

&c., within the room, and those which are complete in themselves and require but few accessories; to the latter type belong the more highly ornamented walls and ceilings. The flat ceilings in one plane are practically large panels defined by the walls, and require panel treatment, *i. e.*, with borders or with centre motives, or both, care being taken that the centre of the ceiling does not appear lower than the sides. To avoid this effect the centre ornament should not have either too much projection, too large a scale or too strong a tone; and it is advisable to have the design of the border more vigorous than that of the centre.

Darker tones in the ceiling than in the walls produce the effect of a heavy ceiling, for which reason, unless there are strong supporting motives in the ceiling, such as beams from wall to wall or rich projecting divisions between panels forming a framework apparently capable of self-support, it is well to have the tone of the ceiling lighter than the wall. This is also dependent upon the apparent carrying capacity of the wall, for walls with deep reveals, indicating thickness, or with high broad surfaces, which also apparently necessitate thickness, or with pilastered or columned treatment, can carry heavier and richer ceilings than thin walls or walls pierced with numerous openings.

BORDERS ON FLAT CEILINGS come immediately in contact with the upper part of the wall, and if undefined from it by cornice lines require careful harmony or treatment with the design upon the wall, having similar intervals of repeat; in fact, the top of the wall, the cornice and the border of the ceiling should always be designed together, not as separate designs. Corners of ceilings, contrary to those of floors, are adaptable points of interest for ornament, though liable to disturb the scale.

BEAMS in ceilings must be manifestly deep enough, and of proper intervals apart to carry the floor or roof above; the spaces between the beams becoming panels, subject to panel treatment. Alternation of beams, cross beams and framework patterns produce coffered ceilings of the richest type, the coffers being recessed to greater or less depth at will, and treated in the same or different tones from the framework, which takes the form of a geometric pattern extending over the entire ceiling and dividing it into panels of various shapes. When the framework becomes delicate and of slight projection, it is advisable to keep the tones of the frame and the panel near to each other; the heavier framework allowing greater contrast of tone and colour. Upon the framework, ornament is naturally placed at the juncture of the pieces of frame. Each piece of frame is a band and can be treated as such.

VAULTED CEILINGS are based on arch construction, and the lines of intersection of the arches are the salient lines of ornament, being bands, or borders, or ribs, strongest in their centre lines, and with ornament either in repose or following the lines upward. The spaces between these lines become panels of many forms, the ornament upon them being subordinate in scale or tone to the construction lines; and it is inadvisable to subdivide these panels excepting by some geometric framework or lattice of less strength than the arch lines.

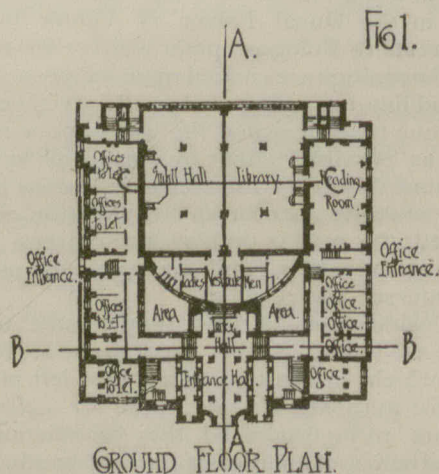
At the points where the arch lines group, rich ornament can properly be placed, such as caps or corbels at the base of the lines; and bosses, rosettes, knots, pendants, &c., at the crown. Parallel bands as borders or arch lines, whether of mouldings or of flat decoration, apparently strengthen the construction; while exceedingly heavy centres in the panels apparently weaken it. Single vaulted ceilings, such as those spanned by barrel-vaults, can be heavily coffered; but all cofferings of ceilings of interlacing arches requires lighter treatment to avoid violating the apparent strength of the rib lines. The tympana left by the barrel-vaults at the end walls of the room are of unique shape and capable of specialized treatment of great interest. Vaulted ceilings do not require a continuous cornice below them, sections of the cornice forming caps or corbels at the points where the arch lines meet the perpendicular walls being sufficient.

PENDANTS. Ceilings with hanging forms or pendants, as at Troyes or at Rosslyn Chapel, and stalactite ceilings, as at the Alhambra, need a strong initial background surface, manifestly capable not only of supporting itself but also all forms hung upon it; and as an arch over a span can unquestionably carry more than a beam over the same span, the ceilings are best when the background is an arched or vaulted form: in fact, pendants from a flat ceiling should be associated with a strong framework pattern upon the ceiling. In all cases numerous small pendants or stalactites are more agreeable than a few large or apparently heavy ones; and the construction scheme should be carefully worked out in the mass before the detail is applied. The form of the pendants should decrease downwards and partake of the character of hanging forms, not of mere masses fastened as a deadweight upon the surface. It is not usual to find such forms at a point of departure for chandeliers, etc., from the midst of a plain surface; and in most cases they are unsatisfactory, the tubing or rods of such fixtures appearing lighter when piercing the heart of a flat ornament, such as a rose or circle. The Oriental stalactite ceilings are extremely interesting; they are built of a series of carefully related units, each of which does its work in supporting those about it.

Pendants from keystones can be heavier than at other points, for obvious reasons.—*The Builders' Journal and Architectural Record.*

AXIAL PLANNING.

It is often said by foreign critics that English architecture lacks the element of study which is so pronounced a characteristic of Continental work. Unfortunately, there is a good deal of truth in this, and to a large extent it is undoubtedly due to our neglect of certain great principles, amongst which that of axial planning is one of the most prominent. Tracing back



the history of architecture throughout all ages, it is found that this principle predominates, not in one period, but in all, where great schemes are concerned. In the Egyptian works it is in strong evidence, the great temples of Thebes being all arranged with an axial corridor and carefully managed minor axes. The Greek temples are similar, and not the temples alone, but the general building schemes of which they formed a part. Roman work, as we know, is based upon the Greek, in this as in most other respects, and the Renaissance was based upon the Roman. All this is a natural sequence; but the Gothic spirit is so utterly different from that which permeates all Classic types, that it might have been thought that this principle would not govern the great building of the Gothic period; yet the churches at least have the same central axial arrangement as have the Basilicas of Rome or the temples of Greece and Egypt, though, upon military grounds, the castles are differently planned.

There is no gainsaying the fact that the present is a Renaissance period, and it consequently follows that the principles which have been successfully applied to Classic architecture in the past should apply equally