



DECORATED GLASS FROM YORK MINSTER

13TH CENTURY MEDALLIAN GLASS. SAINT CHAPELLE PARIS.

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STAINED GLASS,

With its depth and translucency, owes its intrinsic qualities to metallic oxides, such as cobalt, giving fine blues, silver, pale and deep yellows, pink from iron and antimony, and ruby from gold and copper, which also yields fine greens. When these oxides are mixed with the glass in its fused state, it is termed "pot metal," but if the coloured oxides are applied to the surface of the glass only, it is termed "flashed" or "cased glass." Ruby, owing to its depth of colour, is usually cased glass. Fine blues are often flashed, and splendid effects are produced by flashing ruby over yellow or blue pot-metal glass. Cased glass is of the greatest value, owing to the variety of tint that can be produced on a single sheet of glass, and also because the colour may be removed by grinding or by the use of fluoric acid.

The rationale of the glass painter is:—(1) The scheme of composition and colour shown on a small scale; (2) a full-sized cartoon in charcoal or monochrome, with all the details carefully drawn, and showing the lead lines and positions of the iron stanchions for strengthening the window; (3) a tracing on cloth showing the lead lines only, called the cut line, on which are cut the selected pieces of glass; (4) a tracing of the details from the cartoon, with brown enamel, on each piece of glass, the pieces after firing being then fixed in the leading, and kept together with H-shaped leads.

PORTION OF A "JESSE" WINDOW, CANTERBURY CATHEDRAL.

The brown enamel, which is used entirely for outline, detail, or shading, is a fusible glass in combination with opaque manganic or ferric oxide and tar oil. With this enamel, smear shading or stipple shading is worked. This may be removed as required, before firing, by means of a pointed stick or quill, so as to give the details of embroidery or of heraldic forms.

Silver stain (oxide of silver), introduced at the beginning of the

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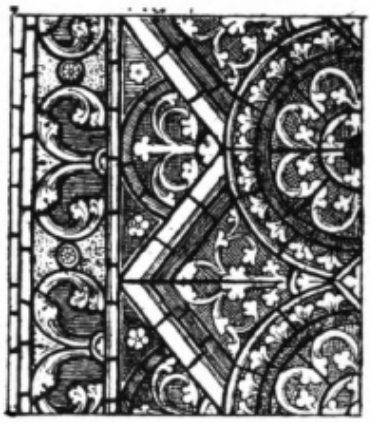
14th century, is largely used in stained glass, and usually on the back thereof. According to the different degrees of heat in the firing, a pale yellow or deep orange of great transparency is produced.

Coloured glass was made by the Egyptians 4,000 years ago, but the earliest stained glass windows recorded were those at Brionde (A.D. 525). None, however, are known to be still in existence prior to those of S. Denis (A.D. 1108). The early examples found in Norman windows have small medallions of figures and ornament of a decided Byzantine type, extremely deep in colour, being, by their style of treatment, termed mosaic glass. The 13th century, or early Gothic period, has single lancet lights, with medallions containing small figures surrounded by the typical 13th century foliage; or the windows were entirely of ornament in *grisaille*, arranged symmetrically—or with a flowing treatment of the vine growing from the recumbent figure of Jesse, and called the "Tree of Jesse"—with narrow bands of ruby or blue, and wide borders. These *grisaille* windows are of a greenish-white glass, with the ornament in outline, and the ground hatched with brown enamel in fine cross lines (figs. 1 and 2). The north transept window at York Cathedral, called the "Five Sisters," is typical of this *grisaille* glass. The finest examples, however, are at Salisbury, Canterbury, and Chartres Cathedrals. Later in the period, single figures were introduced under a simple canopy or gable, plain or crocketed, with an ordinary trefoil arch.



EARLY GRISAILLE GLASS, SALISBURY.

"QUARRIES," ENGLISH EARLY 16TH CENTURY. (S.K.M.)

"Quarry" glass, square or diamond in shape, with brown enamel details, was frequently used where simple masses were desired.

In the 14th century, the figures were larger and placed under canopies in each light of the mullioned windows; such figures in rich colours form a bright belt across the window, surmounted by the canopies, cusped and crocketed, and in strong yellow pot metal,

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ENAMELS.

Of the many decorative arts, enamelling is one of the most beautiful, having a singular charm of limpid or opalescent colour of great purity, richness and durability, and being capable of a most refined and varied treatment for the enrichment of metals.

Enamel is a vitreous or glass compound, translucent or opaque, owing its colouring properties to mineral oxides, or sulphides, a fine opaque white being produced by oxide of tin. These enamels require different degrees of heat in order to fuse them and to cause their adhesion to the metal. Enamels are divided into three classes:—CLOISONNE, CHAMPLEVE and PAINTED ENAMELS.

CLOISONNE enamel is that in which the cloisons or cells are formed by soldering thin, flat wire of metal upon a plate of copper, the cloisons being filled with the various enamels, in powder or in paste, then, in order to vitrify the enamel, it is heated in a kiln, if upon a flat surface, or by the aid of a blow-pipe if upon a curved surface.

Cloisonné was in use from the early dynasties in Egypt, many fine large pectorals having been found in the tombs. These usually have the form of a hawk and are of gold or bronze with well-defined cloisons, which were filled with carefully fitted coloured paste or glass, and this undoubtedly was the origin of the true or vitreous cloisonné enamel. Byzantine enamel is invariably cloisonné, and one of the most beautiful examples of this period is the Pala d'Oro of S. Mark's at Venice (A.D. 976, see page 123). Perhaps the Chinese and Japanese have carried this cloisonné to its greatest perfection in softness of colour and beauty of technique. The earliest Chinese cloisonné is of the Ming dynasty (1368-1643); this has heavy cast metal grounds with low toned colours and deep reds and blues. Under the Ch'ing dynasty, which commenced in 1643, the colours became brighter and the designs more refined.

Early Japanese cloisonné or "Shippo" was doubtless derived from Chinese or Persian sources, and it is characterised by extremely thin beaten copper grounds and the frequent use of a dark green ground in place of the dark blue of the Chinese cloisonné.

The Japanese cloisonné reached its culmination during the last century, when many splendid examples of refined and delicate enamels were produced, remarkable for their beautiful opalescent and translucent colour. Gold cloisons with opaque and translucent enamels were frequently inserted in iron or silver objects by the Japanese of this period.

An early example of English cloisonné is the jewel of King Alfred (page 121). A fine Celtic cloisonné treatment may be seen in the Ardagh chalice (page 121), where the cloisons were cut out of a plate of silver and embedded in the enamel while soft. The Celtic craftsmen also had a beautiful treatment of enamelling by engraving or

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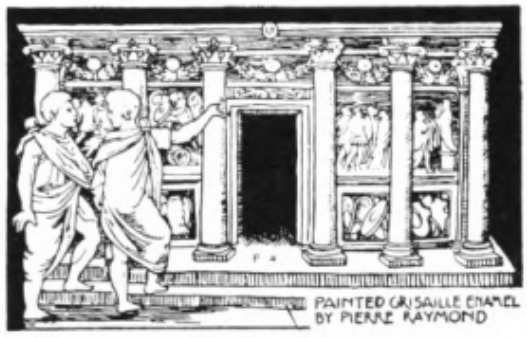
The enamel colours were now used as a pigment, and were painted and fired upon a copper plate. The enrichments in grisaille, or grey and white, were used upon a black, violet or dark blue ground, the grisaille afterwards being enriched with details of fine gold lines. These Limoges enamels have a splendid technique, but they lack the charms of the luminous colour and judicious use of enamels of the early Champlevé period. The most renowned masters of the painted enamels of Limoges were Penicand (1503), Courtois (1510), Pierre Raymond (1530-1570), and Leonard Limousin (1532-1574). About 1600-1650 Jean Toutin and his pupil Petitot produced some fine painted miniatures in opaque enamels upon gold, remarkable for delicacy and perfection of enamelling. In 1750 painted enamel was introduced into England and produced for about thirty years at Battersea by Janssen. The enrichment consisted of flowers painted in natural colours on a white ground. A similar enamel was also produced at Bilston in Staffordshire.


PAINTED GRISAILLE ENAMEL BY PIERRE RAYMOND

BATTERSEA ENAMEL

The finest enamels undoubtedly are those in which the enamel is used in small quantities, such as in the Celtic jewellery, the book-covers, and the Church and Corporation plate of the Gothic and early Renascence period, and the early Byzantine cloisonné, such as the Hamilton brooch in the British Museum, and the Pala d'Oro of S. Mark's, Venice, which was made at Constantinople for the Doge Orseolo in A.D. 976, and has 83 panels of fine cloisonné enamel set in a framework of gold.

The "*Plique à jour*," the "*Baisse taille*" and the Pertubghur enamels are fine examples of appropriateness of treatment with translucency or opalescence and richness of colour.

The Japanese cloisonné with its literal treatment of natural forms, and the painted enamel portraits of Francis I. and contemporary princes by Leonard Limousin, clever as they undoubtedly are, lack the depth and purity of colour obtained by the early methods. Frequently, however, the Penicauds, Nardou, and Jean I. and II. obtained some richness in the painted enamels by the use of "*Paillons*" or pieces of metallic foil which were afterwards flooded with translucent enamel.

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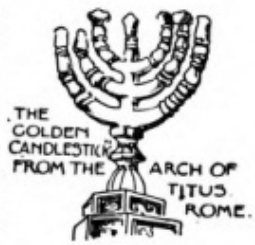
OLD AND SILVER,

With their intrinsic value, ductility, and beauty of colour, have long been associated with the decorative arts of the past, and the many splendid examples still in existence are a tribute to the culture and personality of the craftsman.

Beautiful early examples were found in 1859 with the mummy of Queen Aah-Hotep (1800 B.C., Cairo Museum), and consisted of bracelets, armlets, rings, chains, a diadem, a small model of a war galley, and a poniard, all of exquisite workmanship and of pure gold, enriched with jasper and turquoise vitreous pastes. At Petrossa, in 1837 (Bukarest Museum), some splendid gold objects of Byzantine workmanship were found, consisting of two neck-rings or Torques, a large salver, hammered and chased, a ewer, a bowl with figures in repoussé, four fibulæ enriched with precious stones, a gorget, and two double-handled cups (plate 40). At Guarrazar, in Spain, ten gold votive crowns of Gothic workmanship were found: one inscribed with the name of King Suintila (A.D. 630) is now in the Museum at Madrid; the others are in the Hôtel Cluny, Paris, the largest having the name of King Rescesvinthus (A.D. 670) in pendive letters.

Of silversmiths' work, the most important is the "Treasure of Hildesheim," found in 1868 (Berlin Museum), consisting of thirty objects, cups, vases, and dishes, beautiful in contour and admirably enriched with delicate repoussé work of the Greco-Roman period (plate 40).



Of the gold and silver vessels used by Solomon in the temple, we have only a representation of the seven-branched golden candlestick on the Arch of Titus, at Rome.

English work of an early date is rare, but there are two very beautiful examples, one, the gold ring of Ethelwulf, enriched with blue Champlevé enamel, now in the British Museum, and Alfred's jewel of gold, with cloisonné, opaque, and translucent enamels, with the inscription "Alfred me has worked": this is, with the single exception of the S. Ambrose altar-frontal, the oldest signed enamel extant (871-901, Ashmolean Museum, Oxford).

THE ARDAGH CHALICE IN THE ROYAL IRISH ACADEMY

Contemporary Irish work was even more skilful, and the Ardagh chalice of silver, with gold filigree and enamel enrichments, and the Tara brooch (plate 40) are fine examples.

The wealth and elaborate ritual of the mediæval church called

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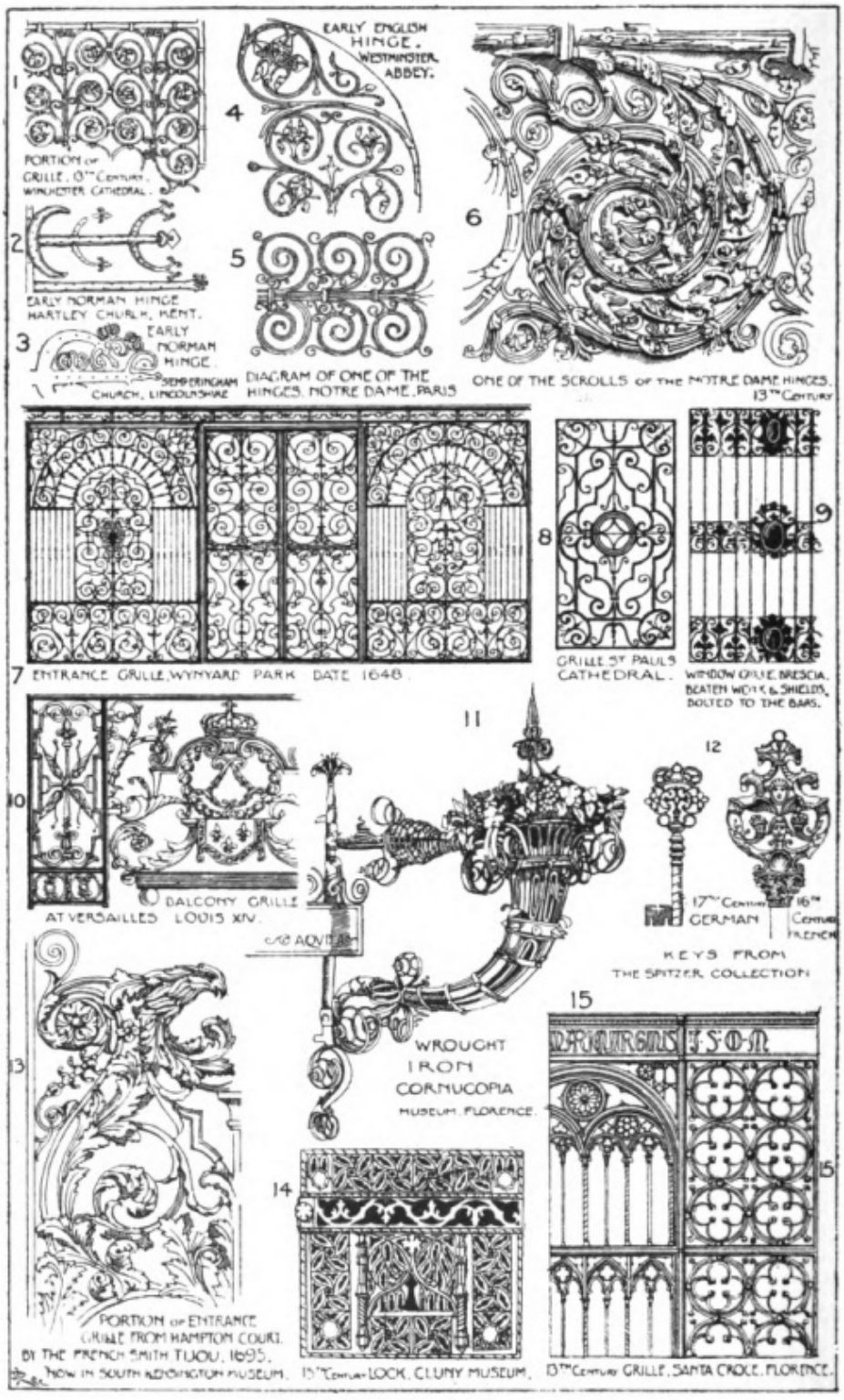

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WROUGHT IRON.

The decorative qualities of iron, with its strength, durability, and comparative cheapness, have rendered it one of the most useful metals in the applied arts. Many fine Norman hinges of wrought iron are still in existence, having a straight central bar or strap, with small scroll terminations; these central straps were strengthened with crescent-shaped pieces, terminating in small serpent forms, probably a survival of the Viking traditions. This form of hinge was succeeded by the early Gothic hinge, which was a series of spirals springing from the straight bar or strap, the spiral being welded or fastened with collars; these spirals were enriched with a three-lobed foliage, or trefoil, typical of the early Gothic period; fine examples of this hinge occur on the west door of Notre Dame, Paris, where this typical spiral has the trefoil leaf, with birds, dragons, and small rosettes in stamped iron. This stamped characteristic may be seen, but in a less degree, in the fine hinges of Leighton Buzzard Church, Eaton Bray Church, Bedfordshire, and the Eleanor grill in Westminster Abbey, by Thomas de Leghton, in 1294. In the 14th and 15th centuries, when panelled doors took the place of the earlier doors, this early Gothic style of hinge was not needed (fig. 5), so that we find no trace of it in that period, but the art of wrought iron was continued with the hammered and chiselled hinges and lock plates of the most varied and delicate workmanship, which enriched the beautiful Gothic chests of the 14th and 15th centuries. The simple wrought screen, which was so largely used in the 13th century was now elaborated, especially in Italy, and fine examples of quatre-foil grilles with massive wrought framing and a rich frieze of foliage, cupids, and animals in pierced and hammered iron are to be seen at the cathedrals of Orvieto, Prato, and Siena, dating from about 1337 to 1350, and at Santa Croce, Florence (1371); but it was in Spain and France that the screen reached its culmination. The Spanish screens or "Réjas" in the cathedrals of Seville, Toledo, and Granada have a fine range of turned and chiselled vertical bars some 30 to 50 feet high, with an elaborate frieze and cresting.

Beautiful wrought and chiselled gates were erected in France about 1658, for the Louvre and Royal Chateaux of Anet and Econeu. There are some fine wrought gates at S. Paul's and at Hampton Court by Jean Tijon, who published some drawings of them in 1694, and many good simple gates of the last century are still in existence in many parts of the country.

The wrought iron gate piers in St. George's Chapel, Windsor, with their architectural treatment of open panelling, cresting, and massive buttresses, are filed, bolted and riveted, and are splendid examples of Flemish workmanship, probably by Quintin Matsys (1450-1529).

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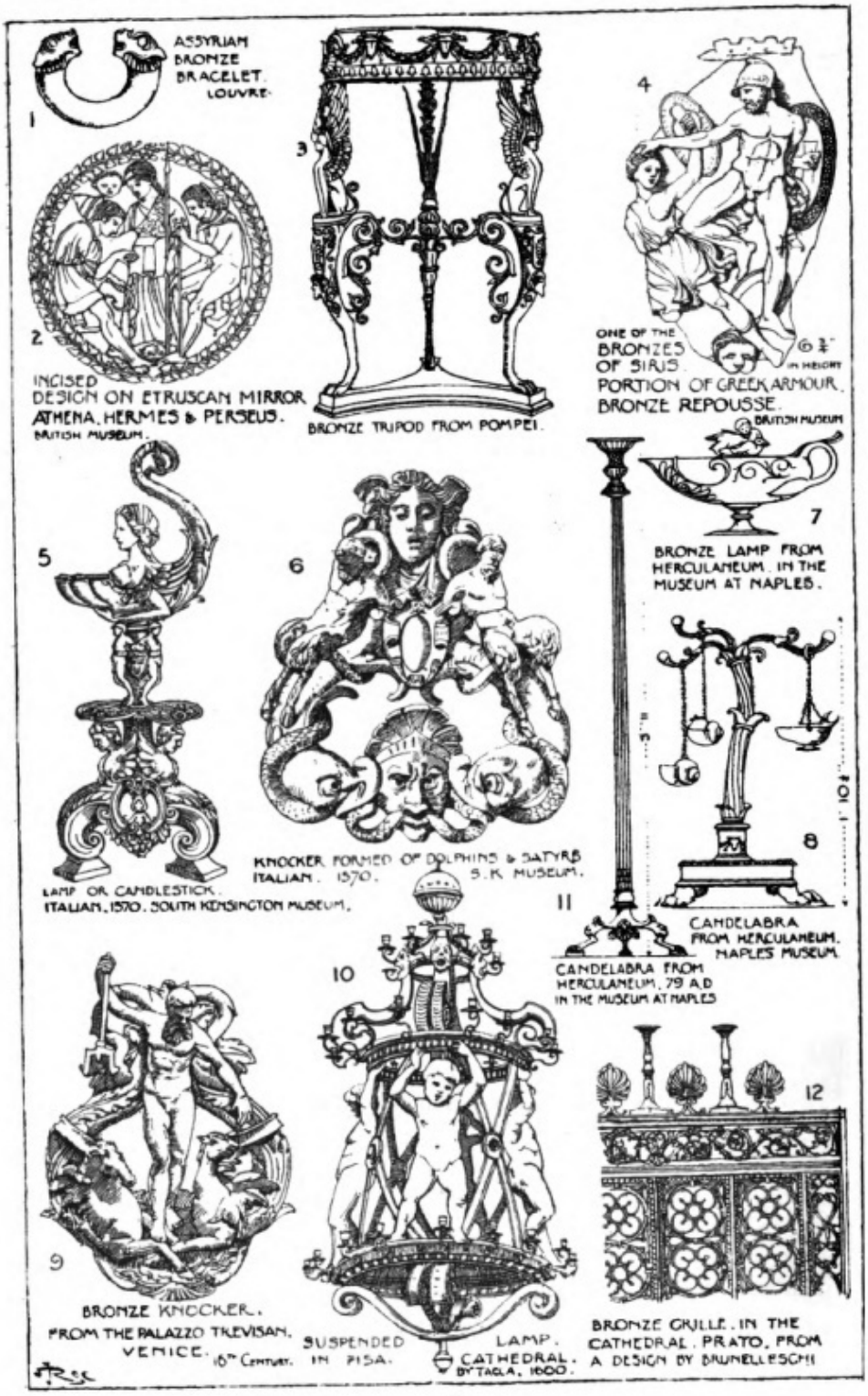

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RONZES.

Bronze, an alloy of copper and tin, has been in use from a remote period; its adaptability for casting, its durability and colour, render this material one of extreme beauty and usefulness. Among the many examples of antiquity are the 1,000 statues of Osiris, found in the temple of Rameses III., and the bands of figure subjects in relief from the Assyrian Balawat gates, now in the British Museum. In Greece, bronze was wrought with exquisite skill and refinement, and the name of Lysippos (340 B.C.), is usually associated with the finest statues.

Two beautiful repoussé bronzes (fig. 4), probably by Lysippos, found in 1820 near the river Siris, in Italy, are admirable examples of this period. Many Greek statues have been found in Pompeii and Herculaneum, of which the beautiful statuette of Narcissus is the best known, and many bronze heads are still extant with the eyes formed of ivory or beautiful stones and jewels.

Etruscan bronzes have a most expressive treatment of incised lines, which differentiates them from the repoussé work of the Greeks. The bronze mirrors with an incised treatment of classic mythology (fig. 2), and the cistæ, or toilet caskets, all found, with but few exceptions, at Palestrina, are typical of Etruscan bronzes. The finest example known is the "Ficoroni Cista" of the 3rd century, B.C. Its cylindrical sides are enriched with a representation of the "Argonauts," by Morios Plantios, and it is now in the "Collegio Romano" (see "Magazine of Art," 1880, and "Murray's Handbook of Greek Archæology"). Of small decorative bronzes, Naples museum alone has over 14,000 examples, consisting of candelabra, tripods (figs. 3, 7, 8, and 11), tables, chairs, and couches, which eighteen centuries ago were used by wealthy Roman citizens.

Early bronze equestrian statues are the "Nero" found at Pompeii (Naples museum), and the Marcus Aurelius at Rome (A.D. 175, plate 44). The four bronze horses, now in front of S. Mark's, at Venice, are probably of the time of Nero. Later examples are the "Gattamelata" at Padua, by Donatello (1453), the magnificent "Colleone" at Venice (plate 44), by Verrochio and Leopardi, and the "Louis XIV." by Girardon, cast by Jean Baltazar Keller in 1699, and destroyed in the French Revolution. Many fine bronze effigies are still extant, which replaced the earlier effigies of Purbeck marble, such as the Earl of Salisbury at Salisbury (1227), and the earliest recumbent figures in gilded bronze are those of Henry VI. (1272), and Queen Eleanor (1291), in Westminster Abbey, by William Torell, goldsmith of London. In Canterbury Cathedral is the fine effigy of the Black Prince (1376). The Richard II. and his Queen, in Westminster Abbey, are by Nicholas Broker and Geoffrey Prest (1395), and at Warwick is the magnificent Earl of Warwick, by William Austin and Thomas Stevens (1453).

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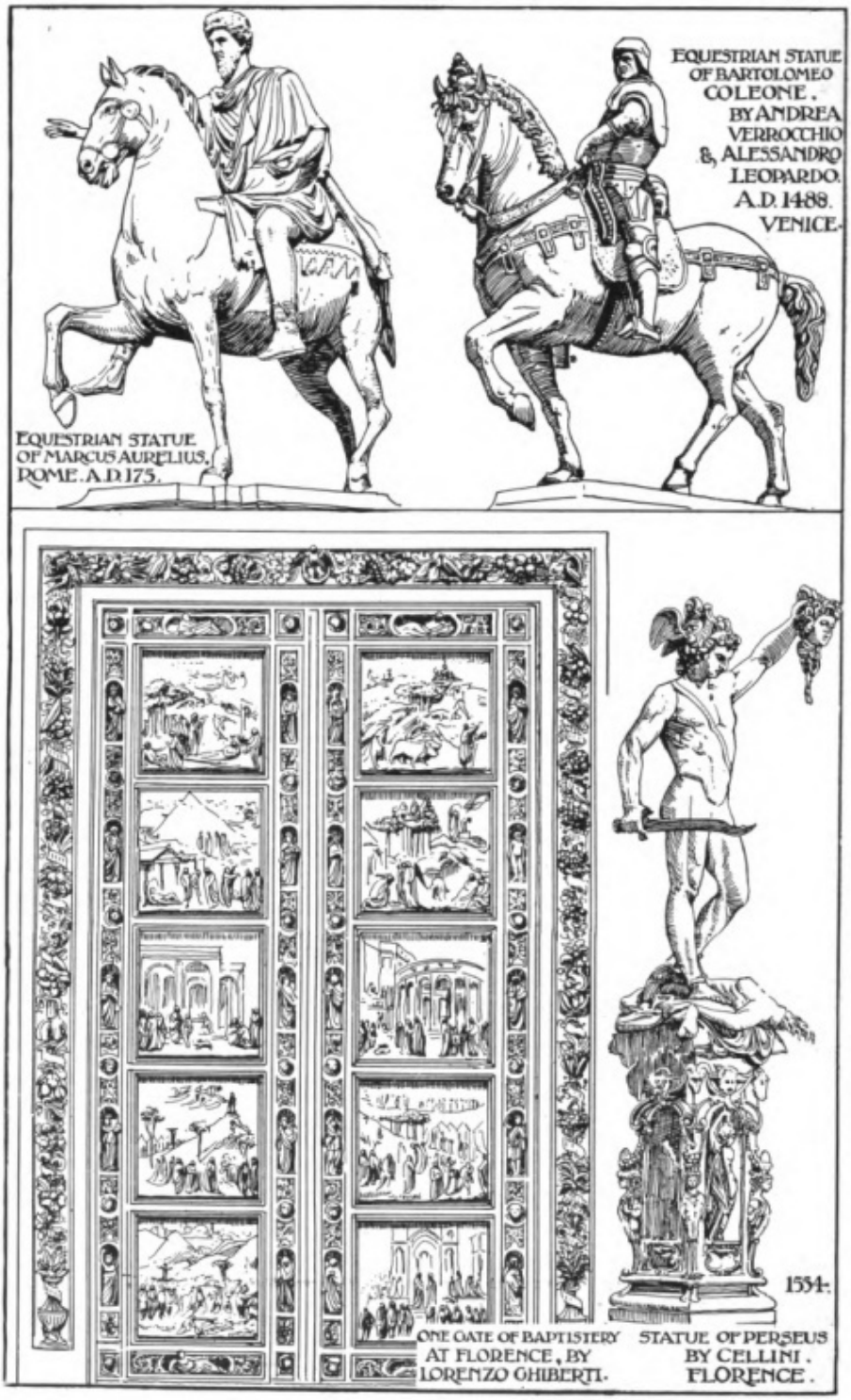

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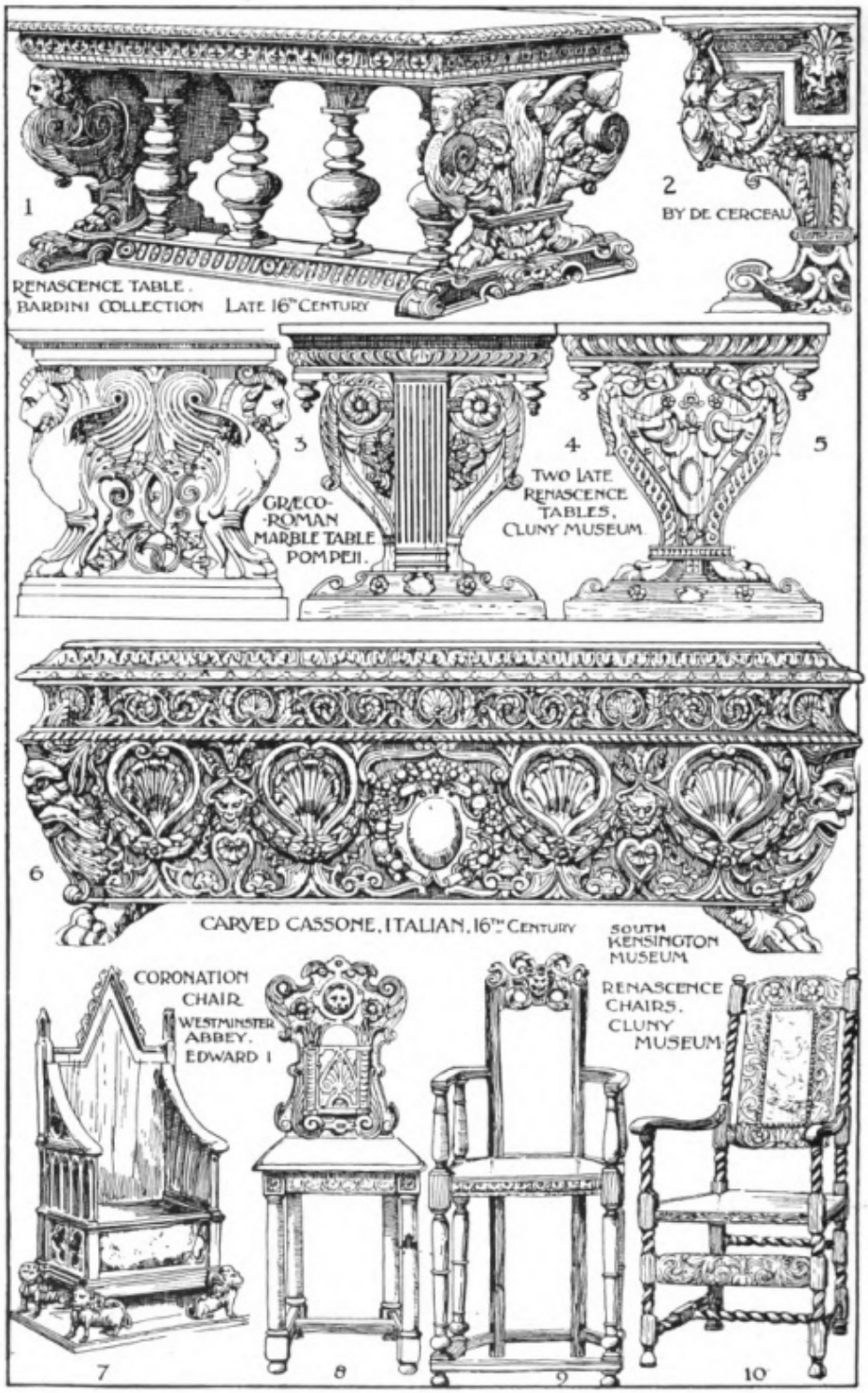

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DECORATIVE FURNITURE.

Caskets, chests, and cabinets, chairs, tables, couches, and bedsteads have been of universal use during many ages, differentiated in design and craftsmanship according to the culture, wealth, and customs of the people, and the versatility, inventiveness, and skill of the craftsman. Many materials have been used for furniture, the chief being wood of various kinds, which was selected for its constructive qualities, beautiful texture, grain, and colour, and its adaptability to carving and inlay.

The universal use of the chair has doubtless tended to preserve its typical form through many centuries, and though undergoing various

modifications, it has still retained its essential character as a seat. Numerous illustrations of early chairs are found on the carved reliefs of ancient Egypt and Assyria, and there are in the British Museum some early Egyptian chairs, one of which is of ebony, with uprights turned in the lathe, and inlaid with ivory. Many Greek chairs, remarkable for their simple and beautiful form, are shown upon the early Greek vases; and the Roman "Sella Curulis," or chair of senators and consuls, is represented on the Byzantine ivories (plate 46, fig. 9).

VENETIAN CHAIR 16TH CENTY

The Chair of S. Peter, of the 1st century A.D., which has enrichments of ivory and gold, is purely architectonic in form, and the same may be said of the coronation chair (fig. 7), which is the earliest example extant in England. The Gothic chairs, few of which remain, were of the box form, with carved linen-fold panels. During the age of Elizabeth, chairs were of oak, with turned supports, the back having an arcade in low relief or in open work. This form of chair was continued during the reign of James I., when the "Farthingale Chair" (chair without arms) was introduced. In the period of Charles I., walnut was introduced, and the chairs had twisted supports and rails, the back and seat being covered with pigskin

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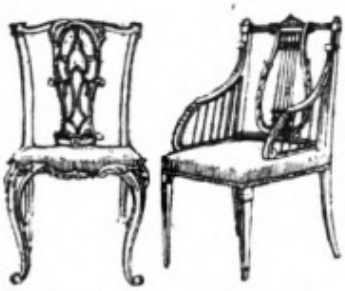
or with stamped and coloured Spanish leather. In the reign of Charles II. and James II., the twisted or the carved and scrolled form of legs were common, with the seat and portion of back in cane, and the back, cresting, and rails in richly-carved open work, similar to fig. 10. In the time of William and Mary, the long supports were turned, and the front supports and arms turned and scrolled, the back of the chair being of open work, or covered with plain or patterned velvets. The chairs with simple curved or cabriole front legs, the arms, seat, and back upholstered with cut velvets, are characteristic of the Queen Anne period.

With George II. and III., we come to the use of mahogany and the work of Thomas Chippendale, who published a work on furniture in 1754, 1759, and 1762. His chairs have frequently straight legs, with shallow sunk carving, or the carved cabriole leg and claw foot: the back is of open work of scrolls, strap-work, or ribbon-work, with delicate carving. Mathias Lock published a book on furniture in 1765 and 1768. In 1789 and 1794, A. Hepplewhite published a set of designs, which largely influenced contemporary furniture. Much of his work is refined and delicate in treatment and distinctive in form, such as his chairs with the shield-shaped backs. M. A. Pergolesi published a folio in 1777, and made some beautiful chairs for Robert Adam, with straight fluted legs and refined scrolled arms and back. Excellent chairs were made by Thomas Sheraton, with straight legs, turned, fluted, or enriched with delicate carving, or an inlay of coloured woods, and having a delightful reticence of form and treatment. Sheraton published in 1791 and 1793 a work on furniture.



CHIPPENDALE. SHERATON.

Early Gothic tables were of the trestle form, the ends being of two pieces, connected by the upper frame and a lower stretcher. The Renascence table retained this form (figs. 1, 2, 4, and 5), which was but a survival of the Greek and Roman marble table (fig. 3). The Elizabethan table had legs of a bulbous form, gadrooned or carved, with upper and lower rails. The oval Gate-leg table, with spiral or turned legs, is characteristic of the early Stuart period. Chippendale frequently used the straight legs and carved or open rails, with a raised fret-work edge round the edge of the table. Sheraton's tables were frequently inlaid with different coloured woods, or of satin-wood veneer, painted with flowers or wreaths, and polished by hand. The ornament of Sheraton is seldom original, but founded upon that of Adams (plate 26), consisting of rosettes, urns, scrolls, and festoons. The artists Cipriani, and Angelica Kauffman, are known to have decorated furniture for the brothers Adam.

Early cupboards were of oak, with pierced and carved tracery

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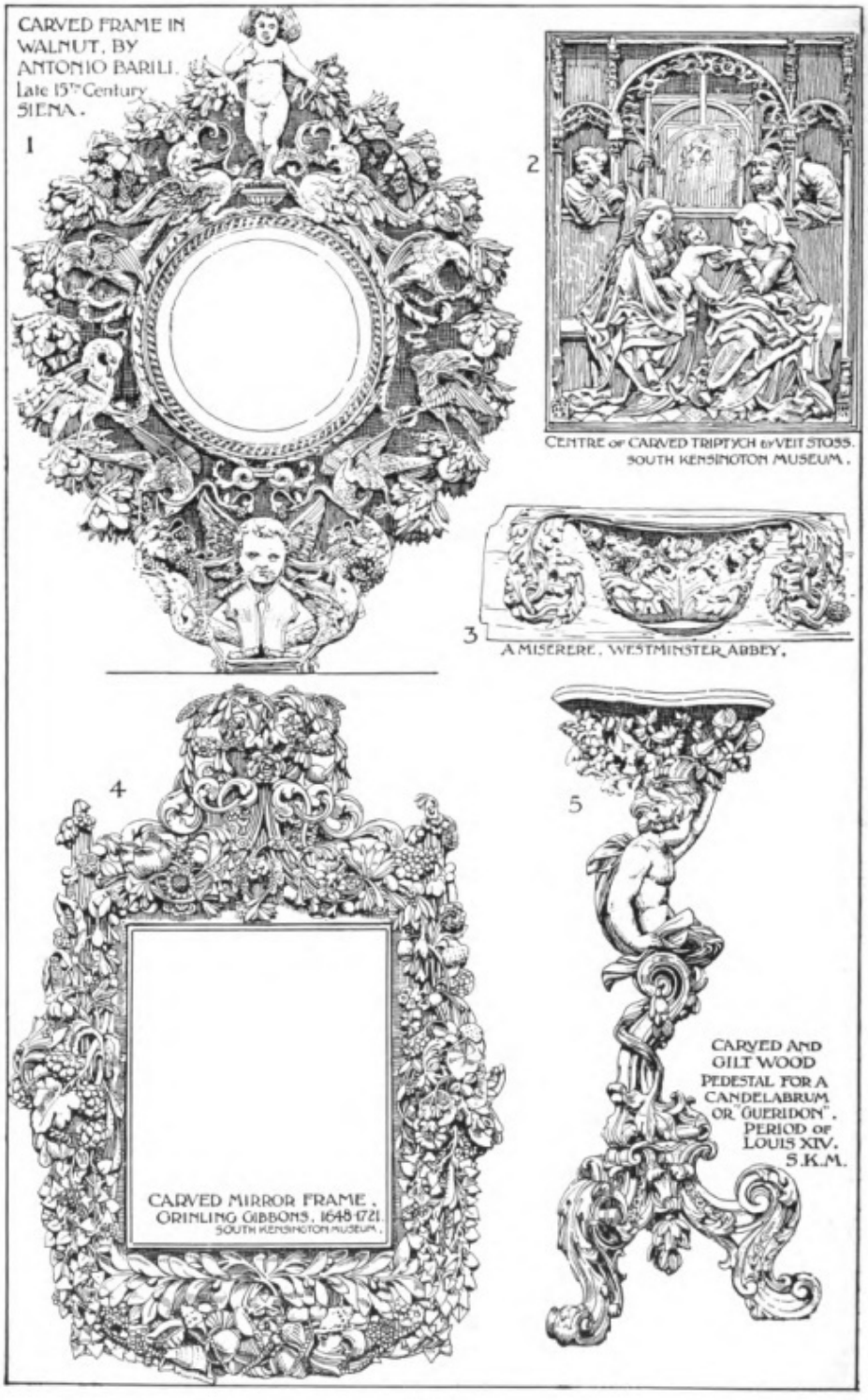

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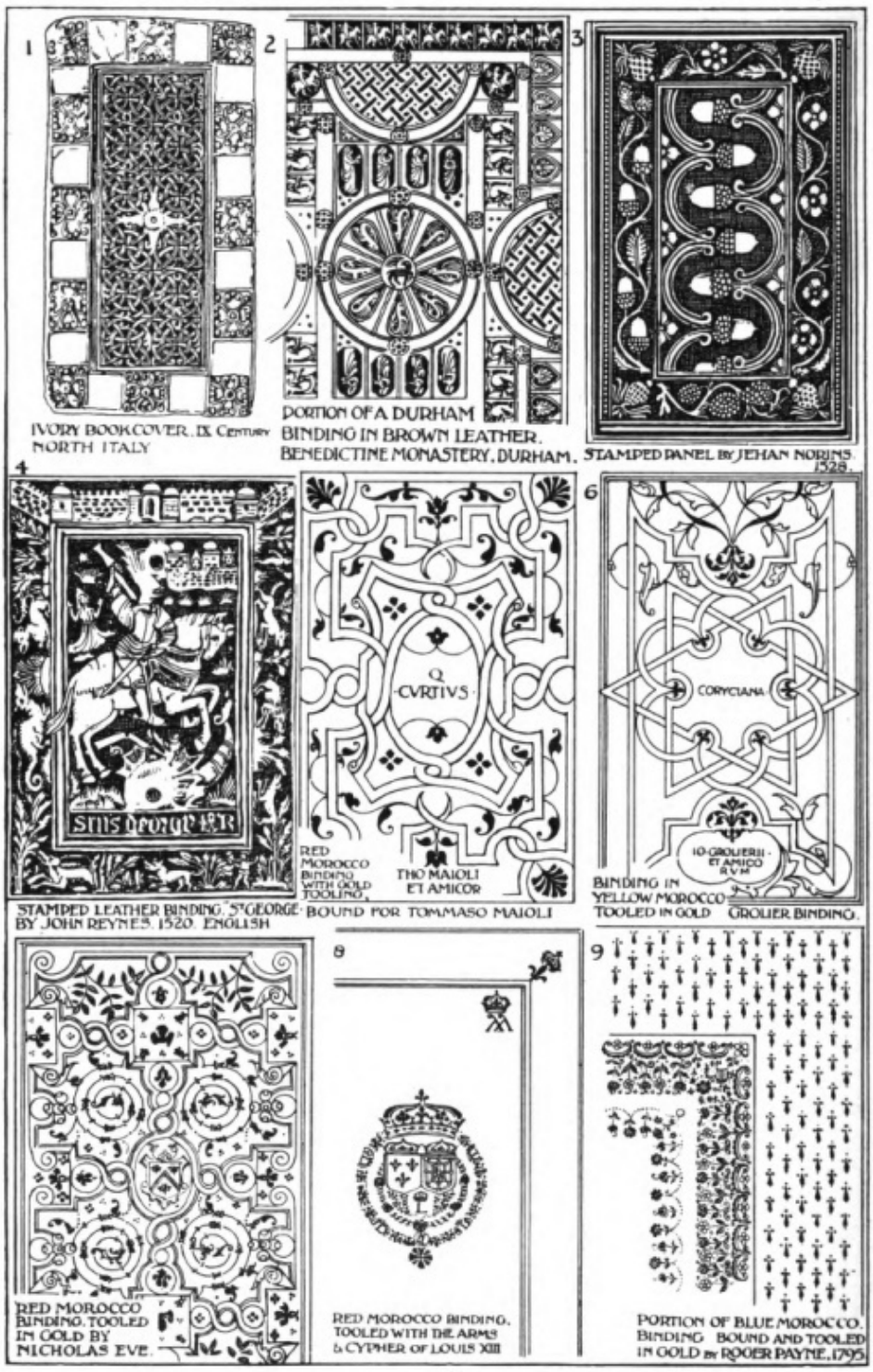

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and acanthus foliation of its architecture and decorative arts, the textiles are quite distinct in style, having the characteristics of the Sicilian, Persian, and Indian ornament.

In the 12th century, Roger II., the Norman King of Northern Sicily, took Corinth and Argos, and carried many weavers and embroiderers from Greece to Sicily, and established them at Palermo, where they quickly assimilated the Sicilian style, and produced many fine fabrics during the 13th and 14th centuries.

SICILIAN FABRIC.

The crusades now began to influence the arts. In 1098, Antioch was taken, and the spoil distributed through Europe. In 1204, Constantinople was taken by Baldwin, Count of Flanders, and the Venetian Doge, Dandolo, and the vast spoil of textiles distributed. It was doubtless under the influence of the crusades that the Sicilian weavers of the 13th and 14th centuries produced the many beautiful fabrics enriched with winged lions, foliated crosses and crowns, rayed stars, harts and birds linked together, and with the introduction of armorial bearings. Early in the 14th century this splendid tradition was introduced into Italy, and at Lucca many beautiful fabrics were produced, having the same characteristics and technique as the Sicilian fabrics.

The cloak upon the recumbent bronze figure of Richard II., in Westminster Abbey, has a pattern of foliage, with couchant harts and rayed stars, and was most probably copied from the original silk made for Richard at Lucca or Palermo.

The beautiful materials and designs of Indian textile fabrics are indicative of the love of nature and the splendour of colour of a remote antiquity. Though influenced at various times by Greek, Persian, and Arabian traditions, India still preserved an indigenous ornamental art of remarkable freshness and vitality, the designers choosing their own flora and fauna with rare selective power and adaptive qualities. With an instinctive feeling for ornamental art, aided by the splendid colourings of the native dyes, they produced textile fabrics of silks, brocades, and gold and silver lace remarkable for richness and perfection of material, beauty of design, and harmony of colour.

The Indian pine is a familiar form of enrichment, differentiated

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Plate 50.

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Plate 51.

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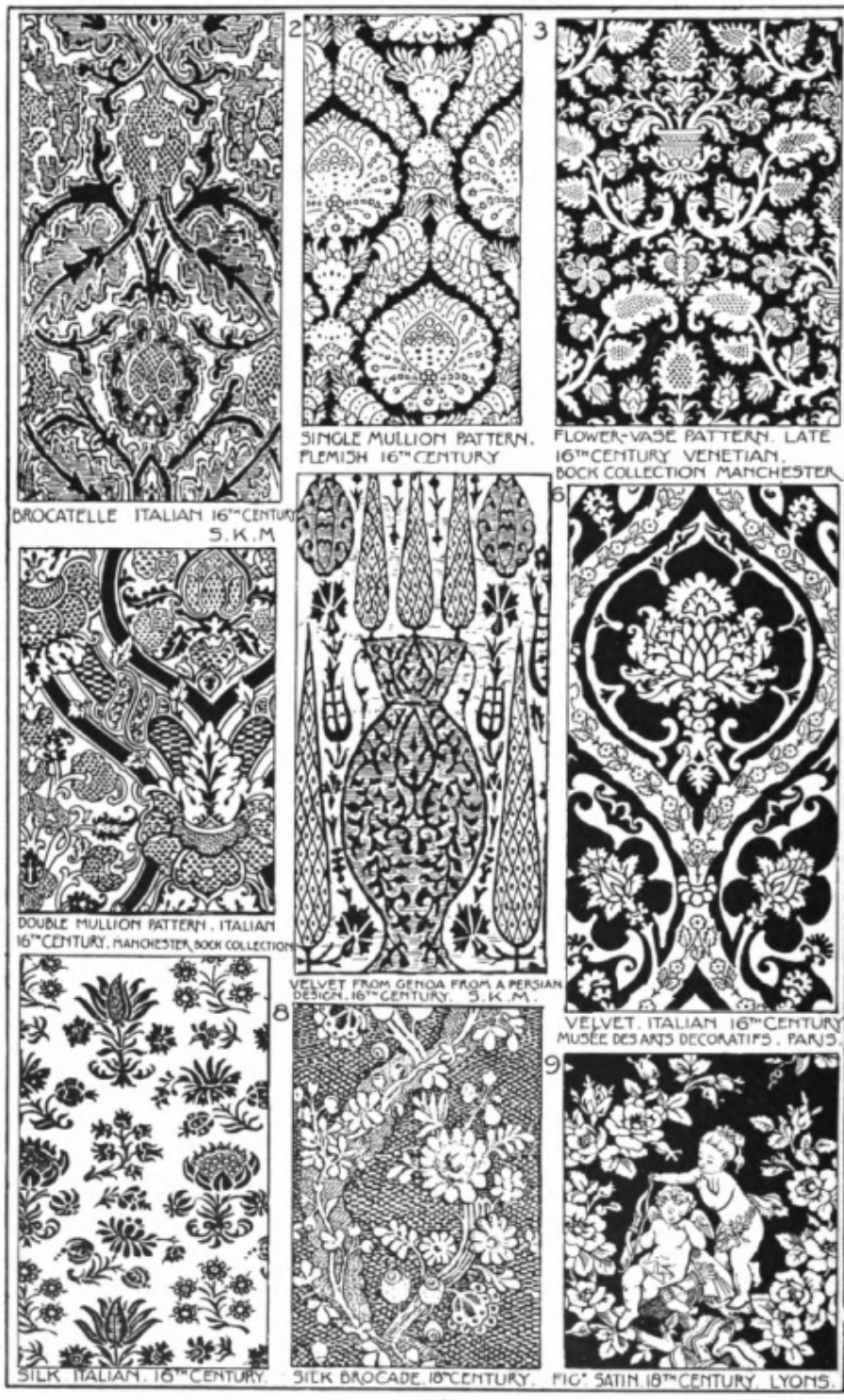

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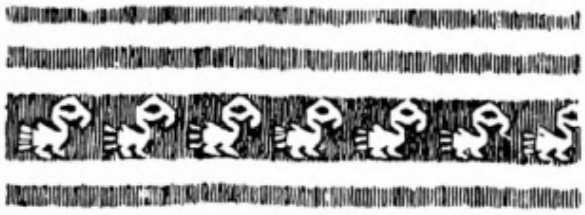
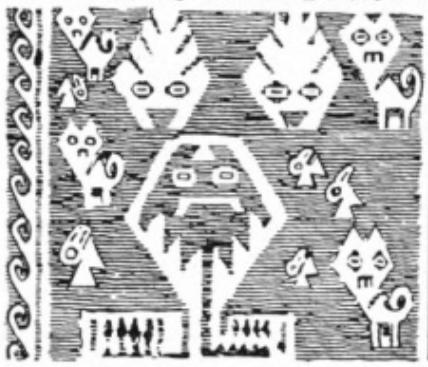
to the vitality and civilization of a people remote from all Asiatic or European influences.

These Peruvian textiles are remarkable for the absence of the beautiful flora of Peru as elements for decoration. The fret is a frequent form of enrichment. The wave scroll so typical of Greek work is also a remarkable element in Peruvian ornament, and illustrates the singular development of the same ideas and aspect of form among people so remote from each other as the Greeks and Peruvians. But the patterns that sharply differentiate Peruvian examples from all other styles are the conventional treatments of figures, birds, fishes, and animals. The llama is conspicuous in many patterns, but the bird forms are the most remarkable, having many variations of type and treatment.



TAPESTRY IN WHITE & BROWN.



DOUBLE CLOTH IN BROWN & YELLOW.

KEY PATTERN IN BROWN & YELLOW.

DOUBLE CLOTH IN BROWN & YELLOW.

It is difficult to fix any date for these Peruvian examples, but as it is known that during the reign of Inca Pachacutic (circa 1390) the ceramic art was at its best, we may assume that the sister art of weaving reached its perfection about the same period, and continued until the Spanish Conquest in the 16th century.

Many of the fabrics are of double cloth, of deep brown and pale straw colour, and show the same colour and pattern on both sides of the cloth. Some of the fabrics are tapestry woven, having short strands of coloured wool inserted into the fabric by the aid of the needle, and they somewhat resemble the Gobelin tapestry in their method of production.

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ERMS USED IN ORNAMENTAL ART.

Ornament is the means by which Beauty or Significance is imparted to Utility. It is either Symbolical or Æsthetic. Symbolic ornament consists of elements or forms chosen for the sake of their *significance*—Æsthetic ornament consists of forms or elements chosen for their *Beauty* alone, or their power of appealing to the senses.

Of the historic styles of ornament, the Egyptian, Assyrian, Byzantine, Scandinavian, Persian, Indian, Gothic, Polynesian, and much of the Chinese and Japanese are symbolical, having elements and ornamental details chosen for their significance; while in the Greek, Roman, and Renascence ornament the purely æsthetic motive is characteristic.

Ornament, again, may be natural or conventional—Imitative or Inventive. The terms "natural" and "imitative" have the same significance—*viz.*, the exact copying of natural forms, so that they become principal, not secondary as perfect ornament should be. Conventional ornament is the adaptation of natural forms to ornamental and technical requirements, and is seen in its greatest beauty in the frank treatment by the Indians and Persians of their flora and fauna for the decorative enrichment of their textile fabrics, pottery, and jewellery.

Inventive ornament is that which consists of elements not derived from any natural source; the Moresque style is a good example of this type.

The *elements* of ornament are the details or forms chosen for ornamental motives, and the *principals* of ornament are the arrangement of these forms and details; they comprise repetition, alternation, symmetry, radiation, balance, proportion, variety, eurythmy, contrast, intersection, complication, fitness, and utility.

Repetition is the use of elements in a continuous series; *Alternation* is the repetition of an element at intervals, with others intervening; *Symmetry*: when the leading lines are equal or similar (or reciprocal) on both sides; *Radiation*: when the lines spring from a centre, for example, a bird's wing and the flower of the daisy; *Balance* and *Proportion*: when the relation and harmony of parts is based upon natural laws; *Variety* implies difference in the details, with respect to form or type; *Eurythmy* signifies rhythms or harmony in ornament; *Contrast* is the arrangement in close proximity of colours or forms of opposite characters, as the straight line with the curve, or light with dark; *Intersection* is the crossing of the leading lines, the Arabian, Moresque and Celtic styles are examples of this principle; *Complication* is the effect produced by elements so arranged as to be more or less difficult to trace with the eye alone: as in the Japanese key and the Moresque star pattern. *Fitness* and *utility* as their names imply are essentials in all good periods of ornamentation.

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PRINTED INITIAL LETTERS.

The initial letter, with its beauty of line and colour, its emphasis and distinctive character, was a frequent form of enrichment to the beautiful early manuscripts, and when, in the latter part of the 15th century, the printed book began to supersede the MS., the "Illuminator," or rubricator, was still called upon to enrich the printed page with his beautiful initials. Frequently, however, the rubricator was not called upon, with the result that many of the early printed books are still without their intended initial letters, as we find in many of the magnificent folios issued from the Aldine Press at Venice about 1500.

When the printed initial first made its appearance, it necessarily followed the type and character of the illuminated examples, as in the fine B (page 31), from the Mainz Psalter[1] in red and black, and which is the earliest example known (1457), printed with the text, and this initial is distinctly based upon the earlier illuminated capital.

Illustrations are given on pages 5, 7, 9, 21, 81, 93, 107, 131 of eight beautiful printed initials from the "Suetonius" of 1740[1] by the Germans, Conrad Sweynheym and Arnold Pannartz, who in 1456 introduced the art of printing into Italy, at the Benedictine Monastery at Subiaco, near Rome. These initials, with their distinctive and refined Roman type, and delicate interlacing scrolls, are admirable examples of the early printed initial. They were afterwards acquired by Riessinger, who used them in 1480-98 for his printed books at Rome. The five examples, with well-designed interlacings, given on pages 35, 37, 53, 85, 91 are taken from the fine "Euclid" by Ratdolt, of Venice, printed in 1481.[1] Three excellent initials from the beautiful printed books by Aldus Manutius, at Venice,[1] are given on pages 3, 87, 113.

Well-designed Gothic initials are given on page 13 from the "Fasciculus Temporum" (1481) by Ratdolt of Venice, the D (page 49) by Antonios Campigollis (1475), and the N from the "Life of Campanus," by M. Feronis, at Milan (1495, page 38). Eight beautiful Gothic initials given on pages 25, 73, 125, 135, 141, 153, 154, and preface, having well-spaced convential foliage and flowers, are taken from "Froissarts Cronycles," printed in London by Richard Pynson (1523).[1] Other examples are the two from the Golden Bible (pages 33, 95) and the C on page 97 from the "Missale Traijectense" (1515), showing an intricate interlacing of the letter itself, the same characteristic appearing in the Romaunt of the Rose given on pages 69, 111, 117, 139, and in the preface.

Two rich examples of foliated initials by Israel van Meckenen (1500), are given on pages 55 and 79. The P on page 29 is from Venice (1498); the N, page 45, is dated 1510; the G, page 121, is from the Flemish woodcut alphabet of 1464 (British Museum); and the T on page 150 is from the Basle woodcut copy of this alphabet.

The Italian examples on pages 127 and 151 illustrate the decorative use of the figure in the early 16th century initials.

[1] From the original editions in the John Rylands Library.

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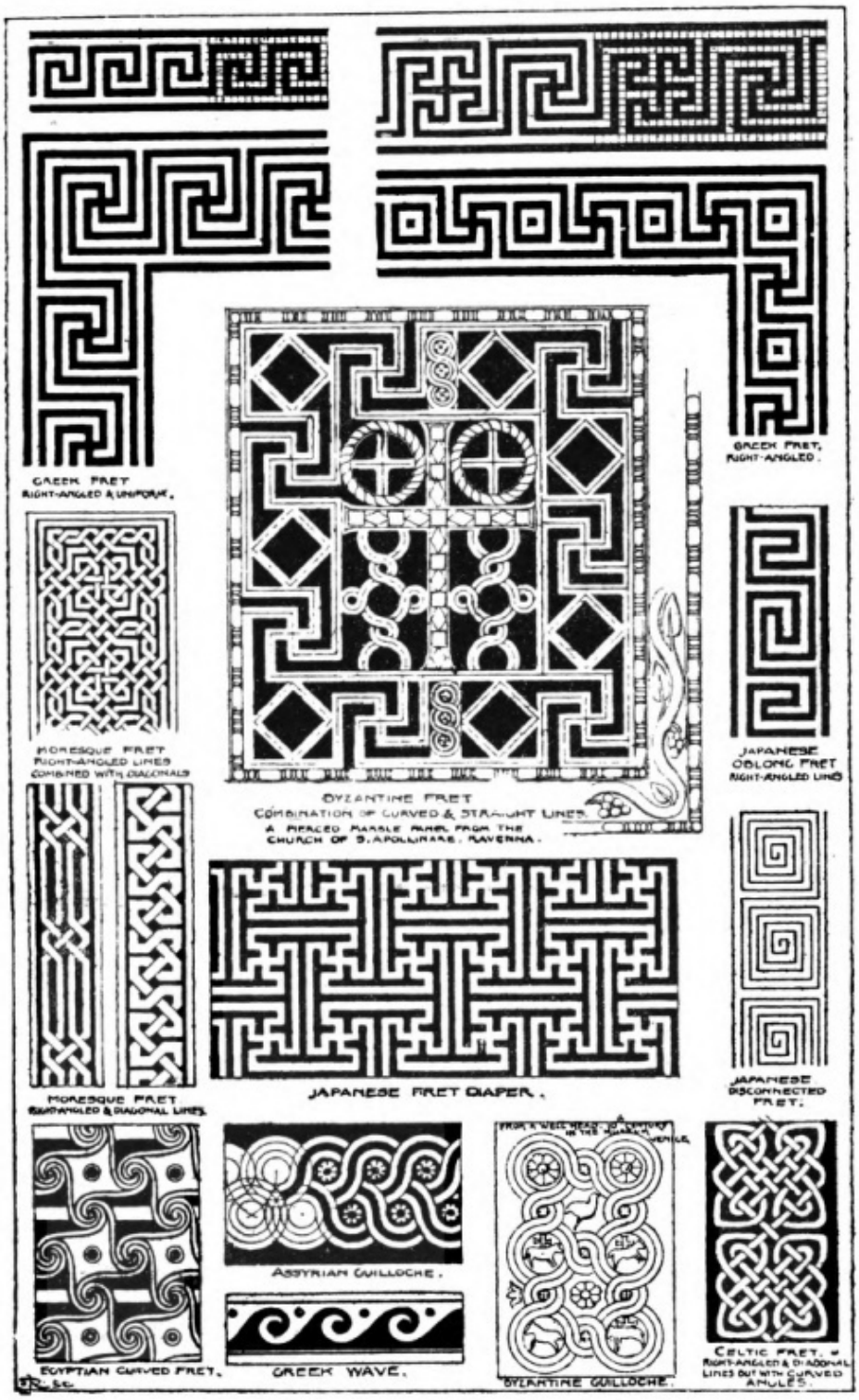

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FRETS.

The remarkable universality of the fret, the simplicity and rhythm of detail, its adaptability and usefulness for surface enrichment, have made the fret one of the best known forms of ornamentation. It was used in the surface decorations of the tombs of Egypt, the temples of Greece, and the civic and domestic buildings of Rome.

The Greek form with its right-angular and equally-spaced keys, was used on the simple abacas and plain fascias of the Dorian architecture, in bands upon the painted vases, and in a concentric form when used in the interior of the red-figured circular cylix. The Romans, without imparting freshness used the same right-angled key-pattern, chiefly as borders for mosaic pavements and upon the horizontal soffits of their architecture. The Byzantine, using the same type in conjunction with the cross and circle, gave more significance to the fret.

The Arabian fret differs in the use of the oblique line, together with the right angled key, obtaining a wonderful degree of complexity and richness.

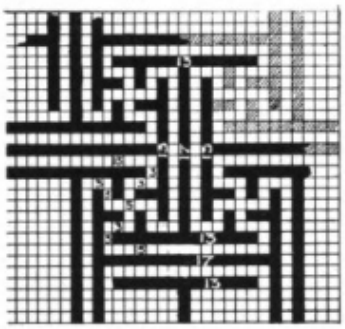
WALL MOSAIC OF COLOURED MARBLES

The Celtic fret is chiefly a diagonal one but the recurrent angle is rounded to a curve.

Chinese and Japanese frets are usually right-angled, and are used in great profusion, often in a secondary field or background.

The Japanese key or "*Fret diaper*" is used in the greatest profusion; it is used alike on silks and brocades, damascened in metal, in cloisonné enamel and in lacquered work, and is frequently arranged in irregular shaped compartments or medallions.

The Greek continuous fret border is rarely used by the Japanese who generally use the disconnected or irregular fret. A similar irregular fret border was used by the Peruvians (page 101 and 147), by the Mexicans, and by the natives of Polynesia.



The Assyrian and Byzantine guilloche is but a curved fret, but additional interest is given by the introduction of radiating forms in the principal interstices of the fret.

The simplest form of construction for frets, or key pattern, is to use squared or ruled paper. The Chinese or Japanese key is comparatively simple to construct by making the double T 17 squares in length with arms at each end of 13 squares, and placed alternately at right angles to each other.

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THE ARCHITECTURAL CAPITAL.

The form and enrichment of the Architectural Capital offer one of the most interesting and instructive fields of study in the history and evolution of architecture and ornament. The remarkable persistency of the capital as a distinctive feature in architecture may be traced through many centuries, though differentiated by climatic conditions and racial influences, yet still preserving a remarkable similarity of form and enrichment among the various nations of the earth.

The function of the capital is to sustain and transmit to the columns the weight of the entablature or archivolt, and the beauty and appropriateness of the capital depends (1) upon this functional treatment of strength; (2) upon the beauty of profile or mass; (3) upon the enrichment and proportion of the capital.

The dignified Doric capital of the Greeks illustrates these functions and conditions by its perfect adaptability, simple functional strength, beauty of profile, appropriateness of enrichment and proportion and harmony of parts, qualities which are essential to beauty of architecture. In the Parthenon (B.C. 438) we have the finest treatment of this capital—a treatment full of dignity, reserve, and unison of profile (plate 4). The many examples of the Doric Order in Greece and her colonies attest to the esteem in which this order was held by the Greeks. The Indian capital (plate 30) exhibits the same functional treatment by the use of brackets or modillions, which undoubtedly are a survival of a wooden construction, and which are typical of Eastern architecture.

The remarkable persistency of the profile and enrichment of the capital extending through a period of 4,000 years may be illustrated by a series of diagrams of typical examples. The profile of the capital has not varied to any appreciable extent in the examples here given, and the enrichment of the bell is remarkable for its persistency, though differentiated by racial influences. The Corinthian capital, with its volutes and acanthus foliage, is but the architectural continuity of the Egyptian capital. The only pure Greek example of this order is from the monument of Lysicrates, but the Romans continued the tradition, assimilating and elaborating until they produced the magnificent capitals of the portico of the Pantheon and the temple of Castor and Pollux. In these examples the leaves are arranged in series of two rows of eight leaves each, the volutes springing from sheaths and stems between the leaves which support the angle of the volutes. The

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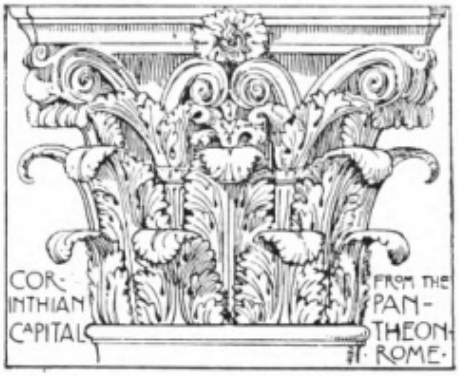
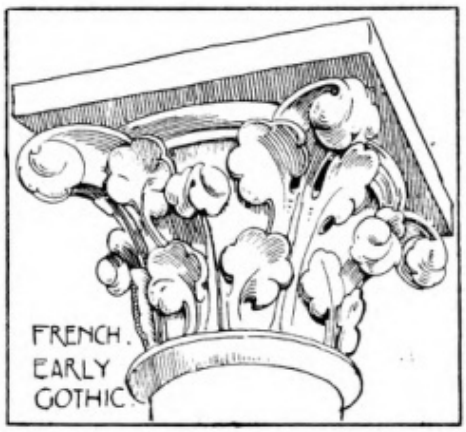
example of early French Gothic has similar characteristics and illustrates the continuity of style.

The Ionic capital (page 10), though one of the most persistent in the history of architecture, never reached the architectonic perfection of other capitals. This was undoubtedly owing to the wooden origin being incompatible with the necessities of stone and marble. There is a want of unity between the volutes and ovolo of the capital; in brief, it has neither coherence nor harmony of parts. The exquisite craftsmanship of the capitals of the Erectheum, with their anthemion enrichment of the greatest purity, the beauty of the ovolo and the subtility of the volutes compensates to some extent for the lack of unison (plate 4). The enrichment of the architectural capital is no doubt a survival of the primitive custom of binding floral forms round the simple functional capital, these forms being afterwards perpetuated in stone or marble.

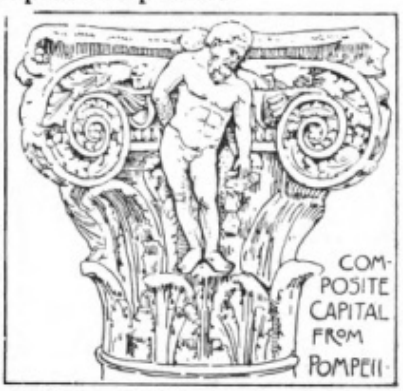




In early Corinthian examples these floral forms were frequently of beaten metal, which, in turn, gave place to the beautiful marble foliage of the Greeks and Romans.

That the ancients used metal work in their capitals we have abundant proof. In the descriptions of the building of Solomon's Temple we read of "Two chapiters of molten brass to set upon the pillars, and nets of chequer work and wreath of chain work to set upon the top of the pillars."

The composite capital is deficient in coherence and unity of parts, having the same defects as its prototype the Ionic. The annexed illustration from Ancient Rome gives an unusual treatment by the introduction of the human figure in the centre of the face of the capital.



The Byzantine capital differs from those of the Greeks and Romans in its marked symbolism of detail and the prevalence of the cushion form. Functionally, this type of capital is admirable, yet it lacks the vigorous upward growth of the Egyptian and early Gothic capitals.

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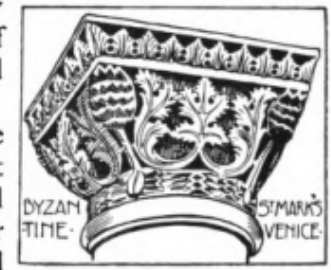
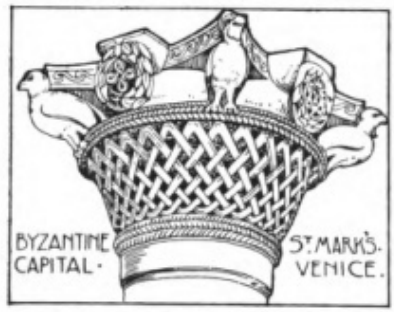
The Byzantine capitals have a wonderful complexity and variety of detail, such as interlacing circles and crosses with their mystic symbolism, basket work, chequered details, and the traditional sharp acanthus foliage of the Greeks.

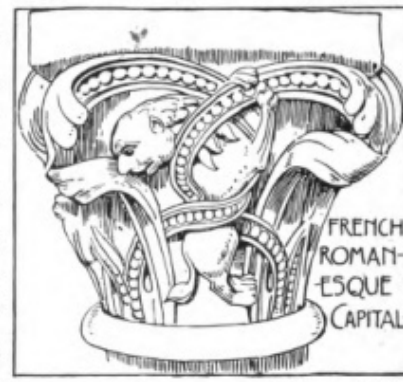
These features are seen in the greatest profusion at S. Sofia at Constantinople; S. Apollinare and S. Vitale at Ravenna, and S. Marco at Venice. These splendid capitals of a splendid period are exceedingly beautiful in fertile inventiveness of enrichment, and show the assimilative power of the Byzantine craftsmen. The abundant use of chequer work, wreaths of chain work, and of lily work in Byzantine capitals, many of which are figured in Ruskin's "Stones of Venice," show the continuity of style and tradition in architecture.



The Byzantine capitals have the square abacus, usually consisting of a simple fillet and chamfer enriched with the billet, dentil or star pattern. The Dosseret, a singular adjunct to the capital, was introduced during this period; it was a cushion-shaped or cubicle stone placed upon the abacus of the capital to give additional height (plate 11).



The Byzantine influence is seen upon the Norman capitals with their square abacus of fillet and chamfer, and the cushion profile of capital. Some remarkable Siculo-Norman capitals are in the cloisters of the Benedictine Monastery of Monreale in Sicily (A.D. 1174-1184). The great fertility of inventiveness in the 200 capitals, their storiation, the intermingling of figures, birds and animals with the classic and Byzantine foliage makes this cloister one of the most remarkable in the history of the world. The Arabian capital, which frequently shows the traditional volute, differs from the typical bell-shaped form in its marked squareness of profile with flat or low reliefs enriched with colour.



The early Gothic capital is one of the most vigorous and beautiful.

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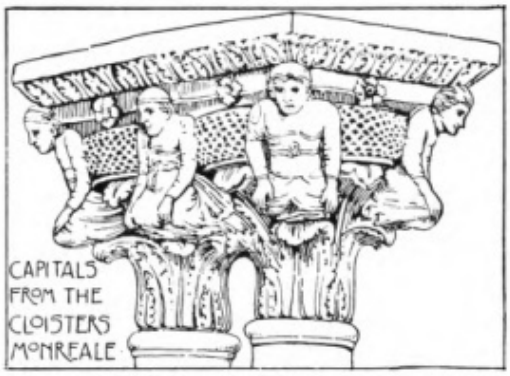
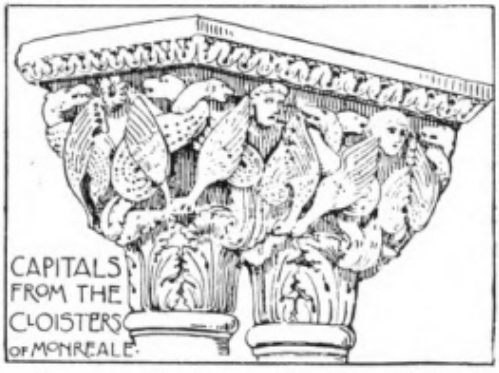
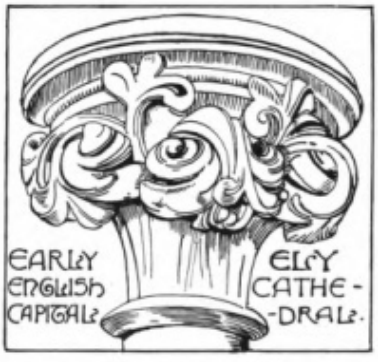
The perfect adaptability of its foliage to stone carving, the significance of its detail as emblematic of the Trinity, the spiral growth of its foliage, and the vigorous contrast of light and shade are the chief characteristics of this period. Lacking, perhaps, the delicacy or variety of detail of the Byzantine period, or the later Gothic work, it excelled them in the appropriateness of its enrichment, which is more beautiful in the early English examples with their circular abacus than in contemporary French capitals where the square abacus was prevalent. The transition from the circular column to the square abacus was always felt to be a difficulty, and was rarely overcome, but in the circular abacus of the early English capitals we have a break in the continuity of the style of the capital.

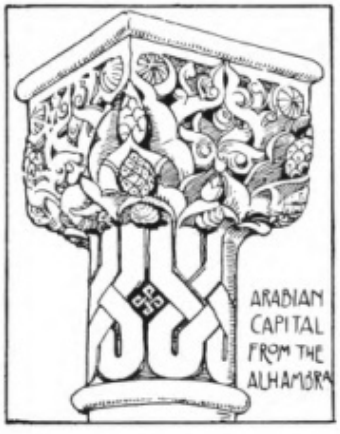

CAPITALS FROM THE CLOISTERS MONREALE


CAPITALS FROM THE CLOISTERS OF MONREALE

The English foliage of this period differs from the French in the use of a deep mid-rib and simple


EARLY ENGLISH CAPITAL

ELY CATHE-DRAL.


ARABIAN CAPITAL FROM THE ALHAMBRA

trefoil leaf. The French examples have a less pronounced mid-rib, and the leaf is convex in form and divided into three lobes, and the foliage adheres more closely to the bell, consequently the brilliant play of light and shade which is so characteristic of early English work, is generally absent from French examples (fig. 12, plate 17).

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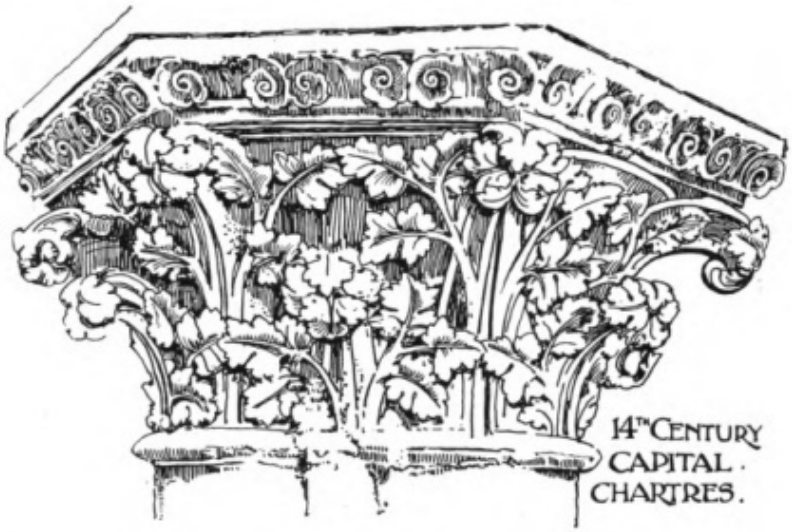
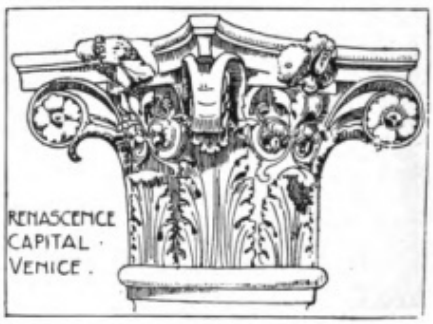
The decorated Gothic capitals differ essentially from those of the early Gothic period, a more natural type of foliage being used, consisting of the briony, maple, mallow, and oak. This foliage was carved with singular delicacy of touch and grace of profile, and is beautiful in its modelling and play of light and shade, yet frequently the capitals are trivial in conception and arrangement, lacking that architectonic character which is so essential to all architectural constructive features.

The perpendicular, or late Gothic capital, was usually octagonal in form with square conventional foliage of the vine, showing a marked decadence in tradition and craftsmanship.



The Renascence capital was frequently marked by a fine feeling for profile, splendid craftsmanship, diversity of enrichment, and vitality of conception, more especially in Italy, where the tradition of architecture culminated in the works of such remarkable men as Leon Battista Alberti, Bramante, Baldassare Peruzzi, San Micheli, Serlio, Palladio, and Sansovino.



The tradition was worthily carried on in France by Pierre Lescot, Jean Bullant, Philibert de Lorme, and De Brosse, and in England by Inigo Jones, Wren, and Chambers.

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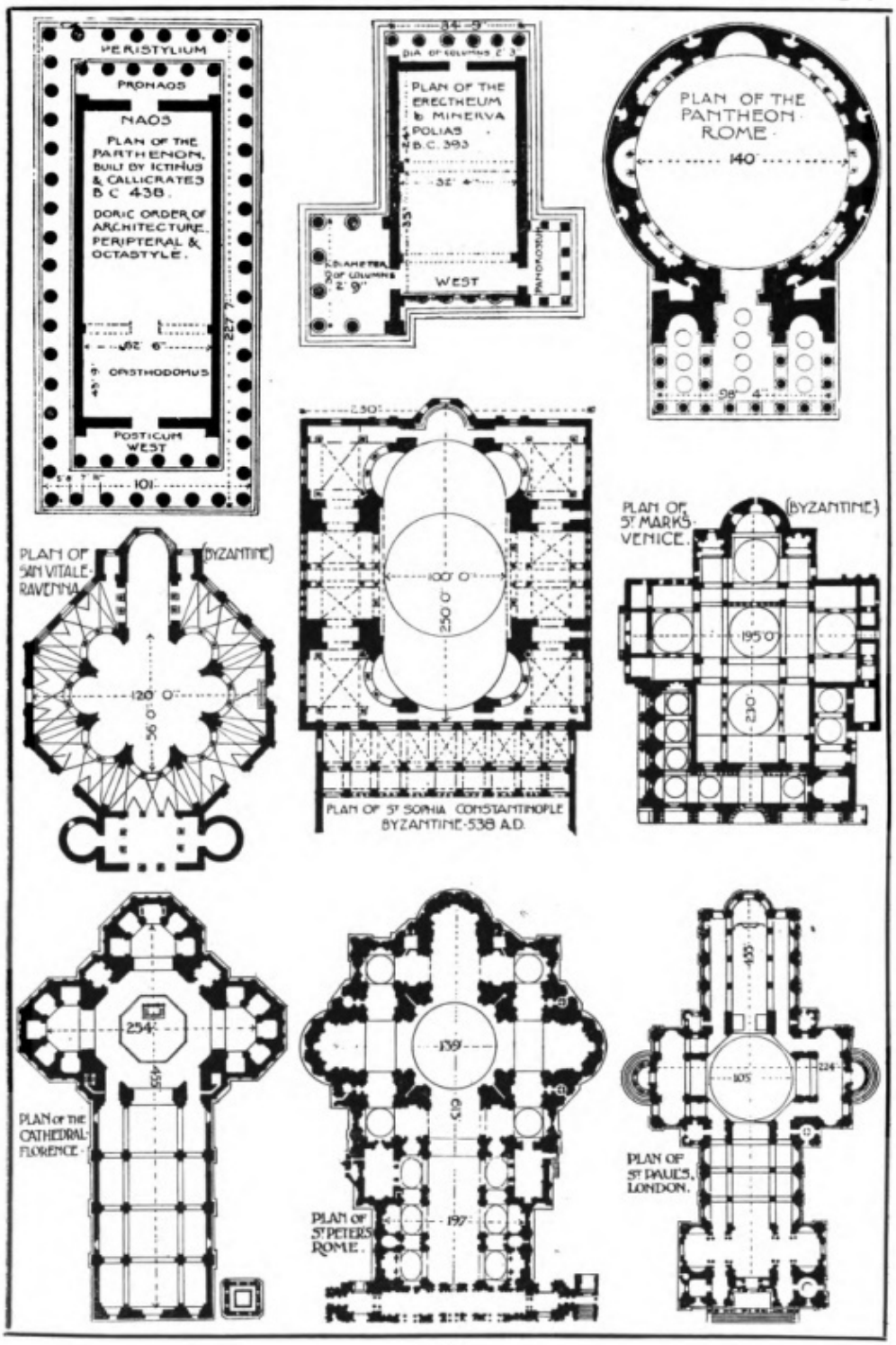
PLANS OF HISTORIC BUILDINGS. Plate 54.



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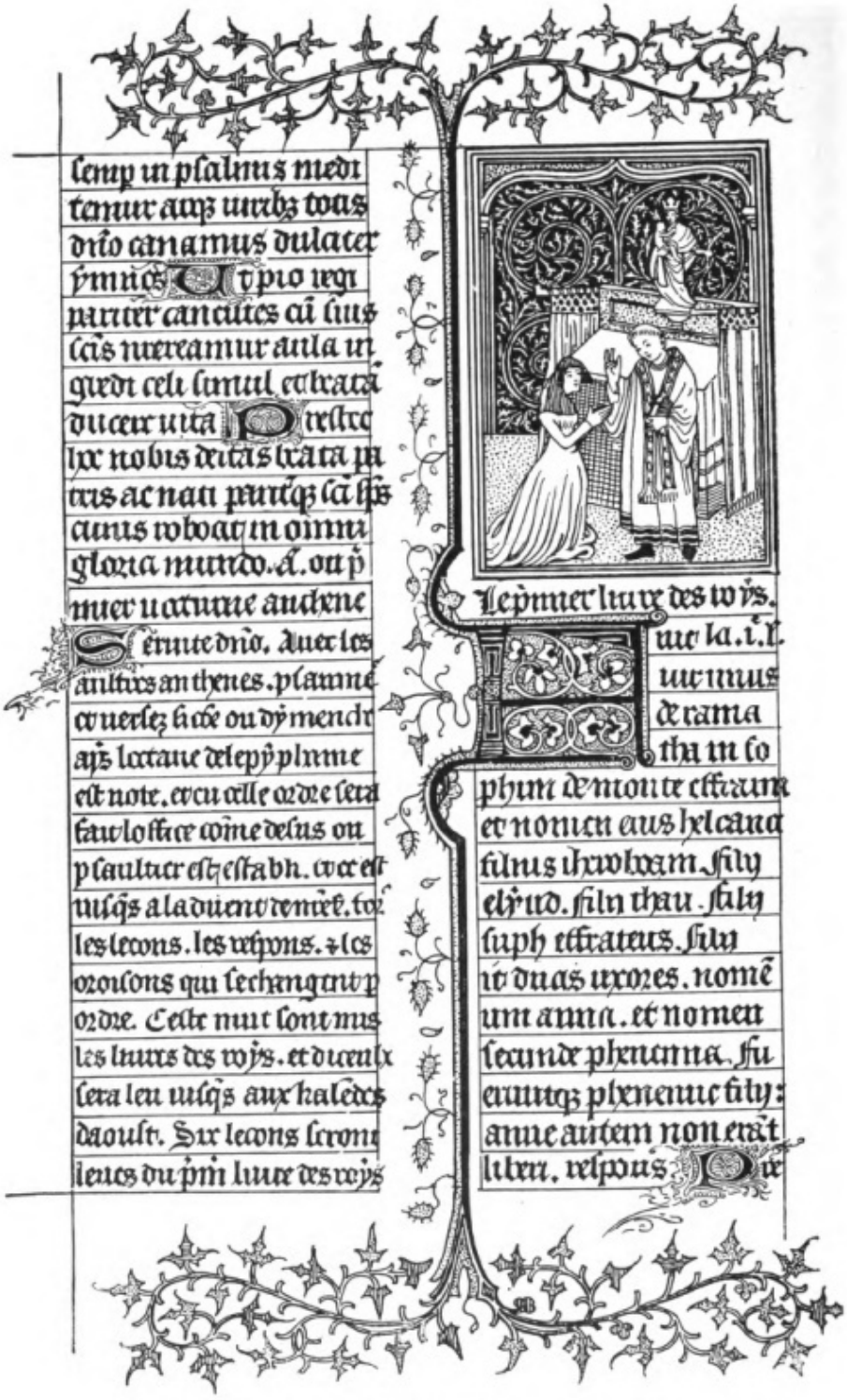

PAGE FROM ONE OF THE HARLEIAN MANUSCRIPTS,
BRITISH MUSEUM,
FRENCH, EARLY 15TH CENTURY.

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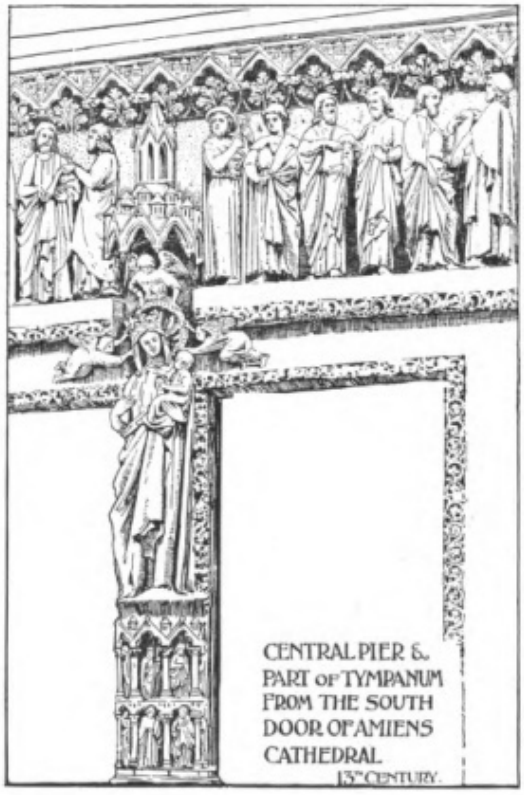
CARYATIDE FROM THE ERECTHEUM.

THE TWO "FATES," FROM THE EASTERN PEDIMENT OF THE PARTHENON.

CLASSIC SCULPTURE—GOTHIC SCULPTURE: A COMPARISON.



CENTRAL PIER & PART OF TYMPANUM FROM THE SOUTH DOOR OF AMIENS CATHEDRAL. 13TH CENTURY.

FIGURES FROM THE WEST FRONT OF CHARTRES CATHEDRAL. 12TH CENTURY

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A Manual of
HISTORIC ORNAMENT

TREATING UPON THE EVOLUTION, TRADITION, AND DEVELOPMENT OF ARCHITECTURE & THE APPLIED ARTS

PREPARED FOR THE USE OF STUDENTS AND CRAFTSMEN

BY RICHARD GLAZIER

HON. ASSOCIATE OF THE ROYAL COLLEGE OF ART
ASSOCIATE OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS
HEAD MASTER OF THE MUNICIPAL SCHOOL OF ART, MANCHESTER

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