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978-1-108-06850-5 - The True Principles of Pointed or Christian Architecture: Set Forth in Two Lectures
Delivered at St Marie's, Oscott

A. W. Pugin

Excerpt

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PRINCIPLES
OF
POINTED OR CHRISTIAN ARCHITECTURE.

LECTURE I.

The object of the present Lecture is to set forth and explain the true principles of Pointed or Christian Architecture, by the knowledge of which you may be enabled to test architectural excellence. The two great rules for design are these: *1st, that there should be no features about a building which are not necessary for convenience, construction, or propriety; 2nd, that all ornament should consist of enrichment of the essential construction of the building.* The neglect of these two rules is the cause of all the bad architecture of the present time. Architectural features are continually tacked on buildings with which they have no connexion, merely for the sake of what is termed effect; and ornaments are *actually constructed*, instead of forming the decoration of *construction*, to which in good taste they should be always subservient.

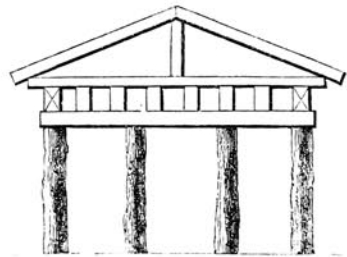
In pure architecture the smallest detail should *have a meaning or serve a purpose*; and even the construction itself *should vary with the material employed*, and the designs should be adapted to the material in which they are executed.

Strange as it may appear at first sight, it is in *pointed architecture alone that these great principles have been carried out*; and I shall be able to illustrate them from the vast cathedral to the simplest erection. Moreover, the architects of the middle ages were the first who *turned*

the natural properties of the various materials to their full account, and made their mechanism a vehicle for their art.

We shall have therefore to consider ornament with reference to construction and convenience, and ornament with reference to architectural propriety. Construction must be subdivided and treated under three distinct heads,—stone, timber, and metal; brick might indeed be added, but as the principles of its construction are similar to those of stone, I shall not make any distinction; and as for plaster, when used for any other purpose than coating walls, it is a mere moderate deception, and the trade is not worthy of a distinction.

To begin with stone. A pointed church is the masterpiece of masonry. It is essentially a stone building; its pillars, its arches, its vaults, its intricate intersections, its ramified tracery, are all peculiar to stone, and could not be consistently executed in any other material. Moreover, the ancient masons obtained great altitude and great extent with a surprising economy of wall and substance; the wonderful strength and solidity of their buildings are the result, not of the *quantity or size of the stones* employed, but of the *art of their disposition*. To exhibit the great excellence of these constructions, it will be here necessary to draw a comparison between them and those of the far-famed classic shores of Greece. Grecian architecture is essentially *wooden* in its construction; it originated in wooden buildings, and never did its professors possess either sufficient imagination or skill to conceive any departure from the original type. Vitruvius shows that their buildings were formerly composed of trunks of trees, with lintels or brestsummers laid across the top, and rafters again resting on them. This is at once the most ancient and barbarous mode of building that can be imagined; it is heavy, and, as I before said, essentially wooden; but is it not extraordinary that when the Greeks commenced building in stone, the *properties of this material did*



A Wooden Building the origin of Greek Temples.

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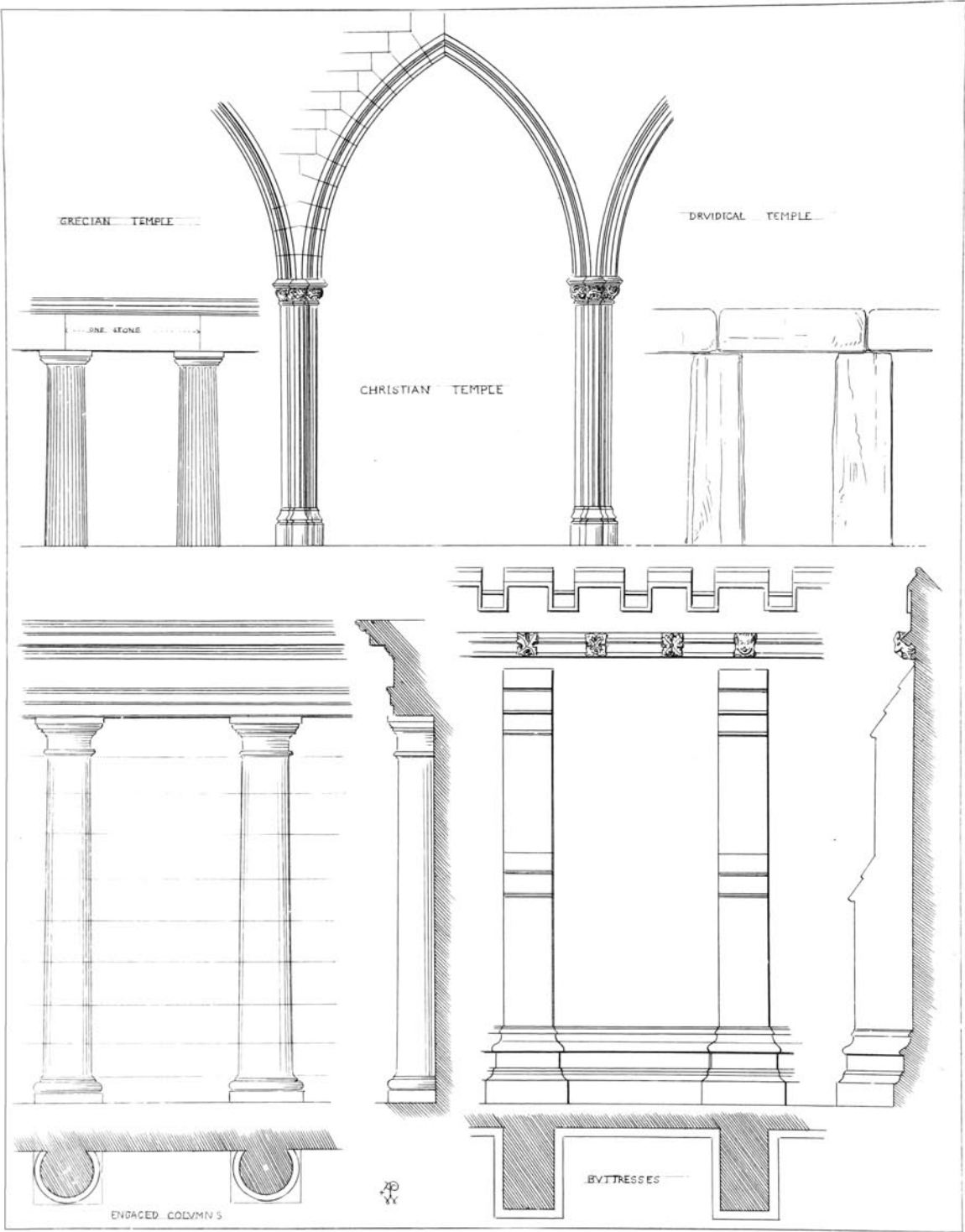


Plate 1.

London. Published by John Woele. 59. High Holborn. 1842.

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not suggest to them some different and improved mode of construction? Such, however, was not the case; they set up stone pillars as they had set up trunks of wood; they laid stone lintels as they had laid wood ones, *flat across*; they even made the construction appear still more similar to wood, by carving triglyphs, which are merely a representation of the beam ends. The finest temple of the Greeks is constructed on the *same principle* as a large wooden cabin. As illustrations of history they are extremely valuable; but as for their being held up as the standard of architectural excellence, and the types from which our present buildings are to be formed, it is a monstrous absurdity, which has originated in the blind admiration of modern times for every thing Pagan, to the prejudice and overthrow of Christian art and propriety.

The Greeks erected their columns, like the uprights of Stonehenge, just so far apart that the blocks *they laid on them would not break by their own weight*. The Christian architects, on the contrary, during the *dark ages*, with stone scarcely larger than ordinary bricks, threw their lofty vaults from slender pillars across a vast intermediate space, and that at an amazing height, where they had every difficulty of lateral pressure to contend with. This leads me to speak of buttresses, a distinguishing feature of Pointed Architecture, and the first we shall consider in detail.—Plate I.

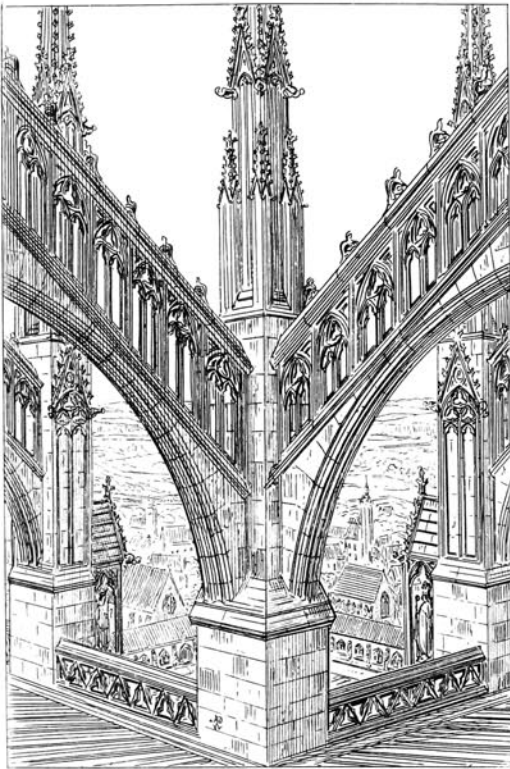
It need hardly be remarked that buttresses are necessary supports to a lofty wall. A wall of three feet in thickness, with buttresses projecting three feet more at intervals, is much stronger than a wall of six feet thick without buttresses. A long unbroken mass of building without light and shade is monotonous and unsightly; it is evident, therefore, that both for strength and beauty, breaks or projections are necessary in architecture. We will now examine in which style, Christian or Pagan, these have been most successfully carried out. Pointed architecture does *not conceal her construction, but beautifies it*: classic architecture seeks to conceal instead of decorating it, and therefore has resorted to the use of engaged columns as breaks for strength and effect;—nothing can be worse. A column is an architectural member which should only

be employed when a superincumbent weight is required to be sustained *without the obstruction of a solid wall*; but the moment a wall is built, the *necessity and propriety of columns cease*, and engaged columns always produce the effect of having once been detached, and the intermediate spaces blocked up afterwards.

A buttress in pointed architecture at once shows its purpose, and diminishes naturally as it rises and has less to resist. An engaged column, on the contrary, is overhung by a cornice. A buttress, by means of water tables, can be made to project such a distance as to produce a fine effect of light and shade. An engaged column can never project far on account of the cornice, and all the other members, neces-

sarily according with the diameter of the column, would be increased beyond all proportion. I will now leave you to judge in which style the real intention of a buttress is best carried out.

I have yet to speak of flying buttresses, those bold arches, as their name implies, by which the lateral thrust of the nave groining is thrown over the aisles and transferred to the massive lower buttresses. Here again we see the true principles of Christian architecture, by the conversion of an essential support of the building into a light and elegant decoration. Who can stand among the airy arches of Amiens, Cologne, Chartres, Beauvais, or Westminster, and not be filled with admiration

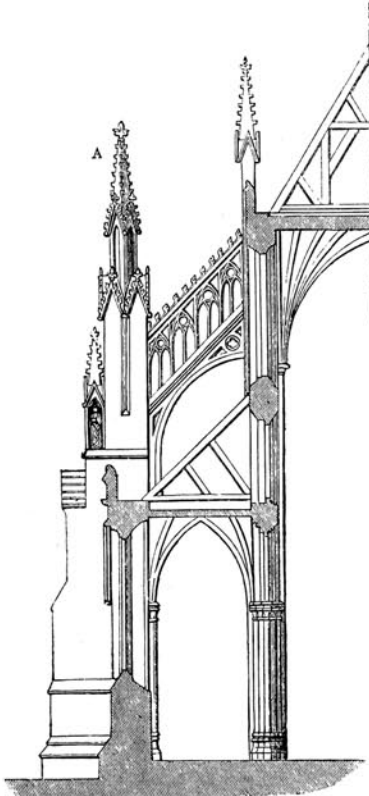


Flying Buttresses.

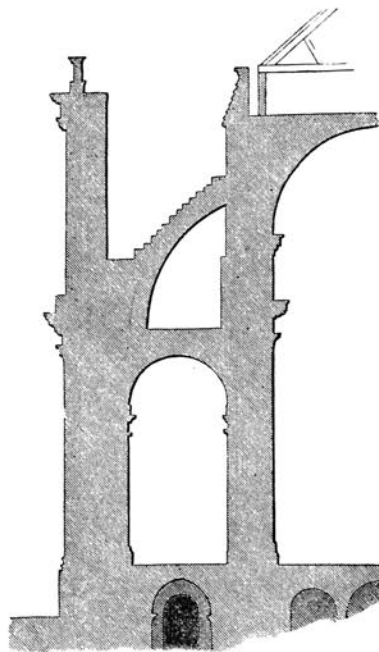
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at the mechanical skill and beautiful combination of form which are united in their construction? But, say the modern critics, they are only props, and a bungling contrivance. Let us examine this. Are the revived pagan buildings constructed with such superior skill as to dispense with these supports? By no means; the clumsy vaults of St. Paul's, London, mere coffered semi-arches, without ribs or intersections, *have their flying buttresses; but as this style of architecture does not admit of the great principle of decorating utility*, these buttresses, instead of being made *ornamental*, are *concealed by an enormous screen*, going entirely round the building. So that in fact one half of the edifice is built to conceal the other. Miserable expedient! worthy only of the debased style in which it has been resorted to.



Section of a Pointed Church, with the Flying Buttresses decorated.



Section of St. Paul's, London, a Church built in the revived Pagan style, with the Flying Buttresses concealed by a Screen.

It is proper to remark that the cluster of pinnacles at A are not carried up for *mere ornament*, but, by their *weight*, to increase the resistance of the great pinnacle at the point of thrust.

We will now proceed, in the second place, to consider groining and vaulting, which are solely adapted to stone construction.

A groined ceiling is divided into compartments by means of ribs springing from caps or corbels, and uniting in bosses placed at the intersections; the spaces between the ribs are termed spandrils: the word boss signifies a spring of water, and has doubtless been applied to the key-stones of vaults, as the ribs seem to spring or separate from them.

Here again the great principle of decorating utility is to be observed. A stone ceiling is most essential in a large church, both for durability, security from fire,¹ and conveyance of sound. It is impossible to conceive stone ceilings better contrived than those of the ancient churches; they are at once light, substantial, beautiful, and lofty. 1st. They are light, because, their principal strength lying in the ribs, the intermediate spaces or spandrils are filled in with small light stones. 2nd. They are substantial, for all the stones being cut to a centre and forming portions of a curve, when united they are capable of resisting immense pressure, the keys or bosses wedging all together. 3rd. They are beautiful, for no ceiling can be conceived more graceful and elegant than a long perspective of lines and arches radiating from exquisitely carved centres. 4th. They are lofty, not only on account of the elevation at which they are placed, but that their construction permits the clerestory windows to be carried up level with the crown of the arch in the intermediate spaces.

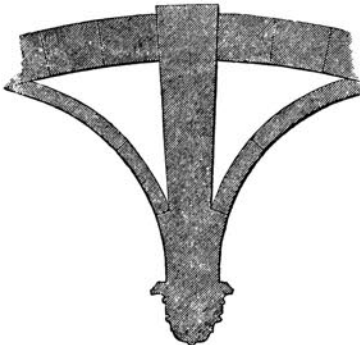


¹ Within the last few years the roofs have been burnt off the cathedrals of Rouen, Chartres, and Bruges; and, owing to the strength of the stone vaulting, the interiors of these churches have scarcely been injured; while York Minster has twice been completely

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In the groining of the later styles we find a great departure from the severe and consistent principles I have been describing. Henry the Seventh's Chapel at Westminster is justly considered one of the most wonderful examples of ingenious construction and elaborate fan groining in the world, but at the same time it exhibits the commencement of the bad taste, by *constructing its ornament instead of confining it to the enrichment of its construction*. I allude to the stone pendants of the ceiling, which are certainly extravagances. A key-stone is *necessary* for



Pendant.



Boss.

the support of arched ribs; the older architects contented themselves with enriching it with foliage or figures, but those of the later styles allowed four or five feet of *unnecessary stone to hang down into the church*, and from it to branch other ribs upwards. This is at most an ingenious trick, and quite unworthy of the severity of Pointed or Christian architecture.²

guttered within a short period through the want of a stone groining; and yet a mere wood and plaster ceiling has been again constructed!

² This is one among many other symptoms of decline apparent in the later works in the pointed style. The moment the *flat* or *four-centred arch* was introduced, the spirit of Christian architecture was on the wane. *Height* or the *vertical principle*, emblematic of the resurrection, is the very essence of Christian architecture. It was to attain greater elevation with a given width that the pointed arch was employed; and the four-centred arch does not possess equal advantage in this respect with the old semi; and although some of the later buildings, as King's College Chapel, Cambridge, still retain the principle of internal height, with the use of the depressed arch, yet who can avoid being struck with the inconsistency of

In the third place, we will proceed to the use and intention of pinnacles and spiral terminations. I have little doubt that pinnacles are considered

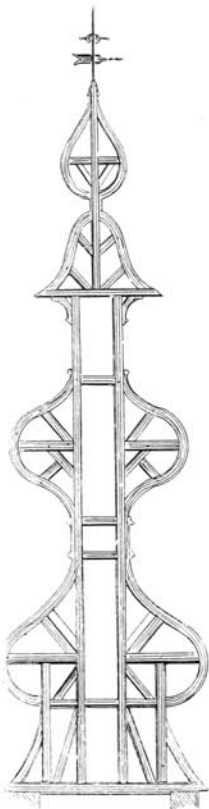
running up walls to a prodigious elevation, and then, instead of *carrying out the principle, and springing a lofty groin*, losing a considerable increase of height by a flattened thrusting arched ceiling; the form of which is a sort of contradiction to the height at which it is commenced.

I do not make this observation by way of disparaging the merits of this stupendous building, but merely to show the early decay of the true principles of pointed architecture which may be traced even in that glorious pile.

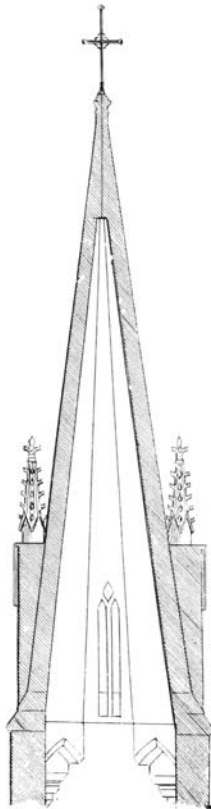
We not unfrequently find the bulbous form employed in the Tudor period: this, which afterwards became the prevailing form of the Dresden and Flemish steeples,

is of *the worst possible taste; and why? Because it is a form which does not result from any consistent mode of constructing a covering*, and, on the contrary, requires by its shape *to be constructed*, as will be seen by the annexed sketch; by the side of which I have placed a spire, the severe form and decoration of which are quite consistent with the true principles of rendering the necessary roof or covering of a tower elegant in appearance, without *departing from essential construction* for the sake of ornament.

One of the greatest defects of St. Paul's, London, is its fictitious dome. *The dome that is seen is not the dome of the church*, but a mere construction for effect. At St. Peter's the dome *is the actual covering of the building*, and is therefore constructed in that respect on the true principle; but, as will be perceived by the an-



Bulbous Covering or Steeple,
in the debased style.



Spiral Covering or Steeple,
in the Christian style.