

SETTING OUT BALUSTERS

The two types of Renaissance baluster are small columns with their characteristic bulges replacing the entasis. Their proportion, spacing and details can vary considerably and, although individual authors have suggested particular types for each order, no universally accepted link between the detail and proportion of the baluster and different orders has been established. Balusters commonly sit between piers which are, or are identical to, the pedestals of the orders. The height of the balusters is, consequently, given by the dado of the relevant order and, generally, the more detailed and slender the order the more detailed and slender the baluster. All balusters can be round as well as square, but square balusters give the appearance of greater bulk.

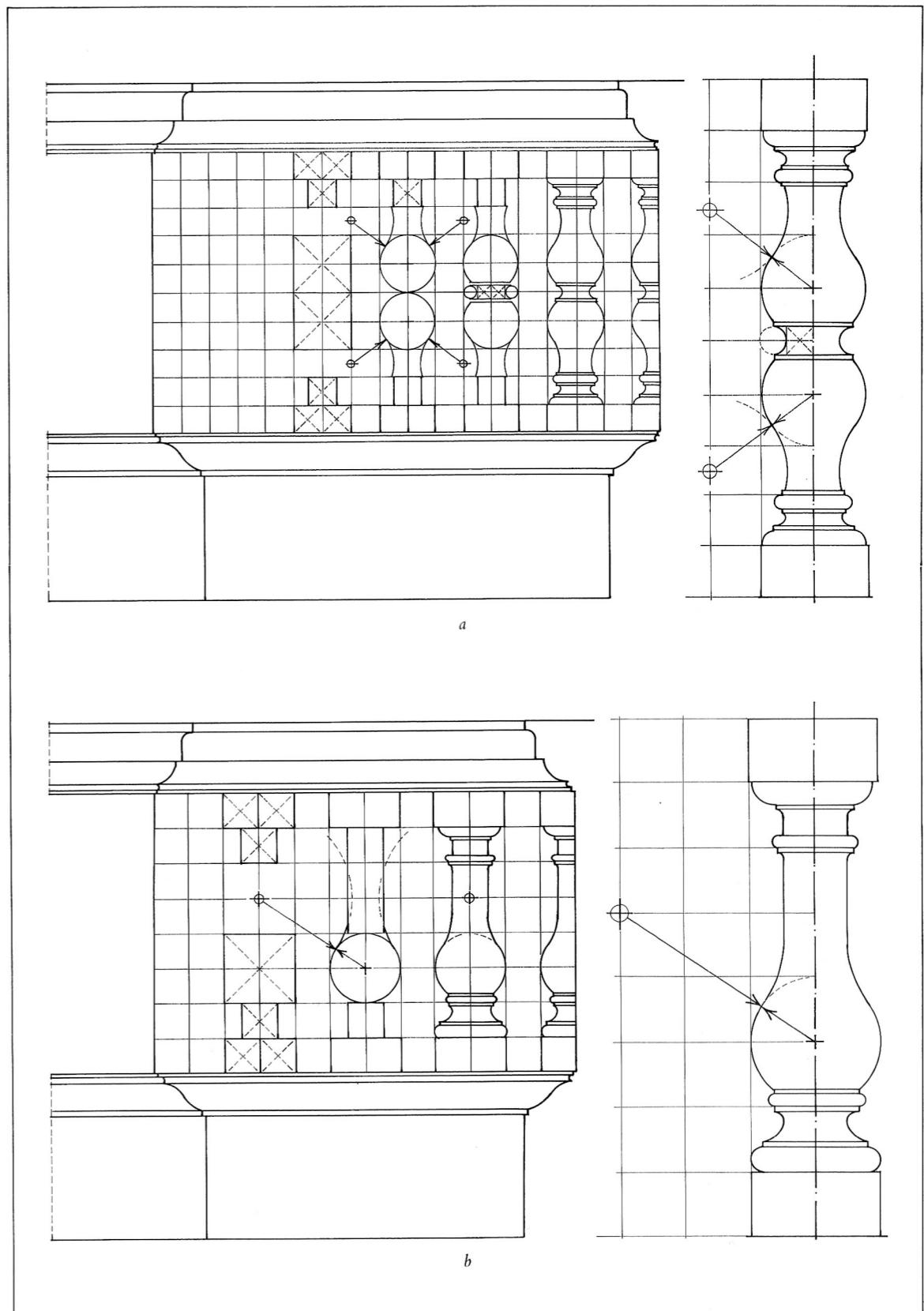
An example of each type of baluster of average detail and proportion is illustrated, derived from standard eighteenth-century examples.

The double baluster (a) has the given height divided into ten units of measurement and each baluster will be two units wide and spaced one unit apart. There will be a half-baluster against the dado. The top and bottom units will give the dimensions of the blocks at the capital and base, which will be square in plan. The two units above and below the centre will give the diameter of the spheres which act as the larger part of each swelling. One unit located centrally on the baluster gives the shaft, or minimum width of the baluster. The spheres at the centre are joined to the shaft with an arc centred two units out from the centre and two and a half units up or down. The intersection of the two spheres is masked by a symmetrical scotia one quarter of a unit in diameter and joined to the swelling with square fillets. The capital and base above and below the blocks approximate to a Doric capital and an Attic base. Each is one unit high and set out on one-third divisions of a unit.

This baluster can be based on broader and more slender proportions of twelve units high or more, and the detail around the central scotia in particular can be expanded with a central astragal or decoration. The principles of the spacing and setting out will, however, remain essentially the same.

The single baluster (b) has the given height divided into eight units. The horizontal setting out, shaft width, capital and top and bottom blocks will be the same as for the double baluster. The swelling is made by a sphere centred three units above the base and this is joined to the shaft with a radius centred three units down on the centre line of the adjacent baluster. The Attic base has a torus and scotia one third and two thirds of a unit high respectively. The upper torus and its fillets are one third of a unit high.

This baluster can also have broader or narrower proportions. Extra height is often given by increasing the height of the base or giving the baluster its own pedestal.



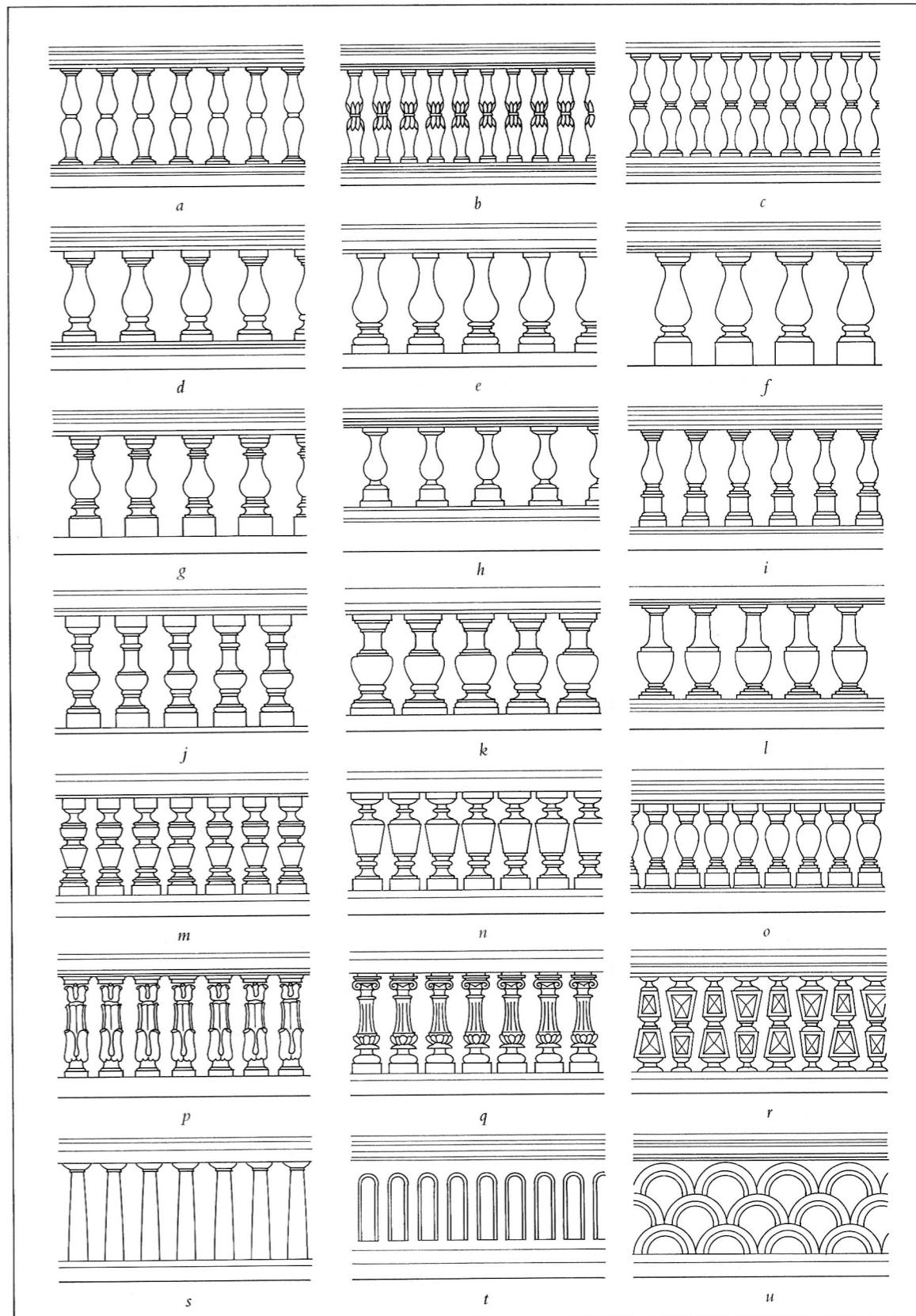
BALUSTER VARIATIONS

Since the introduction of balusters there has been a considerable variety in design. It was not until the eighteenth century that the tradition had become sufficiently well established for authors to publish standard versions, but before long an archaeological interest in antiquity had revealed the modernity of the baluster and the revival of Renaissance and Baroque architecture stimulated more inventive designs.

Although Renaissance balusters differ in detail, the general form is consistent, (a) to (i). The double baluster, (a), (b) and (c), has only minor variations in proportion and in the degree of decoration where the two parts of the baluster meet. Although the double baluster is an earlier form, it is often combined on different parts of the same building with the single baluster. Examples (c) and (i) are both by Bramante and from the same building in the Vatican in Rome. Equally, different single balusters were used on different parts of the same building – examples (d) and (h) are both on the Villa at Caprarola near Rome by Vignola. The proportions of these balusters differ, but the major variations are the details at the capital and, in particular, the base. Balusters from the Villa Giulia in Rome (e) by Vignola have no capital, while there is more detail on both the base and capital on balusters from the Palazzo Lante (f) by Peruzzi and the Palazzo Farnese (g) by the younger Sangallo, also in Rome.

This consistency of form was interrupted in the Baroque period; the balusters on Blenheim Palace in England (j), by Vanbrugh in 1705, have the even curve of the swelling exaggerated and broken. This Baroque type became an established variant and is found on nineteenth-century (k) and twentieth-century (l) buildings. In the same period, balusters were introduced that reversed the direction of the swelling. The complex examples from Longhena's S. Maria della Salute in Venice (m) of 1630 are square in plan. This reversed form, like the broken variant, was revived in the nineteenth century (n). Other fantastic versions belong to Baroque and nineteenth-century buildings. The square rusticated balusters from the early-eighteenth-century Palazzo Pesaro in Venice (r) have an alternating taper which makes their relationship to double and single balusters ambiguous. The relationship between the baluster and the column of the relevant order, on the other hand, is made more explicit in a nineteenth-century example (q) which makes a single baluster specifically Ionic.

The Renaissance origin of balusters created a problem for neo-classical architects. The use of balusters had become so well established that they could not be abandoned in spite of, what was regarded as, an impure modern pedigree. C. R. Cockerell adapted the baluster to a vase shape with a reverse swelling on the Ashmolean Museum in Oxford (o) in 1839. An earlier solution was to substitute a specific leaf form from antiquity for a baluster (p), while the use of small Greek Revival columns (s) and small arches (t) unwittingly came closer to Gothic examples. The most authentic neo-classical baluster (u) was a version of a transenna fence from antiquity.



PIERCED WALLS

While the baluster became the normal method of forming a parapet in Italian architecture of the fifteenth and sixteenth centuries, and in countries under Italian influence, north European architects developed the tradition of parapets formed by pierced screens.

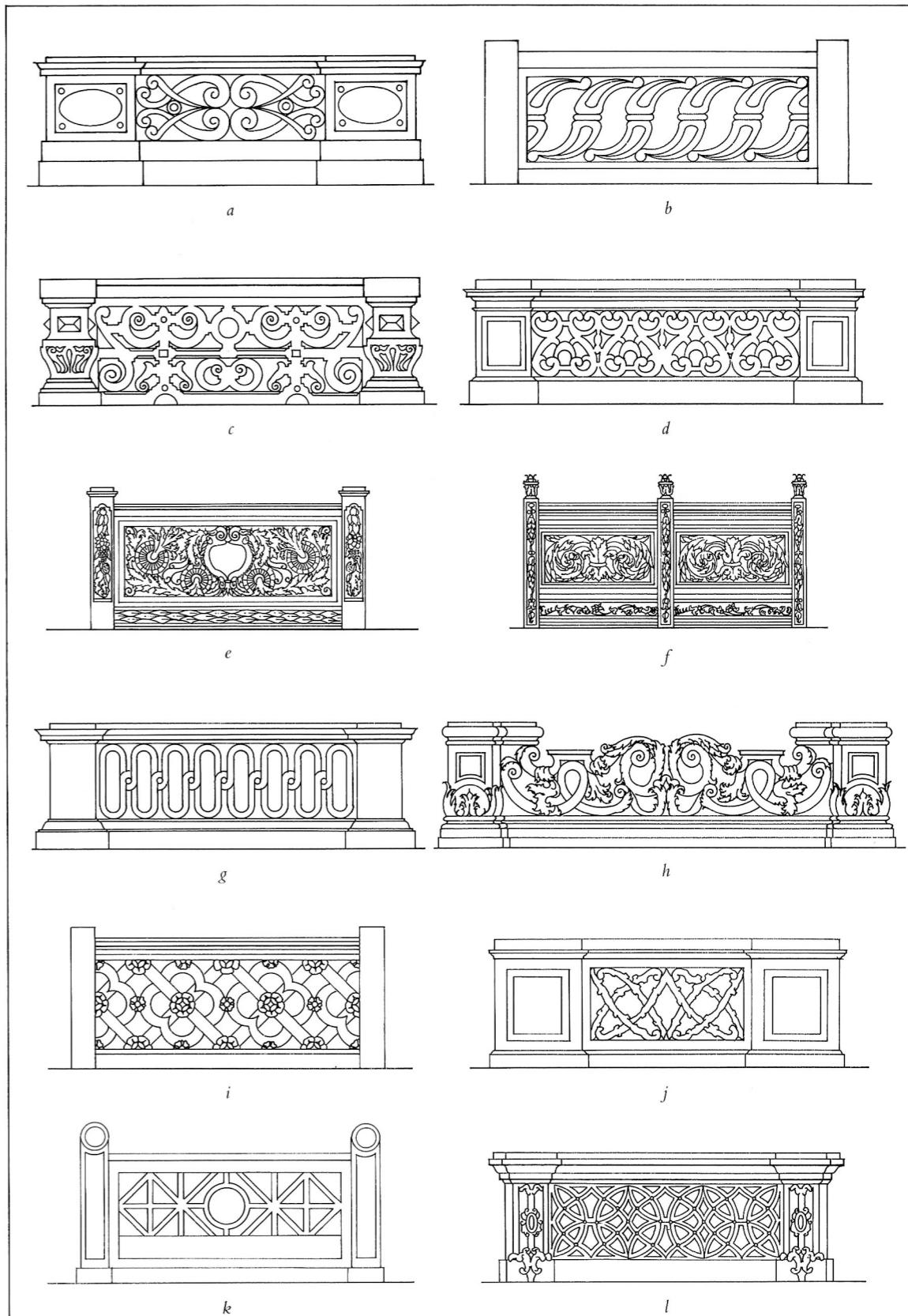
Although French Renaissance architecture began with direct contact with Italy, it retained an individual national identity. One of the most influential native classical architects was Philibert de l'Orme. His few surviving works include a number of pierced screen parapet designs. An example from the gatehouse at Anet (a) of 1547 is made up from an interlacing series of classical scrolls which remain individually recognizable. Similar designs, but with a less obvious classical derivation (b), continued to be produced in France into the following century.

In the Protestant north, much of the spread of classical architecture was through publications from the Low Countries where Italian Mannerist books had been reinterpreted to create a fanciful architectural decorative theme known as strapwork, due to its apparent similarity to cut leather. The reliance on silhouette in pierced screen parapets made them particularly well suited to strapwork decoration and free designs on the skyline of buildings, such as on the sixteenth-century castle at Baden-Baden in Germany (c), are characteristic of northern architecture of this period. Similar parapets can also be found in Spain (d) in the seventeenth century, perhaps through a political association with the Low Countries. These designs were revived in the nineteenth century in Britain (l).

The tradition of the pierced screen continued in Britain in the sixteenth century. Rich naturalistic designs of the national Baroque style, (e) and (f), were executed on intricate internal balconies and stairs by woodcarvers whose skills have seldom been surpassed.

Later developments in Baroque architecture in the eighteenth century included variants of the baluster and other forms of parapet. In middle Europe, Baroque stairs were designed with relatively sober screen walls, cut with a form of the traditional guilloche interlacing pattern (g) or, by contrast, with a dramatic swirl of sculpted stonework, such as the screen in the Daun Palace in Vienna (h), by Lukas von Hildebrandt in 1713. In Italy, the home of the baluster, Baroque (i) and Rococo (j) pierced screens were also introduced.

The realization by neo-classical architects that screen walls and fences were the only form of protective railing in the ancient world led to renewed but more restrained interest in pierced screens and a number of designs, such as Gottfried Semper's stair for the Winterthur Town Hall in Switzerland (k) of 1863, were loosely based on examples from antiquity.



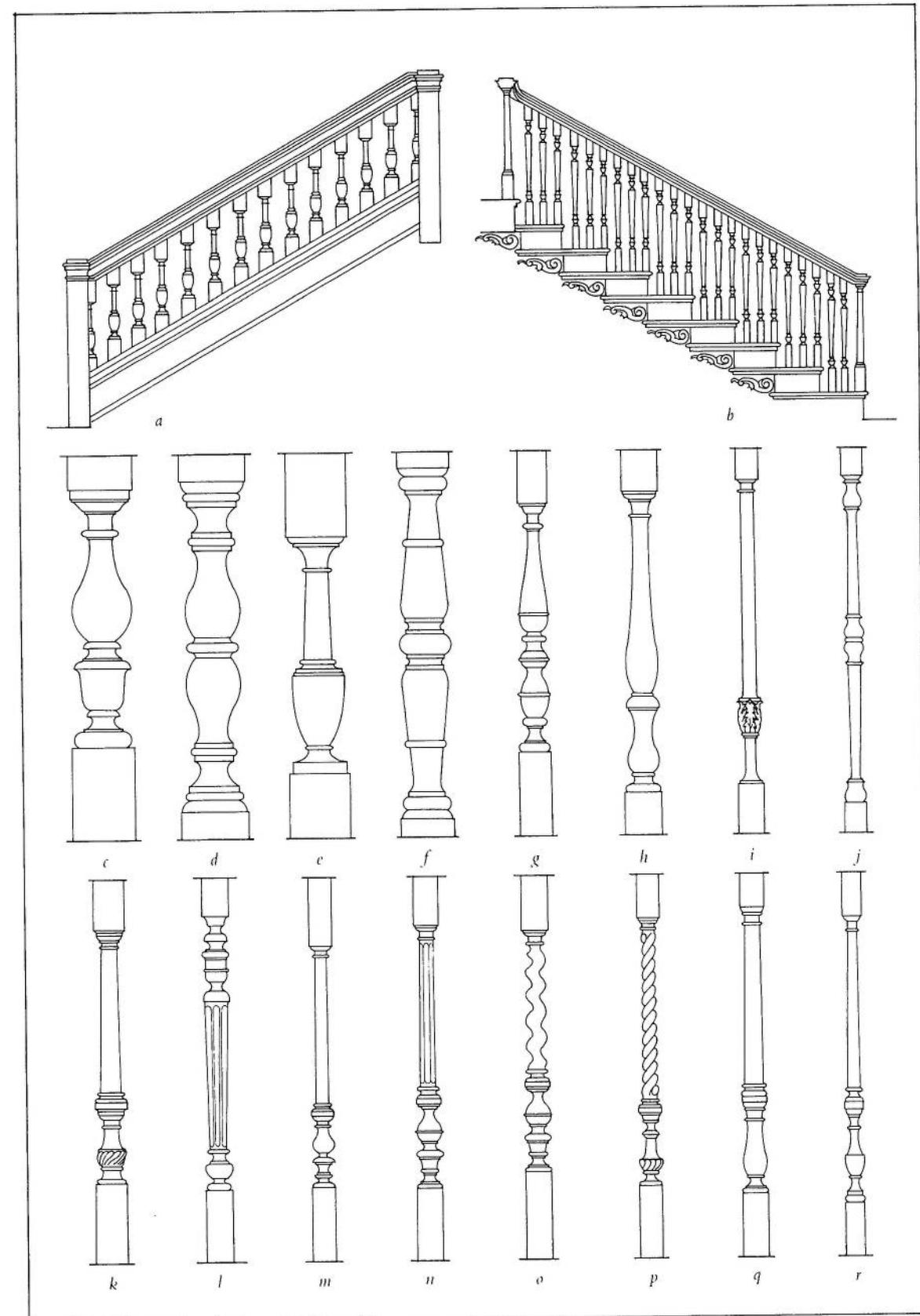
STAIR RAILS

Stair rails are a form of baluster which, together with the handrail and the edge of the stair, has been adapted to suit the lightweight construction and appearance of most smaller-scale internal stairs. The principal adaptation has been a reduction in width to form a narrow rail often turned out of timber. The other details have been similarly modified.

Early timber stairs were proportioned and detailed to approximate to a sloping stone balustrade (a). The treads were concealed behind a large timber board, or string, acting as the base of the pedestal, and heavy square posts, or newels, acted as full pedestals at each end of a flight. The handrail was also large and took the form of the pedestal cornice. In the eighteenth century in Britain another type of stair (b) came into use, derived from a traditional arrangement of solid stone steps. The closed string was omitted and the ends of the treads were exposed. To ease the construction of this design in timber, decorative brackets often concealed the overlap of the treads. At the same time the rails and handrail became narrower, while the newel-posts became enlarged rails rather than piers, generally taking the form of small Doric columns. Closed-string stairs became less common, although the heavy early designs were revived in the nineteenth century.

From the sixteenth to the eighteenth century the general tendency was for stair rails to become progressively more slender. Examples (c), (d) and (e) are all from the seventeenth century and (f) is from the late sixteenth century. Their proportions are similar to stone balusters, but they are turned out of wood and follow precisely the pattern of the two types of baluster. Example (h) is also from the late seventeenth century and has a baluster form but is too slender for stone. Example (g) from the first years of the eighteenth century is similar but has a more intricate Baroque character. As rails became narrower in the later eighteenth century, (i) and (j), the two baluster forms became more difficult to represent.

In the early eighteenth century a new type of rail came into use, probably as a response to the fashion for greater slenderness. This new rail, (k) to (r), had a Doric column located over a small baluster. This allowed more slender proportions but avoided the contortion that would have made the baluster form virtually unrecognizable. At first the column itself, as in example (k) from 1709, was of conventional proportions, but as the rail became more slender the column was reduced in width. There were Baroque variations such as example (l) from 1720 where the column has a reverse taper and the column and baluster are also reversed. The columns can be fluted, (n), or twisted, as in (o) and (p); the baluster can be elaborate, (m) to (p), or simple, as in (q) and (r). Generally, as the eighteenth century progressed, the detail and baluster width was reduced until, as with (r), the rail was as thin as the timber would allow without becoming dangerously brittle.



METAL RAILS AND SCREENS

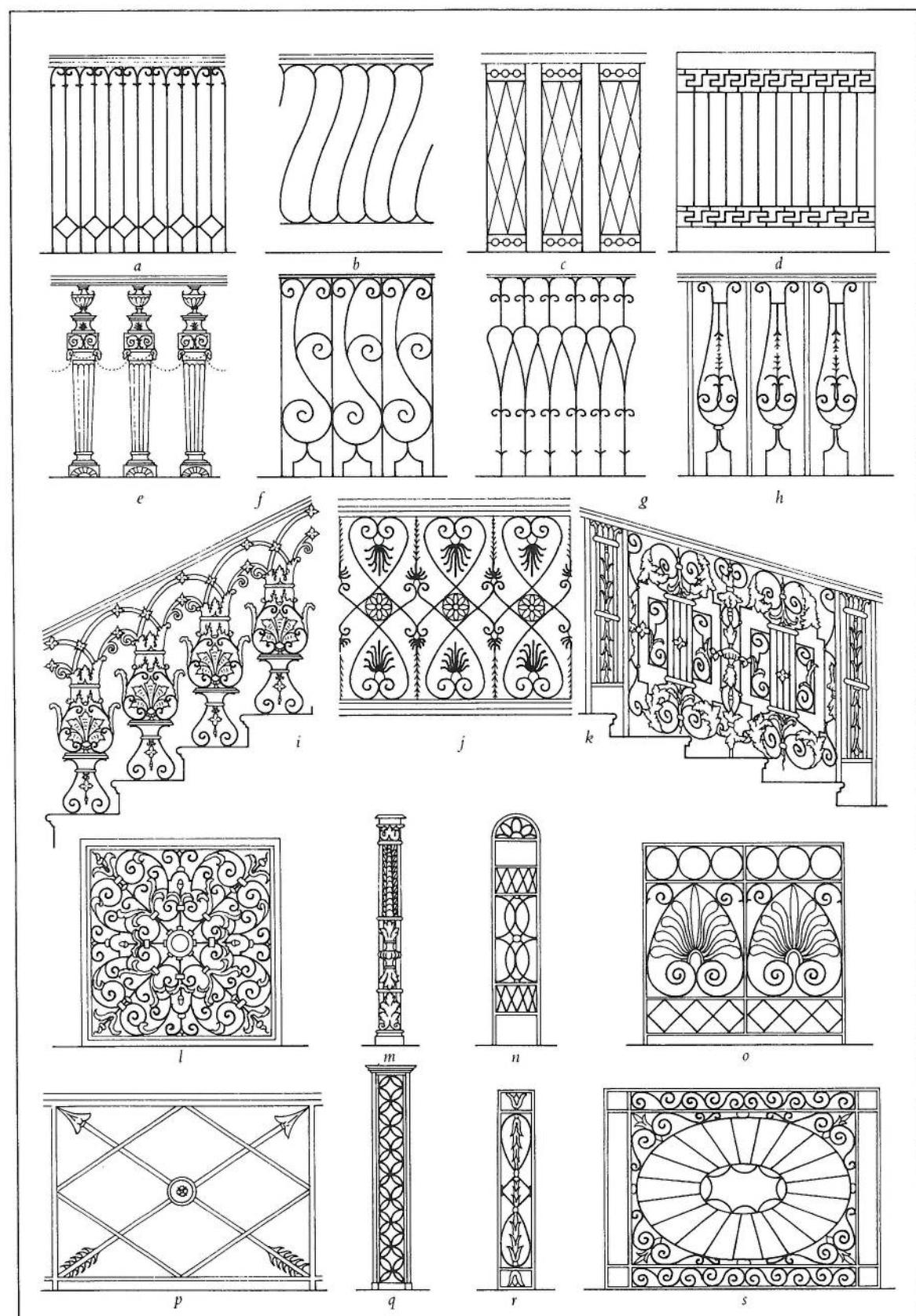
From the Renaissance to the nineteenth century, metal rails and screens have generally been of wrought or cast iron. In antiquity they were often bronze. Steel was used from the nineteenth century and in the twentieth century a number of different metals and alloys have been used. The patterns illustrated are all either wrought or cast iron, but the designs mostly derive from wrought iron. Cast iron in the late eighteenth and nineteenth century was often a mass-produced reproduction of hand-worked and higher status wrought iron. Neither material is used frequently today although steel can be hand-forged in the same way as wrought iron.

There are endless different railing designs that can be created in metal. The material can take on seemingly limitless shapes when heated and beaten, or melted down and poured into moulds. The only significant limitation to the use of metals has been the rusting of steel and the weight of most metals. Both of these problems can be overcome with the lightweight metals and rust-resistant alloys and coatings now available.

The strength and the weight of the metals traditionally used for rails has made many of the designs fine and slender, in keeping with the general tendency towards narrower rails and balusters, (b), (c), (d), (f) and (g), in the late eighteenth and early nineteenth century. The process of bending and shaping hot wrought iron by hand from thin rectangular lengths of the material has established a tradition of designs made up of curves, spirals and small flat leaf forms, (i), (j), (k) and (l). Cast iron, while following this tradition, was more brittle, but the liquid process of moulding allowed more complex patterns, (o), (p), (q), (r) and (s), in the surface of the design.

Without the joints that limit the possibilities of timber construction, slender metal railings of complex design can be made of straight pieces, (c) and (d), which require no bending. With very little forging work, simple curved designs, (a), (b), (f) and (g), can be created economically. Rich Baroque rails and posts, (i), (k), (l) and (m), often with gilding on selected areas, require considerable skill in manufacture and the flexibility of the hot metal allows continuous designs to be produced which either link a repeated rail (i) or form long individual panels (k). Late-eighteenth-century patterns are often more sparse and include a number of motifs taken from antiquity, such as anthemions, (j) and (o), and lyres (h). Elaborate and costly metal rails or posts (e), which rely more on their sculptural qualities than the nature of the material, continued to be produced in wrought iron, but similar effects could be produced more economically in large numbers from moulds in cast iron, (n), (q) and (r).

There are numerous other designs, from simple round or square cast-iron railings with spear tops to elaborate wrought panels. These examples are limited in type, period and material but illustrate the British tradition which developed at a time when the nation's industrial wealth and iron manufacture were at their peak.



14. BRACKETS

SCROLLED BRACKETS

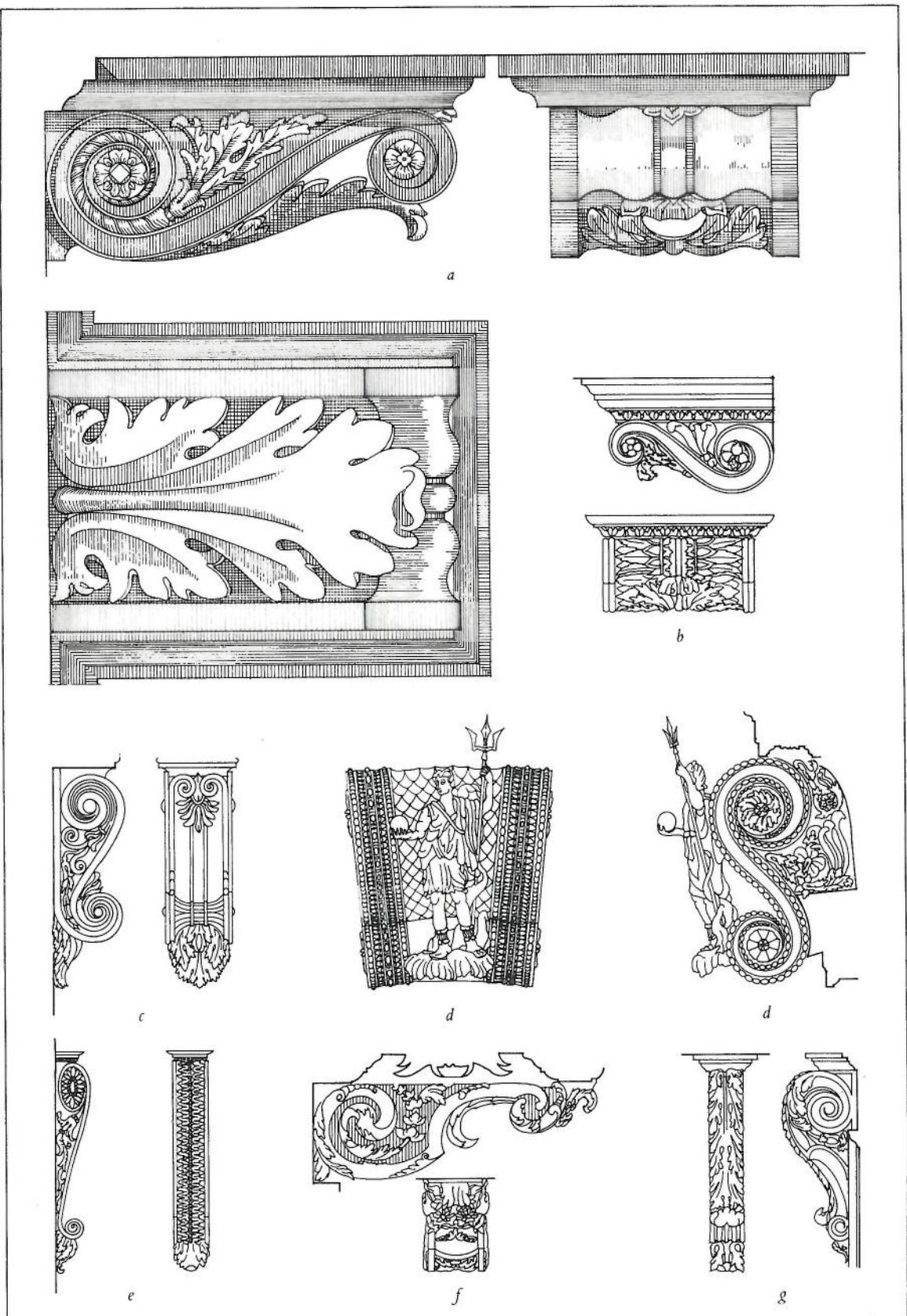
The scrolled bracket, also known as the modillion or console (a), is a decorative feature unique to classical architecture. The form is very specific, but its origin and meaning are unknown.

An early example supports the upper cornice of the door of the north porch of the Erechtheion in Athens (c) of 421 BC, shown in full on page 199. The scrolls, or volutes, are complex and have the same multiple ribs as the Ionic capitals of the building. The lower scroll opens out as a back to the bracket while the face of the upper scroll has its own small volutes, out of which grows an inverted anthemion. These details are individual to this bracket and its copies, but in other respects it establishes the principal features of future scrolled brackets (a). It has two scrolls turning in opposite directions, the outer face is divided into two parts, a bud sprouts from the upper scroll and an acanthus leaf from the outward turn in the lower scroll.

In Rome, scrolled brackets were applied to other architectural details. The Roman Corinthian order included a series of scrolled brackets set horizontally in the upper part of the cornice. The bracket details differ from the Greek design. The bracket from the Temple of Apollo in Rome (b) of 36 BC has two scrolls, both of which have flowers in the centre, and what is now the underside has a large acanthus leaf sprouting from the centre of the face of the larger scroll.

The scrolled bracket was also adapted to act as keystone for arches on the Arch of Titus in Rome (d) of about AD 82 and other triumphal arches. The level of decoration has increased in keeping with the importance of the detail. Rows of beaded and fluted mouldings have been added to the scrolls and the outer face is filled with a scale decoration. An acanthus leaf supports a symbolic figure, and the awkward gap behind is filled with a twisting series of buds, leaves and flowers.

The bracket has subsequently been used as a support in many different circumstances and the profile can be modified to suit particular configurations, such as the support of shallow cornices over doors (e). Baroque designers added further variations to the form, breaking the line between the volutes, (f) and (g), and at times carving away all but the essential details, reducing the bracket to a decorative skeleton (f).



SCROLLED BRACKETS: VARIATIONS

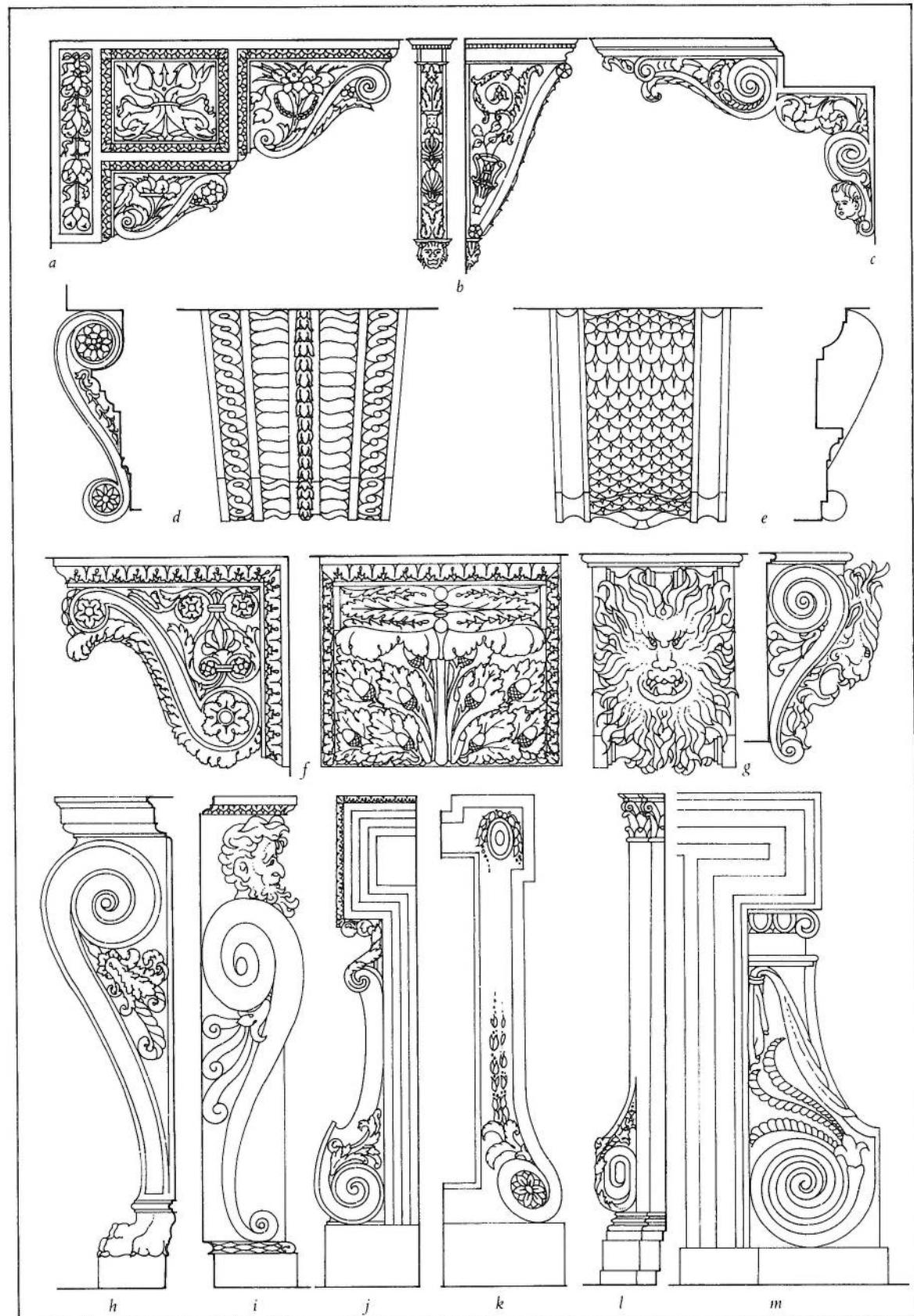
The scrolled bracket has become such a characteristic classical form that it has been adapted to suit a large number of different practical applications and decorative themes.

The original shape of the scroll is not always suitable for supporting large or heavy projections. This has given rise to the use of pairs of scrolled brackets combined in one design. In the early Renaissance these were often grouped around a square or rectangular block (a) to give a greater projection and create a complex design. Example (c) shows an English Baroque porch bracket, which also combines two scrolled brackets, though the individual brackets have in this case been modified to adapt to the required shape. A cherub's head is lodged below the large volute of the lower bracket and an extended acanthus leaf links it to the more conventional upper scrolled bracket. Example (b) shows a Renaissance bracket on which the standard design has been reduced to a barely curved decorative face on a deep triangular bracket supporting a heavy masonry projection. The shape of the bracket is a traditional medieval design, but the decoration has given it a classical character.

Scrolled brackets have often been used as keystones since their first adaptation for this purpose in Roman triumphal arches. These first scrolled keystones were contorted to carry figures and to fit into the deep mouldings of the arch (see page 227). Later examples are often more simple. A conventional scroll can sit neatly below an entablature and the archivolt mouldings of an arch (d) and can be decorated on the outer face. If the keystone is to be recessed further into the archivolt the sides of the scrolls can be omitted and the decoration limited to the front face (e). Scale decoration has become a traditional addition to scrolled keystones.

The decorative foliage of the scrolled bracket is traditionally stylized acanthus. This can be varied to suit a particular decorative theme. Example (f) is a Roman bracket with acorns and oak leaves sprouting within the usual acanthus leaf on the outer face. Another Roman bracket, from Palmyra in Syria (g), incorporates the head of a lion.

This combination of plant and animal forms is a peculiarity of classical decoration. The addition of an animal's foot or paw to a scroll (h), to form a table leg or other support, was common in antiquity and was enthusiastically revived and expanded to include symbolic representations of the human figure (i) by Mannerist architects. The Baroque use of the bracket as a side-support for frames to openings such as windows and fireplaces, shown here (j) with carved tassels, led by a simple step to scrolls that grew out of and became a part of the frames themselves (k). A similar transformation led to the combination of scrolls and columns, usually joined together as ambiguous pilasters on either side of an opening, (l) and (m). The Baroque Ionic scrolled pilaster (m) includes a drapery festoon.



SCROLLED BRACKETS SIMPLIFIED

Scrolled brackets are a unique concentration of formalized architectural decoration. They combine scrolls similar to the volute of the Ionic capital with a complex enriched profile and the acanthus of the Corinthian order. As a decorative feature they can be heavy with architectural ornament and a display of the sculptor's art. It is not, however, always appropriate or economic to include this wealth of decoration in an architectural scheme. In common with most aspects of classical design, the specific form of the fully developed feature and the established tradition of the architectural element make it possible to reduce the quantity and scale of the detail while maintaining the identity of the element. The scrolled bracket is one of the most widespread and individual classical architectural features and a series of levels of reduction in detail has evolved.

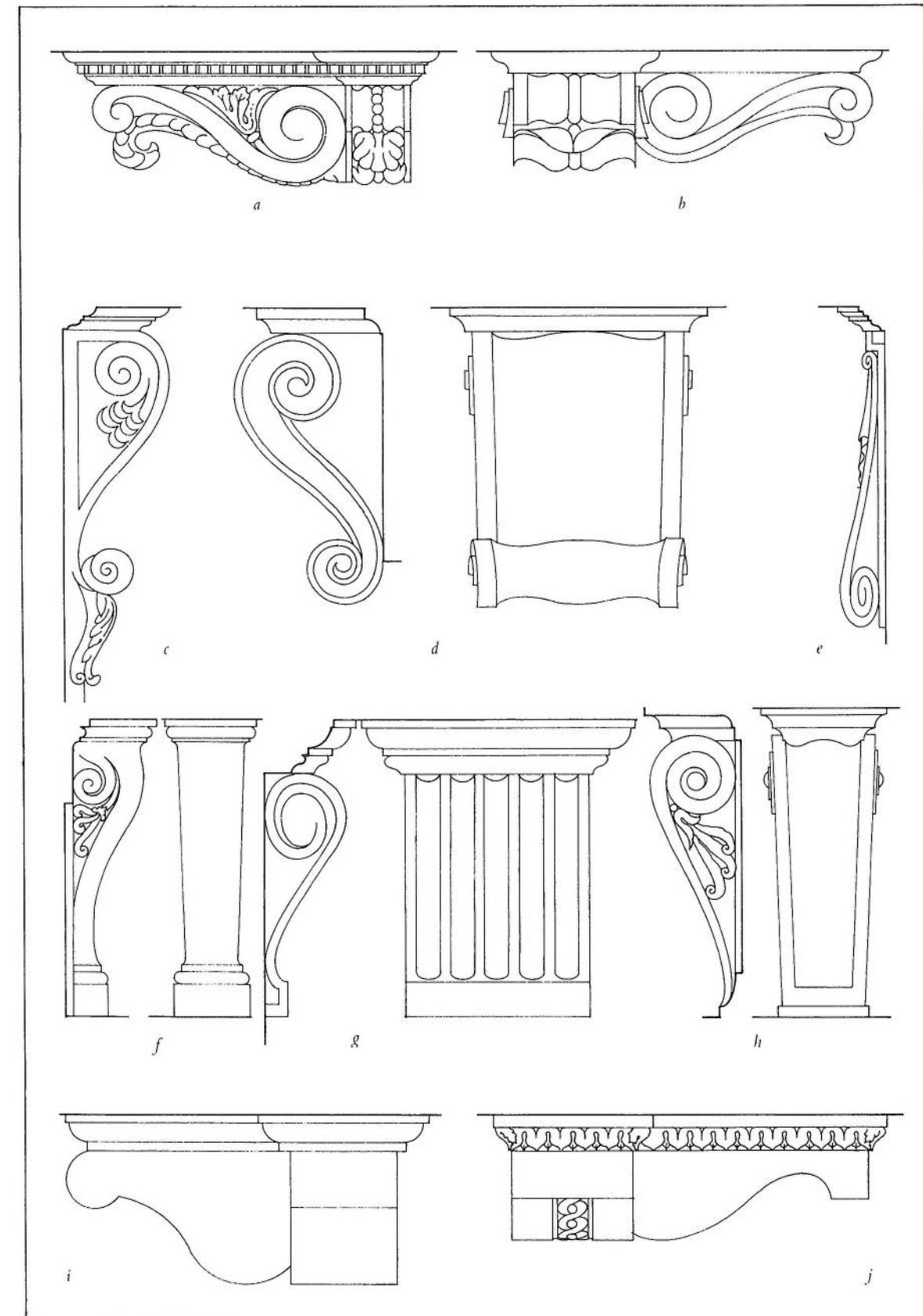
As the modillion, the scrolled bracket is included in the upper part of the Corinthian cornice. If the Corinthian order is relatively small it is not possible to include the full range of decoration. Examples (b), (i) and (j) are from Corinthian cornices although any appropriate reduction of detail could be applied to a suitably proportioned modillion.

The scrolls themselves can have the narrow ribs that define their edges omitted and the whole body of the scroll can curl inwards. The scroll is then defined either by a groove or by the outward projection of the scroll as it coils to the centre. Examples (a), (e), (f) and (g) have scrolls defined by grooves, while (b) and (h) rely on the projection that can be seen on either side of the face.

The detail on the face of the bracket is subject to a similar process of simplification. The central bead seen on (a) and (b) can be omitted to give a continuous curved profile across the face as on (d) and (h). The face can also be flat and have simple flutes cut into it (g) or be left without any profile or decoration, (f), (i) and (j).

As the complexity of the profiles diminishes, so the leaf decoration simplifies until it disappears. The acanthus on the face of the bracket at first loses some (a) then all (b) of its detail and finally is omitted altogether. The characteristic sprouting buds that emerge from the larger scroll are either omitted or reduced to an outline (c). Fully carved isolated leaves can also be reintroduced to give added richness to an otherwise severely simplified bracket. This technique, a particular aspect of classical decoration, allows detail to be introduced economically to suggest the full decoration of the element. The lower acanthus leaf alone is fully carved on (c) and the sprouting buds in the scrolls on (f) and (h) contrast not only with the omission of detail but also with a simplification of form.

Finally the form itself can be simplified. The substitution of the smaller scroll with a rectangular detail, (f), (g) and (j), and the reduction of the bracket to no more than its profile are common. The total omission of the lower scroll (h) is unusual.



SETTING OUT A SCROLLED BRACKET

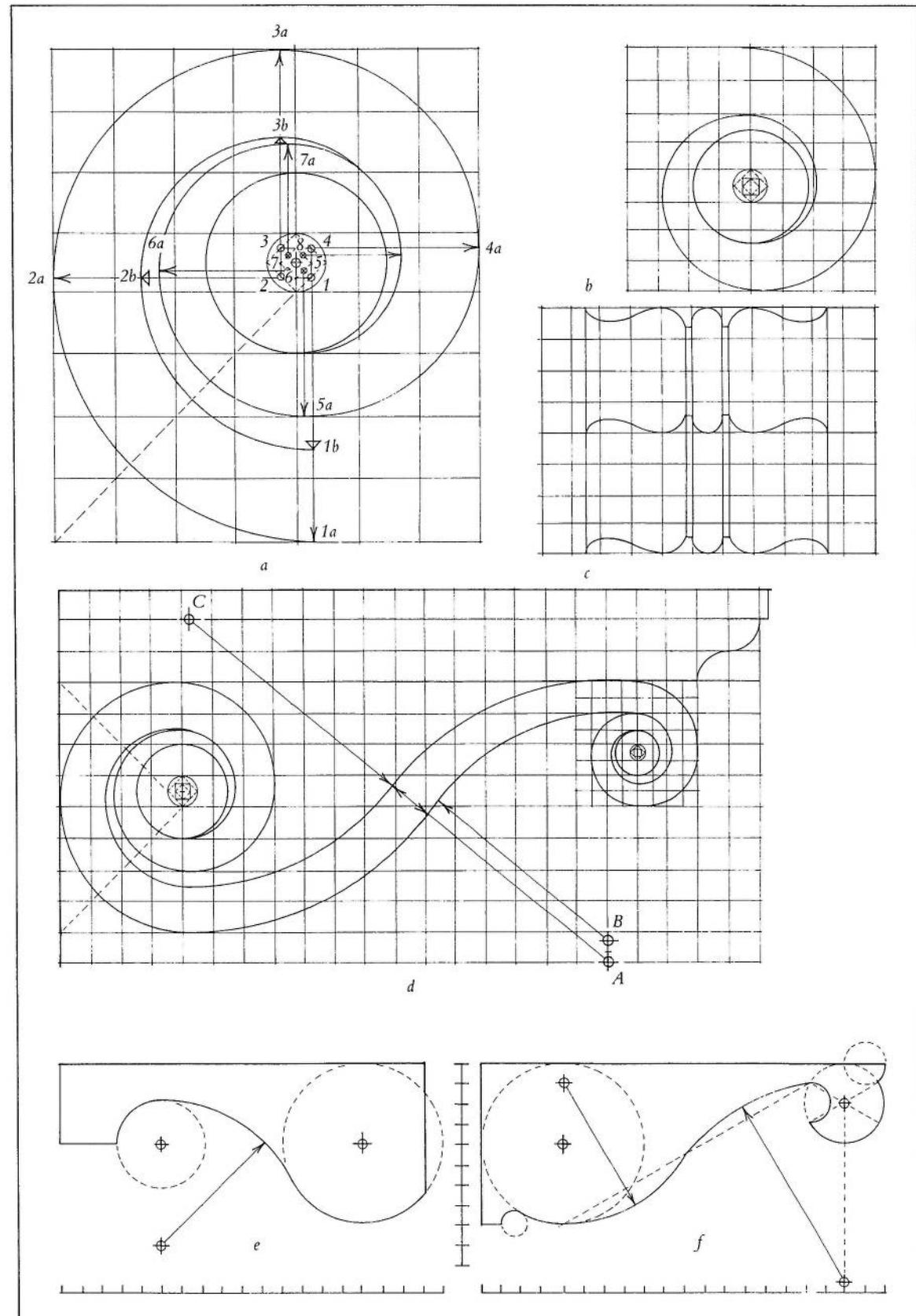
The scrolled bracket can be set out in a number of different ways to produce varied shapes and one method is illustrated here. The technique for forming the scrolls is similar to that used for the Ionic capital and is an alternative to the system shown on page 87.

The height of the bracket, excluding any adjacent mouldings, is taken as eight units of measurement and the length as twenty-one. To set out the large scroll (a) take two diagonals from the outside corners and at their intersection, away from the corners and from the start of the scroll, form a square with diagonals equal to one unit. These diagonals are the circumference of the eye of the rosette. Inside this square, form another square touching the centres of the sides of the first square and, inside this square, form another in the same way. Extend the sides of the second square outwards in the order shown and, setting the compass on point 1, form an arc from the outside of the scroll, 1a, to 2a. Then set the compass at point 2 and from 2a form an arc to 3a and so on to 4a. Continue the process from point 1b (the position determined in the following paragraph) with points where the inner square cuts the diagonals of the second square until the line disappears into a circular rosette three units in diameter. With the same method but units of half the size draw the small scroll (b). The rosette, at three and a half of the smaller units, will be proportionately larger, and the line will disappear sooner.

To connect the scrolls (d) drop a line vertically from the inside edge of the rosette of the small scroll to a point A one unit below the large scroll. Divide that unit into three and make a point B two thirds of a unit above point A. Extend point 1 in the large scroll vertically upwards to a point C two units above the scroll. Join points A and C and draw an arc centred on point C from the outside of the large scroll and another centred on point B from the inside of the small scroll to meet at line AC. Draw a further arc centred on point B from the outside of the small scroll to line AC and continue this line by drawing another arc centred on point C back to the large scroll. Where this arc ends on a vertical line the inner edge of the large open scroll starts. Using the same centres as the outer edge of this scroll, turn the inside line inwards from 1b onwards until it disappears into the rosette.

Acanthus leaves and other decorations may be added to fill the spaces at the outside of the scrolls and in the gap between the scrolls. A large leaf can curl out from below the large scroll to the centre of the small scroll. This leaf will partially cover the complex curves and central fillet of the outside face of the bracket (c).

Plain cut-out brackets, (e) and (f), based on the scrolled bracket, can be formed around simple curves.



17. THE SKYLINE

DESIGN FOR THE SKYLINE

In antiquity and in more recent centuries classical architects have used a number of features at roof level to accentuate buildings or parts of buildings.

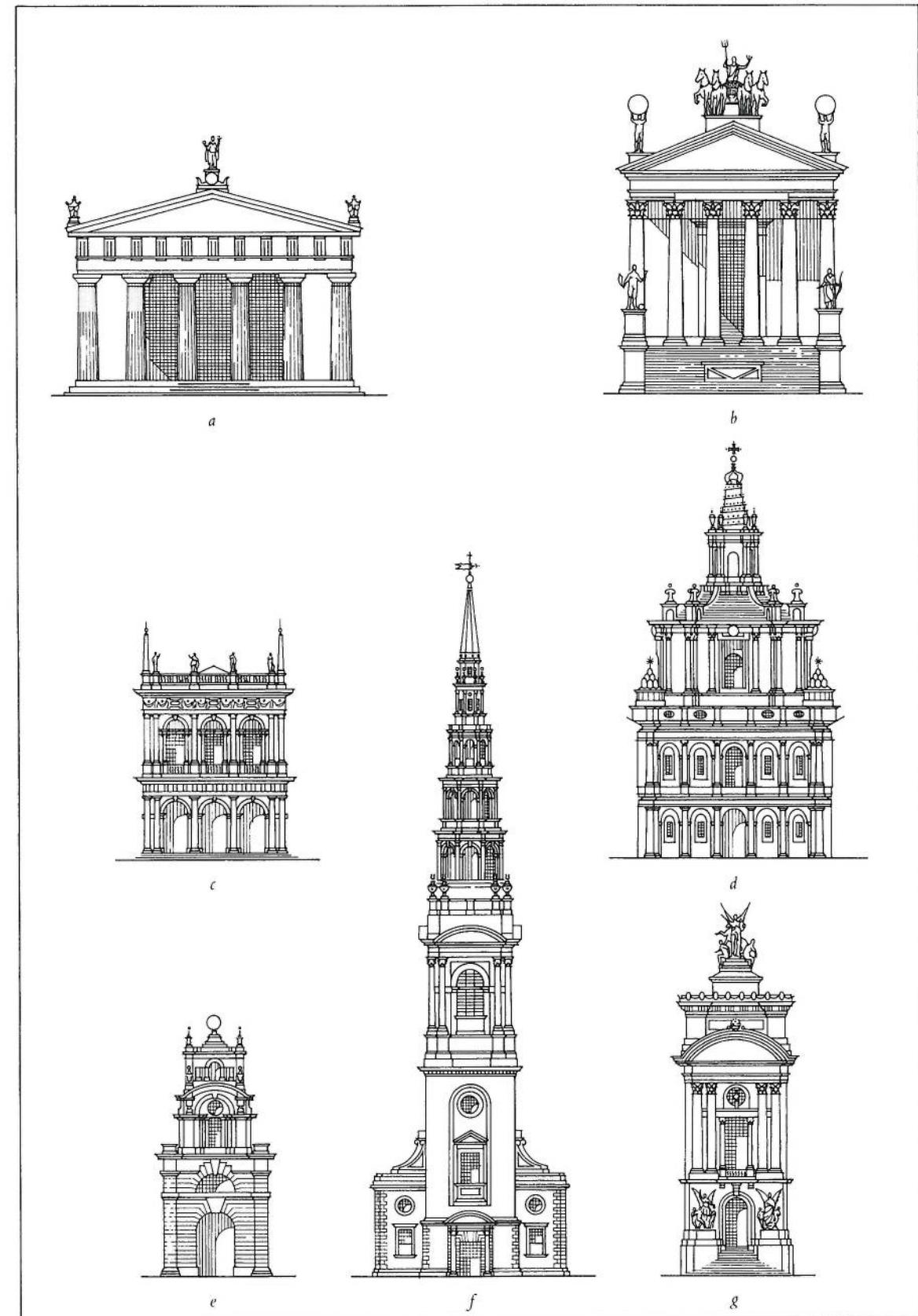
The Greek temple roof had certain specific projecting features. The tiles along the ridge of the roof could have clay crests decorated with coloured leaf designs. On the pediment at the ridge and eaves, platforms were created, known as acroteria, that carried sculptural ornaments ranging from large statues of gods or mythological creatures to brightly coloured two-metre-wide discs or bronze tripods. The effect can be seen on a reconstruction of the Temple of Zeus at Olympia in Greece (a) of about 460 BC.

The design of Roman temples was influenced by the roof decorations of their ancestors, the Etruscans, which ranged from rows of horns along the pediment to groups of large clay figures along the ridge. Later Roman temples, such as the Temple of Antoninus and Faustina in the Forum in Rome (b) of AD 141, continued this tradition within the framework of the Greek temple.

Later Renaissance architects, like Jacopo Sansovino who placed obelisks and figures on the parapet of his prominent Library of St Mark in Venice (c) in 1536, were perhaps influenced by evidence of these features on ruins and coins and sculpture from antiquity.

It was, however, Baroque architects who exploited the skyline to the full. The dome, always a vertical feature, was stretched upwards by architects such as Borromini who, in the church of S. Ivo in Rome (d) of 1642, surmounted the building with a symbolic spiral ramp and open crown and placed flaming urns, balls and heraldic devices at descending levels. The English architect Vanbrugh used a series of golden balls, urns and figures to punctuate the profile of important elements, such as gates, on Blenheim Palace (e) in 1705. In London the loss of a series of Gothic spires in the Great Fire of 1666 brought about their replacement with a remarkable series of classical spires, such as St Bride's (f), designed by Wren, which made an inventive use of classical details to create powerful vertical landmarks.

The Baroque tradition was continued by architects like Garnier, who decorated each end of his Opéra in Paris (g) in 1861 with tall sculptural groups. Buildings such as these influenced the twentieth-century Baroque revival.



BALLS, URNS AND PINE-CONES

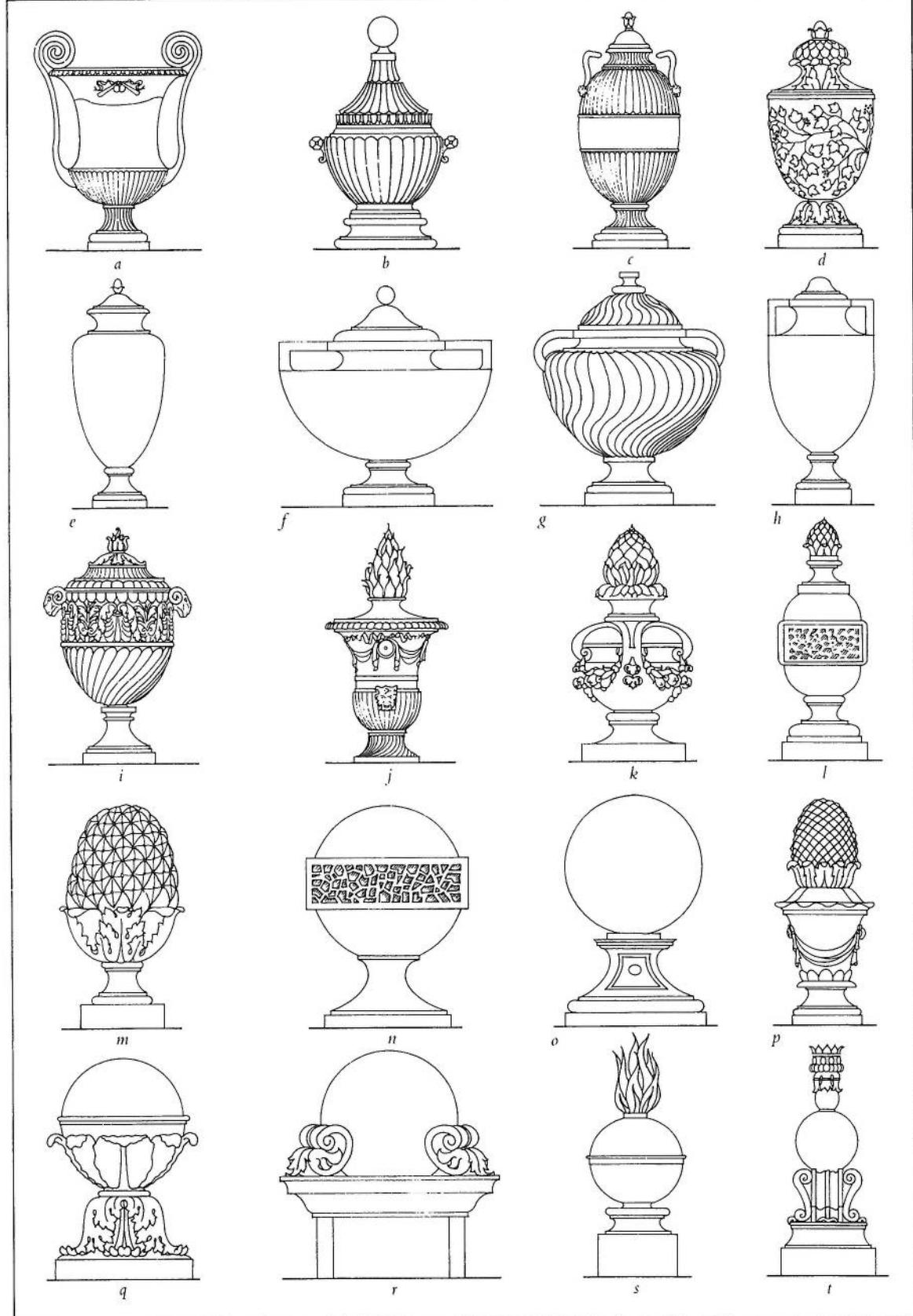
The use of finials rather than sculptures as features on the roofs of buildings can be traced to antiquity through a few surviving buildings but, as such fragile ornaments rarely survive, principally through paintings and other representations. In the early Renaissance, balls and similar details were applied to the apex of pitched roofs and domes following Byzantine and Gothic practice, often as a base for a cross signifying God's rule over the world. In the late Renaissance, balls and urns became common additions to the roofs and parapets of buildings and have become, at both a large and small scale, one of the most familiar elements of classical decoration.

A large number of urns survived from antiquity and were admired and collected in the Renaissance. Examples (a) to (i) are from the Pope's collection in Rome. The quality of these vessels reflects their prestige in antiquity. Some of the finest surviving works of early Greek art are the pottery vases and urns that were mass produced not only for the domestic market but for export. Their use as containers for the ashes of the dead and consequent burial, together with the low value and durability of the raw material, are the principal reasons for their survival in large numbers. The higher status metal vessels have, however, more often been melted down as bullion. Examples (a) to (i) are all carved out of fine marble, which has ensured their survival, but the shape, detail and decoration often derives, as with pottery vases, from metal originals.

All of these shapes have been used on later classical buildings and at times have specific meaning. An urn, particularly if partially covered, can signify death. An urn with flames at the top (j) once represented charity, but in time the flames came to be no more than a standard decorative stopper. Urns the shape of (a), (c), (f) and (h) are often found on neo-classical buildings, while (j) and (k) are Baroque forms. The last example (l) is unusual and includes a block of rustication in the centre to relate to a rusticated building below. This detail is more common on balls.

The pine-cone stopper of (k) and (l) can grow to dominate the vase (p). The use of pine-cones on their own as finials (m) is a frequent classical decorative feature and derives from a famous large bronze pine-cone unearthed near the Pantheon in Rome in the Middle Ages and erroneously thought to be its finial.

The ball is the most common decorative finial, usually sitting on a base with a scotia moulding (o). This simple feature is subject to a surprising number of variations. Rusticated blocks are often added (n), the ball can be flattened to an oval, be supported on leaves (q) or issue forth flames (s) like an old-fashioned grenade. Different combinations of balls and scrolls can be made: example (t) is from the early eighteenth century and example (r) from the early twentieth century.



FINIALS, OBELISKS AND TROPHIES

Special objects can be designed to act as features on the roofs and parapets of buildings. These finials at times derive from vases or candlesticks and sometimes are original creations. The most famous example from antiquity is on the roof of the Choragic Monument of Lysicrates in Athens (a) dating from the late fourth century BC. This elaborate composition acted as the base for the bronze tripod that the monument was designed to display. The early-sixteenth-century chapel of S. Giovanni in Oleo in Rome (b), attributed to Bramante, has a similarly complex leaf and ball design. From the same period are two candlestick finials, one from a tomb in Rome (c) by Andrea Sansovino, and another from Santiago de Compostela in Spain (h). The plain column and ball (k) and baluster and ball (l) are similar, but their simplicity has made them more popular. Many of these features have an ambiguous relationship with urns. The earliest is from Brunelleschi's dome in Florence (d) and is an original invention, while a Baroque finial with bronze representations of leaves (g) could be an urn. A combination of urn, candlestick and ball on Palladio's Palazzo Chiericati in Vicenza (e) of 1550 has been repeated and modified many times (f). Most extraordinary is an ascending series of four urns from León Cathedral in Spain (j) of 1520. While many finials have sculpted representations of flames, lamps can themselves act as features, such as example (i) by the Scottish architect Robert Adam at Syon House in 1764.

When Egypt fell under Roman control in the first century BC, obelisks (x), ancient needle-shaped religious monuments carved with commemorative inscriptions, were brought to Rome. These huge pillars were erected in the city and other smaller obelisks were imported to decorate temples as the worship of Egyptian gods became popular. The obelisk, with various other Egyptian forms, entered into the classical vocabulary. In the Renaissance the fallen remains were repaired and erected again. Since then, the obelisk has, in a surprising number of modified shapes, become a decorative feature on many classical buildings. A ball and spike like the needle, or gnomon, of a sundial is often added, (n) and (o), and flames can issue from the top, (p) and (q). They are often raised on pedestals, (n), (o), (r), (s) and (t), and occasionally on urns (q). At some time in the sixteenth century they were raised on ball or bun feet, (o), (p) and (s), and later developed curves, (m) and (s).

The ancient Greeks placed the armour of their fallen and defeated enemies on tree trunks (v). This symbol of conquest, or trophy, was adopted by the Romans as a part of their elaborate celebrations of victory and enlarged to incorporate flags, drums and other captured apparatus of war including, in sculpted form, prisoners of war. These sculptural groups have continued to be used to represent military prowess, with the addition of cannon or other weapons relevant to the warfare of the period, (u) and (w).

