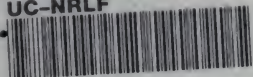


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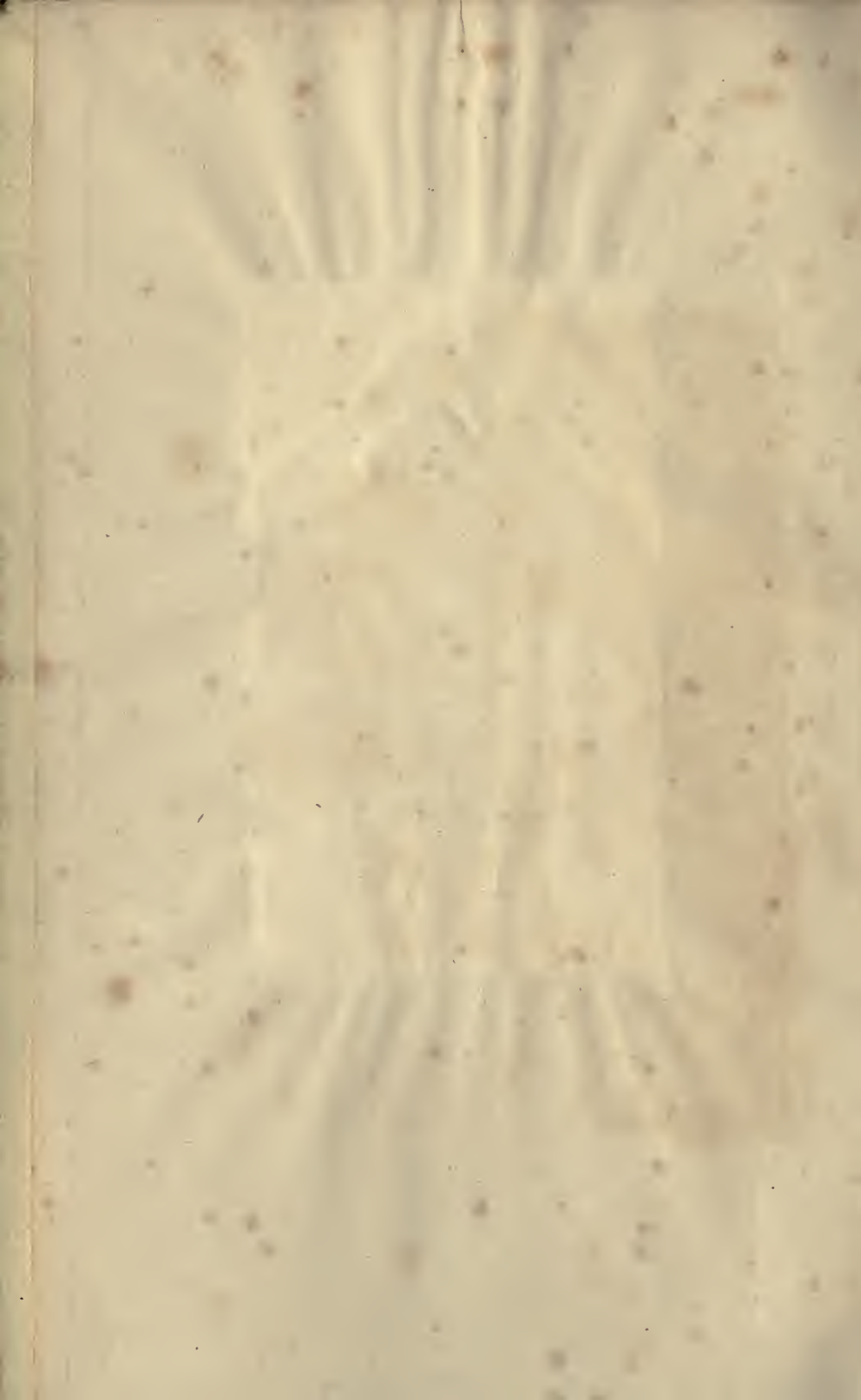




Plate III.



Lauch., from the N.W.

J. B. F. S. Stone, 20 Cambridge St.

ARCHITECTURAL NOTES

ON

GERMAN CHURCHES.

A NEW EDITION.

TO WHICH IS NOW ADDED,

NOTES

WRITTEN DURING AN ARCHITECTURAL TOUR

IN

PICARDY AND NORMANDY.

BY THE REV. W. WHEWELL, M.A.

FELLOW AND TUTOR OF TRINITY COLLEGE, CAMBRIDGE.

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CONTENTS.

ARCHITECTURAL NOTES ON GERMAN CHURCHES.

	PAGE
DESCRIPTION of the Plates	vi
PREFACE	ix

CHAP. I.

OF THE CAUSES OF POINTED ARCHITECTURE.

SECT. 1.	<i>Of the Romanesque and Gothic Styles.....</i>	31
SECT. 2.	<i>Of the Origin of Pointed Vaulting.....</i>	36
SECT. 3.	<i>Of the Aisled Form of Churches.....</i>	42
SECT. 4.	<i>Of the kinds of Vaulting employed in Churches...</i>	44
	No. 1. Cylindrical Vault.....	<i>ib.</i>
	2. Semi-dome	45
	3. Three Aisles of equal Height	46
	4. Flat Roof.....	48
	5. Double Compartments with Semi-circular Arches in both Directions.....	52
	<i>a.</i> Alternate Distinction of the Piers ...	54
	<i>b.</i> Distribution of the Clerestory Windows	56
	6. Vaulting with Transverse Ribs Pointed, and Longitudinal Ribs Semi-circular .	58
	7. Vaulting with Transverse and Longitudinal Ribs both Pointed	59
	8. Sexpartite Vaulting.....	60
	9. Octopartite Vaulting.....	62
	10. Octopartite Vaulting of the Apse . . .	63
SECT. 5.	<i>On the Nomenclature of Fan-tracery Roofs, or Concavo-convex Vaulting.....</i>	<i>ib.</i>
SECT. 6.	<i>Order of Succession of the Kinds of Vaulting...</i>	67
SECT. 7.	<i>Influence of the Pointed Arch on other Parts of the Architecture.....</i>	69

CHAP. II.

OF THE CHARACTERS OF TRANSITION OR EARLY GERMAN
ARCHITECTURE.

	PAGE
SECT. 1. <i>Difference of the Early English and Early German Styles</i>	74
SECT. 2. <i>Characteristic Details of Transition or Early German Architecture</i>	78
I. The Plan	<i>ib.</i>
II. The General outline	80
III. The Vaulting	82
IV. Interior	85
1. Piers and Pier-Arches	86
2. Triforium	90
3. Clerestory	93
4. Aisle-Windows	96
5. Apse.....	<i>ib.</i>
6. Intermediate Compartment.....	97
7. Transept	99
V. Exterior.....	100
1. Windows.....	101
2. Corbel Table	<i>ib.</i>
3. Apse	102
4. Towers.....	104
5. Fronts	105
6. Porches.....	107
7. Buttresses.....	109
SECT. 3. <i>On the Complete Gothic Style in Germany</i>	112

CHAP. III.

SUGGESTIONS ON THE MANNER OF MAKING ARCHITECTURAL
NOTES.

SECT. 1. <i>On Describing Churches</i>	116
SECT. 2. <i>Nomenclature</i>	120
<i>List of Technical Terms which are explained in the preceding pages</i>	121
SECT. 3. <i>On a Notation to express Vaulting</i>	123
SECT. 4. <i>On making Architectural Notes by means of Drawing</i>	124
SECT. 5. <i>List of Churches</i>	126

NOTES ON PICARDY AND NORMANDY.

	PAGE
INTRODUCTION	131
<i>Abbeville to Amiens</i>	136
Abbeville. St Riquier. Ailly le Haut Clocher. Belloy.	
<i>Amiens</i>	141
<i>Beauvais</i>	148
<i>The Flamboyant Style</i>	153
<i>Outline of French Cathedrals</i>	159
<i>Comparison of French Decorated and Flamboyant.</i>	
<i>Rouen. (Cathedral)</i>	164
<i>St Ouen</i>	167
<i>Comparison of Early French and Early English.</i>	
<i>Louviers</i>	175
<i>Evreux</i>	176
<i>Lisieux</i>	177
<i>On Different kinds of Norman.</i>	
<i>Jumieges. St George de Bocherville</i>	181
<i>Further Account of French Early Gothic.</i>	
<i>Caen</i>	187
<i>Ardenne</i>	189
<i>Norrey</i>	193
<i>Other Specimens resembling Early English</i>	196
Subles. St Lo. St Gilles. St Sauveur le Lendelm. Perier. Isigny. St Loup. Formigny. Vaucelles. Bayeux. Tilly. Fontenay. St Auban.	
<i>Transition from the Norman to the Gothic Style.</i>	
<i>Cheux</i>	201
<i>The Transition as seen in French Towers</i>	202
St Stephen at Caen. St George de Bocherville. Jumieges. Haute Alle- magne. Basse Allemagne. St Michael de Vaucelles. Ifs. Coutances. St Gilles.	
<i>On the Formation of the Gothic Style</i>	208
<i>On the Intersection Theory</i>	224
<i>Comparison of French and English Decorated</i>	231

DESCRIPTION OF THE PLATES.

PLATE I. Represents the steps which form the transition from circular to pointed vaulting. Fig. 1. is Roman vaulting (see p. 37), the vault-arches in both directions being semi-circular. Fig. 2. represents the kind of vaulting called Welch vaulting, which was necessary when the length and breadth of the vaulted space were different, and both were covered with semi-circular vaults. Fig. 3. shews the way in which this form was avoided (p. 37; and p. 58, No. 6.) the vault-arch in one direction being still semi-circular, and this vault being crossed by another pointed one, of the same height but smaller width. Fig. 4. (p. 37; and p. 58, No. 6.) has pointed vault-arches both ways. Fig. 5. (p. 60, No. 8.) represents sex-partite vaulting: all the vaults being pointed. Fig. 7. is octopartite vaulting on a square base, and Fig. 8. octopartite vaulting on an octagonal base (p. 62. and 63. Nos 9. and 10.). For Fig. 6. see Plate IV.

Under the figures in this plate are placed the symbols which would represent the vaulting according to the system explained page 123.

PLATE II. Three Ground-Plans with their vaulting, (see p. 78). Fig. 9, the Cathedral at Mentz; represents a Romanesque Cathedral, with both east and west apses, two transepts, towers at each crossing, and a pair of towers at each end (p. 79). The vaulting of the east apse is a semi-dome (p. 45), of the west apse, polygonal with acute cells (p. 63). The vaulting of the center aisle is groined, with only the transverse ribs pointed (p. 58); the next lateral aisles are Roman vaulting; the exterior aisles are of more modern work, and are pointed both ways.

Fig. 10, St Aposteln at Cologne. A transverse-triapsal church, with a large western tower; two smaller towers at the east, and an octagonal pyramid at the eastern crossing. (See p. 79). It has also a western transept. The apses are vaulted

with semi-domes: the old vaulting of the center aisle is sex-partite on the double compartments, and cylindrical on the single ones; the modern vaulting (represented by dotted lines) has acute transverse vaults over each single compartment, the longitudinal vault being semi-circular. (See p. 62, 98, and 118).

Fig. 11. Abbey Church of Laach. A parallel-triapsal church, (see p. 98), with a semi-circular apse at each end, a pair of square towers at the east, and of round towers at the west, two transepts and towers at the two crossings. (See p. 79). The three aisles have each Roman vaulting in single compartments. There are three apses towards the east, each with a semi-dome. A portal-cloister (see p. 105) occurs at the west end.

These Plans were drawn by the eye without any measurement, and have no pretensions to exactness of proportions or details.

PLATE III. Perspective view of Laach, exhibiting the six towers just mentioned, with their galleries, windows, panneling, corbel-tables, gables and roofing. (See p. 80). The semi-circular *west* end also is shewn, and part of the portal-cloister.

PLATE IV. Fig. 6. Part of a Romanesque Cathedral, with Roman vaulting in double compartments; shewing the origin of the triforium-space, clerestory, alternate piers, and clerestory windows in pairs. (See p. 43, and 49.)

Fig. 12. A compartment of the church at Sinzig, drawn in memorandum lines only, (see p. 124), exhibiting the principal and intermediate piers, vaulting pillars, triforium, and fan-shaped clerestory windows. (See p. 94.)

Fig. 13. Ground Plan of a pier of engaged shafts and pier-edges. (See p. 87.)

Fig. 14. Ground Plan of pillar, with square abacuses set obliquely. (See p. 95.)

Fig. 15. Cornice which occurs over the apsidal gallery. (See p. 102.)

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P R E F A C E.

A NEW edition of the "Architectural Notes on German Churches" having been demanded for some time, I now republish the work, adding to it another Collection of Architectural Notes, of the same kind, and with the same humble pretensions. The hypotheses, comparisons and classifications which I have employed in these remarks, must be looked upon rather as means of describing what I saw, in such a manner as to make it bear upon the general history and philosophy of the art, than as assertions made confidently after thorough examination of the whole subject. For the latter task I had, as I have stated, no leisure or opportunity.

It has been therefore no source of mortification to me, that Dr Boisserée, after speaking of the Architectural Notes in a manner far more favourable than, from a person so profoundly acquainted with German Architecture, I had ventured to hope, has said that I have, "though rightly, too exclusively assumed the method

of vaulting as the leading principle” of the developement of the pointed style*: or that Mr Willis, in his singularly instructive “Remarks on the Architecture of the Middle Ages,” (p. iv.) has declared himself compelled to dissent from my hypothesis. Though the hypothesis may not contain the whole account of the formation of the Gothic style, it may still have the effect of bringing into view relations and connexions which really exerted a powerful influence on the progress of architecture: and thus it will have an important place even in those theories which ascribe the rise of Gothic Architecture to the joint operation of many causes. But before I attempt to point out what place this is, I will say a word on the present state of the problem.

The architecture, like the literature, which sprang up in the middle ages in transalpine Europe, has gradually risen from contempt to honour. First despised, then tolerated as convenient, then wondered at as whimsical and lawless, it has at length come to be admired as beautiful and excellent, and, at the present day, takes its seat in equal dignity by the side of the Art of ancient Greece and Rome. It is now acknowledged that this architecture has its own

* Denkmale der Baukunst am Nieder Rhein, p. 40.

proper principles of truth and unity, and is to be comprehended and criticised by reference to these, and not by applying to it rules extracted from a different class of works, or by demanding of it a symmetry and simplicity as foreign to its nature, as "the unities" are to the modern historical drama. This acknowledgement was long before it came, but it is now probably generally assented to. "Gothic Architecture," says an intelligent writer in the Quarterly Review for July 1827, "is an organic whole, having within it a living vegetating germ. Its parts and lines are linked and united, they spring and grow out of each other." So long as men were blind to this character of unity and connexion in the members of this form of art, it was impossible that they could speculate with any distinctness or success on the conditions and causes of its rise and progress; so long as they did not perceive clearly *what* it was, they could not discern *how* it came to be; so long as they did not understand the language of Gothic Architecture, they could not trace its phrases to their roots. So long as mere arbitrary, or at least partial forms (as the pointed-arch) were the received marks by which this style was recognized among antiquaries, they could not philosophically investigate the origin and developement of its

principles. And even after it was perceived that this architecture *had* principles, that it was a connected and organic whole, much confusion and indistinctness still remained to perplex the enquiry. Even after it was seen that Gothic architecture had general laws, it was by no means easy to see what those laws were; though the spectator perceived that it had vitality, it was a hard task to put into words the principle of its life. The ancient metaphysicians, in this respect wiser than the modern ones, made definition not the first, but the *last* step in knowledge. Assuredly, in matters of classification, and especially in matters of Art, a perception of difference, even an exact appreciation of the distinction, and an inward possession of the principles of the opposite instances, may long precede the power of stating the principles in distinct abstract terms. In such cases, a criterion which will bear a general application strikes us as something of the nature of a discovery: it is, and deserves to be, applauded as a specimen of "true wit" according to the poet's description of it:

"What oft was thought, but ne'er so well expressed."

I will not undertake to assert that such a definition of the essential principles of Gothic

architecture has ever been offered to us; but I do not hesitate to say, that, in my opinion, Mr Rickman and Mr Willis together have given us such a collection of fundamental maxims with regard to the differences and antitheses of this style and the rival one, as may stand in the place of a definition for the purposes of that investigation of which I have been speaking. I refer to the statement of the distinctions of the Classical and Gothic Styles, which Mr Rickman has exhibited in two parallel columns, (*Attempt to discriminate the Styles of Architecture*, 4th edition, p. 110), and to which Mr Willis has made some important additions in the same form, (*Remarks on Architecture*, p. 158). These tabular statements of the leading features of Gothic as contrasted with Grecian architecture, ought to be constantly present to the minds of those who are endeavouring to arrive at any knowledge on this subject, and are quite invaluable for the distinctness they give to our views and speculations.

By referring to these statements, it will be seen that, among the features of *decorative construction* which occur in the styles of the middle ages, and which did not occur in the styles of Greece and Rome, we may select the following five as of primary importance:

1. The arch is essential, the entablature is not; and the columns support arches instead of entablatures.

2. There are any number of planes of decoration one behind the other. When we have in this way several arches under one, we are led, as Mr Willis has shown, to *tracery*; when we have arches of different forms one under another, we are led to *foliation*.

3. The weights are divided into as many parts as possible, and these are given to independent props; whence we have, among other results, *clustered* piers and pillars.

4. The diagonal pressures of the arch are displayed, whence we have *buttresses* and *pinnacles*.

5. And generally, the running and dominant lines are vertical in this style, as they were horizontal in the ancient styles.

In this statement the pointed arch enters as one of the various forms of arches mentioned in the second rule; and though its use became afterwards almost universal and exclusive, it can never be looked upon as one of the great essentials of the style, or placed upon the same footing with the principles just enumerated. What we have to do then, if we would follow to its sources the history of Gothic architecture,

is to trace, as far as we can, from what origin, and under what circumstances, each of these principles made its way into general use in the buildings of the middle ages.

The defect in the earlier investigations of this subject was, that they attended only to a portion of the second of these principles, neglecting almost entirely the others. Some traced the pointed arch to the countries of the East; and these persons were, by their brother antiquaries, playfully termed Ostrogoths. They have always been a powerful body, and I perceive that Mr Willis himself joins this eastern horde: to this I can easily reconcile myself, if it is borne in mind that he goes with them only as far as the arch; and that whatever influence the new and fantastical forms of openings may have had on the details of the new style, they go but a very little way in constituting its essence. Indeed, we can hardly refuse to allow that the pointed arch (as well as several other forms) is indigenious in the East, whether or not we assert that it flowed into the West from thence: for we cannot easily persuade ourselves that all such arches in Oriental countries are derived from the influence of European art. But it will be found that in the Oriental examples we miss exactly those other principles

above stated, which entitle the architecture to be termed Gothic in our classification.

In assigning the derivation of each of the above five principles, much probably may yet be effected by antiquarian and historical labour; since we have now the object of our research far more distinctly before our eyes than we had before the publication of Mr Willis's "Remarks." By what has already been done, we see something of the probable origin of these principles, and of the processes by which they have been introduced and established.

Thus the change in the office of the columns, from supporting the entablature to supporting the arch, almost inevitably followed after the introduction of the arch; since, as is observed in the following pages, the arch was the principal opening, and the columns the principal supports.

The introduction of several planes of decoration is one of the most material steps in the progress of the new style, and has not, so far as I am aware, been historically investigated. It can hardly be doubted that this mode of building is of European origin, for to this day it is not, I believe, effectively employed in the architecture of any other country. The first suggestion of this combination may be assigned to

the Roman introduction of the arch into Grecian architecture; for, in this manner, there were produced two planes of decoration; one, consisting of the traditional scheme of structure, the columns and entablature; the other behind it, containing the real construction, the arch and the impost-mouldings. And though this combination is, in reality, incongruous and inevitably transitional, it would be impossible for a genuine artist not to perceive that it disclosed an extraordinary richness and depth of effect: and the European architects of the middle ages who could appreciate and admire this effect, were naturally led to carry it still further by introducing other additional planes. They then sought to vary the forms and characters of these planes, and in doing this they may have adopted from Oriental or other foreign countries (as I have already allowed) the various forms of arch, pointed, trefoil or ogee, which fancy had produced among nations whose architecture had no organic principle to control such caprices. Thus we see in modern Italian architecture a wanton and fantastical love of variety in the forms of pediments. But in the middle ages, the general character and conditions of the system soon reduced all other forms of arch into an entire subordination to the pointed.

Again, the same examples which presented the multiplied planes of decoration, suggested also the partition of support; for the columns and the arch form two different mechanical systems. Now, in order to consider a work of art as beautiful, we must see, or seem to see, the relations of its parts with clearness and definiteness. Conceptions which are loose, incomplete, scanty, partial, can never leave us pleased and gratified, if we are capable of full and steady comprehensions. The desire for this completeness and definiteness in our conceptions of objects of art, may be assumed as one of the influences by which art is formed and modified. This tendency, combined with the geometrical faculty, with the clear notion of space, led to the combination of various planes of tracery, and to the formation of solid and complex masses in which the solidity and the complexity were palpably lightened and simplified by subordination of position and form. In like manner, the same love of distinctness of apparent relations, combining with the mechanical faculty, with the clear notion of force and resistance, led to the apparent distribution of the weights and thrusts of the visible members of the architecture to a number of different props and supports. And thus, using Mr Willis's valuable distinctions and terms, *com-*

pound-arches led to *edge-shafts* in the transalpine parts of Europe, while a more superficial application of the same principle produced rolls and *nook-shafts* in Italy; and these features of Romanesque architecture led the way to Gothic. The same consideration applies to that which I have quoted as the fourth distinctive maxim of Gothic architecture, the studious display of the diagonal pressures of the arch, and the consequent introduction of buttresses, pinnacles, corner-turrets, and other features.

The remaining maxim of those above stated, the predominant sway of the vertical lines of the structure, is of a more wide and general nature than those which I have hitherto noticed. This is, in fact, the peculiar and characteristic principle of the Gothic style; and whatever may be the details of the building, if this principle be not unequivocally and throughout enunciated, the work is not true and genuine Gothic architecture. We may see in many parts of Europe, and especially in Italy, how inefficient pointed arches alone, and any other of the mere formalities of the style, are to convey its true spirit and character, when this supreme principle does not rightly operate.

This, then, I conceive to be really the formative principle of the Gothic architecture, and

the first full apprehension of this idea to be the effort of taste to which that form of art is due. It was this thought which gave unity and consistency to the new style, and disclosed a common tendency in the changes which had been going on in the different members of the architecture. And the very fact of this character being, when once applied, so manifest and simple a mode of combining the parts of the structure into a harmonious whole, shows how much of genius there was in the discovery, since undoubtedly there was a time when the principle did not appear in the forms of buildings, and there still are countries which can shew no examples of it, and architects who have not learnt its true meaning.

In a succeeding part of this Volume (p. 214. &c.) I have endeavoured further to illustrate this, and especially to make it appear, that the habit of considering the interior of churches as the most important field for the display of architectural style and beauty, led almost irresistibly to the introduction of the vertical principle. Indeed I may observe that the interior gave rise to the most ornamental members and to the general forms of composition of Gothic architecture, as the exterior did of Grecian. For though classical columns may be used in the

interior of buildings, that is not their genuine position, as, even when so used, their cornice informs us; while the columns of Gothic buildings are piers with shafts attached for purposes of vaulting, and thus essentially belong to an interior.

I have however further to remark that among the distinctions which I have quoted from the works of Mr Rickman and Mr Willis, there is not any which refers especially to the roof of the building. But in another part of his book Mr Willis has considered this subject with his usual sagacity. "In the Decorative construction of a Gothic vault," he says at p. 81, "the ribs assume the principal part in the support of the roof;" whereas in a Roman building the vault lies as a solid mass upon the walls, its framework not having any ostensible mechanical relation to the structure below. I had endeavoured to shew in my Notes on German Churches, that the desire of constructing arched vaults crossing each other led to the general use of the pointed-arch; and I still think that the attempt to construct a vaulted covering, *in such a manner that it should be in architectural harmony with the rest of the structure*, did tend more than any other cause to the prevalence of such arches. It is true, as Mr Willis has observed, that the

abstract problem of vaulting an oblong space had been solved by the Romans, so that we cannot ascribe the invention of pointed arches to the bare necessities which such vaulting introduced. But how could a portion of Roman vaulting, with its sinuous groining line, have been placed on a compartment of a church in which such tendencies as we have been considering were at work to modify and connect the members? While all other parts, arches, piers, openings, &c. are traced with strong lines, and brought out by shadow after shadow on the retiring surfaces, shall the vault remain a smooth and ribless sheet of stone? While all the other parts of the structure have their lines of bearing made prominent and conspicuous, shall the roof, the most remarkable part of the mechanical construction, have no apparent mechanism, and give to the eye none of that pleasure which the display of constructive relation produces? This would manifestly be inconsistent, unsatisfactory, unsightly. We must then have, in the roof, ribs, transverse, longitudinal, and especially diagonal, because at the groin we have a solid projecting edge, apparently unsupported. But shall these diagonal ribs follow the sinuous line of the unequal-sided Roman vaulting? It is clear that this would be both very ugly, and inefficient for

the requisite purpose. We must therefore have some mode of vaulting which will provide ribs capable of being acknowledged by the eye as lines of support in the construction, lines of order and reference in the decoration. Nor is this object effectually attained by the Byzantine invention of a dome resting on four pier masses, or by a series of such domical coverings; though this method was employed in Romanesque buildings, as I have mentioned at page 53 of the present volume. For if the compartments of the vault be really domes with no groins or edges, they cannot be consistently decorated till we introduce the process of general panneling, which only came into use as the last stage of Gothic ornamental construction, both in England, France and Germany. And if the compartments are made oblong spaces domically vaulted, but with manifest groins, we want some general principle which shall select and fix the forms of these prominent lines in the decorative construction; nor can I discern any such principle which will answer the purpose, except the adoption of the pointed arch as the pervading rule. This necessity appears, I think, in the domical *ribbed* vaulting of the Early Gothic to which Mr Willis refers, p. 77. Thus a consistent and harmonious system of vaulting can be obtained

in no way but by the use of pointed arches. I formerly attempted to show this, and to point at the manner in which the operation of this necessity appears in the churches of the Rhine; and I think the considerations and instances I there adduced must be allowed to have some weight. Even if we grant that the pointed arch among many other forms, as a matter of fancy and caprice, was borrowed from some foreign models, we have still to explain the way in which the pointed arch gained the mastery over all other forms, so that they became subordinate to it, as when the trefoil appears in feathering, or the ogee in canopies. This universal predominance of the pointed arch is no doubt the joint result of convenience and of harmony of form; and these causes operate in other parts of the fabric as well as in the vaulting; but in no other part so imperatively or so universally.

Looking back, then, at what has been said, we obtain a consistent view of the origin of the Gothic style. The introduction of the arch undermined the Grecian system of entablature, and introduced a double plane of decoration; the ruin of taste and art supervening upon this, broke up still further the Roman traditional arrangement; caprice and the love of novelty

introduced new forms of members and ornaments into this incoherent mass: arches of various shapes were invented or borrowed; the Byzantine dome was added to the previous forms of Roman vaulting*. So far all is a proof of disorganization. But then comes in a new principle of connexion first and of unity afterwards: the lines of pressure are made the prominent features; the compound arches are distributed to their props; the vaults are supported by ribs; the ribs by vaulting shafts; the upright meeting of the end and side is allowed to guide the neighbouring members; finally the general authority of vertical lines is allowed; the structure is distributed into compartments according to such lines, each of these being symmetrical in itself. The continuity of upright lines being established, the different planes of decoration glide into tracery and feathering, and the Gothic system is complete.

The reader will see how large a portion of this general view is founded upon Mr Willis's admirable work. It is on this account the more necessary for me to state, that whatever agreement may be found between his opinions and those which are offered in the latter part of

* Historical Essay on Architecture, by the late Thomas Hope, p. 132.

this volume, all such coincidences are accidental, each work having been written in entire ignorance of the contents of the other. If, indeed, I had become acquainted with Mr Willis's views and nomenclature before I made my Norman tour, I should have possessed a great advantage, as the reader of his book will easily suppose. My descriptions would have been expressed in accordance with his analyses and classifications, and there is not one of the pages of my Notes which would not have been greatly modified: I have written in like ignorance of Mr Hope's Historical Essay on Architecture, which has just appeared. As the establishment of well-understood terms is a material advantage in this, as in other subjects, I hope I may take the liberty of objecting to the expression "Lombard Architecture," which Mr Hope applies to the Romanesque of every part of Europe. His historical grounds for this name are, I conceive, altogether visionary, at any rate when we go beyond the limits of Italy: and the term Romanesque is now so generally understood, and, on the whole, so unobjectionable, that we should certainly lose in attempting to displace it by another, without very strong reasons.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be clearly documented and supported by appropriate evidence. This includes receipts, invoices, and other relevant documents that can be used to verify the accuracy of the records.

The second part of the document outlines the procedures for handling discrepancies and errors. It states that any differences between the recorded amounts and the actual amounts should be investigated immediately. Once the cause of the discrepancy is identified, appropriate steps should be taken to correct the records and prevent similar errors from occurring in the future.

The third part of the document discusses the role of the accounting department in providing accurate and timely financial information to management. It highlights the importance of regular reporting and analysis of the company's financial performance. This information is essential for making informed decisions and ensuring the long-term success of the organization.

The fourth part of the document addresses the issue of internal controls and risk management. It describes the various controls that should be implemented to minimize the risk of fraud, error, and misstatement. These controls include segregation of duties, authorization requirements, and regular audits.

The fifth and final part of the document provides a summary of the key points discussed and offers recommendations for improving the accounting process. It concludes by stating that a strong accounting system is essential for the success of any business and that ongoing attention and improvement are necessary to ensure its effectiveness.

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ORIGINAL PREFACE

TO THE

ARCHITECTURAL NOTES ON GERMAN CHURCHES.

THE following pages contain the substance of some notes on churches, made during a rapid tour through a part of Germany, with a few remarks suggested by what I there observed. The matter contained in them appears to me to add something to our published information on this subject; and I am persuaded, that by extending and arranging similar observations, we should be led to some interesting and satisfactory views on the progress of ecclesiastical architecture in Germany.

As I see no prospect of my having leisure to pursue the point myself, I place these materials in the hands of the public; with the hope that they may stimulate or assist others, who may take up the subject with better opportunities of doing it justice.

It might perhaps be worth while to publish these memoranda, even if I had no other object than to guide and assist, in some measure, those

who may visit Germany with a wish to study the ecclesiastical architecture of the country. I have myself felt how welcome to a traveller so employed, are the smallest and most imperfect hints of what he is to see. A single phrase, especially from any one whose studies have been architectural, may direct him to objects which will give him the greatest pleasure, or may save him from a tedious journey, ending in the unprofitable magnificence of some Italianizing church. It will, I think, appear from the following pages, that there are abundant sources of interest to the English antiquary in the country through which I travelled, and that the German churches, both from their resemblances and from their differences as compared with our own, may eminently illustrate the subject of church architecture, which has so long been in our country a favorite topic of speculation.

I cannot, however, pretend to deny, that I have mixed up with these indications and statements something of theory and system. This has taken place almost without my having intended it. It so happened, that the churches which came under my notice in the neighbourhood of the Rhine, illustrated very remarkably an opinion which had long appeared to me almost certain, with regard to the introduction of the pointed arch. Some of the modes of building assumed in this theory, which had been only

hypothetical suppositions when it was applied to English churches, were found existing as common architectural practices in Germany. It seemed worth while to explain to others this curious coincidence of the theoretical and actual progress of things: and I was thus led to arrange my observations on German churches in subordination to this view. The consequence has been, that this Essay has partly assumed the shape of a disquisition on the origin of Gothic Architecture, instead of that of a collection of architectural notes, which was the form originally contemplated.

The doctrine which seems to me so probable is, as may be seen in the following pages, that the adoption of the pointed arch in vaulted roofs arose from the requirements of vaulting, and from the necessity of having arches of equal heights with different widths: and it appears moreover that the succession of contrivances to which these circumstances gave birth, is found more completely developed, and probably more ancient, in the German edifices than in our own.

If it be allowed that this account of the origin of the pointed arch is the true one, it will perhaps be granted without much difficulty that, from its original situation in the vaulting, this form of arch was gradually diffused into every other part of the building. This opinion accordingly I am disposed to entertain, though I

do not consider it to be susceptible of the same exactness of proof as the former tenet: and I have tried to shew that this was the manner in which the old system of architecture, derived from the classical styles, was finally converted into one of a different and opposite kind. According to this view, all the other changes which are found in company with the newly-adopted pointed arch, may be considered as the natural manifestations of the new character thus impressed upon art. The features and details of the later architecture were brought out more and more completely, in proportion as the *idea*, or internal principle of unity and harmony in the newer works, became clear and single, like that which had pervaded the buildings of antiquity: the characteristic forms of the one being horizontal, reposing, definite; of the other vertical, aspiring, indefinite*.

* The contrast of character which exists between the Grecian and the Gothic styles is well marked by Mr Rickman. But the various rules and arrangements which he has pointed out as opposite in the two systems, combine in each case to make a common impression on the mind, and flow from some fundamental principle. It is suggested to me by a friend, that this distinctive principle of construction in the Gothic architecture appears to be the admission of oblique pressures, and inclined lines of support. In Grecian architecture the whole edifice consists of horizontal masses reposing on vertical props. In Gothic buildings on the contrary, the pointed arch is always to be considered as formed by two sides leaning against each other at top, and pressing outward at their lower ends. The eye recognizes this statical condition in the leading lines of the edifice, and requires the details to conform

It does not appear that the degree of attention which the circumstance so well deserves, has yet been given to the extraordinary uniformity of one particular style of Gothic architecture, as it is found over a large part of Europe. The style to which I refer, belongs to that which Mr Rickman has called "The Decorated*," in

conform to it. We have thus in the Grecian buildings nothing but rectangular forms and spaces: horizontal lines with vertical ones subordinate to them. The pediment is one mass with its horizontal cornice, and does not violate this rule. Arches, when they occur, are either subordinate parts, or mark the transition style, in which the integrity of the principle is no longer preserved. In Gothic works, on the other hand, the arch is an indispensable and governing feature: it has pillars to support its vertical, and buttresses to resist its lateral pressure: its summit may be carried upwards indefinitely by the joint thrust of its two sides. All the parts agree in this character of infinite upward extension, with an inclination or flexure to allow of their meeting at top; and thus obviously require and depend on pressures acting obliquely.

* Mr Rickman's terms "Early English," "Decorated," "Perpendicular" architecture, have been objected to. It is a sufficient reason for continuing to employ these words, that they have been so much more accurately defined and discriminated than any other terms of classification. But I conceive that some of the objections which have been raised against these names, have arisen from not attending precisely to the views with which they were imposed. They were apparently intended to distinguish each style from the *preceding* one: and for this purpose they are significant enough. The *Decorated* differs principally from the Early English in exhibiting a greater degree of decoration: the *Perpendicular* varies from the later Decorated mainly in having certain perpendicular members, mullions, which in the Decorated are not perpendicular

its earlier form, and with a prevalence of circular tracery. The cathedral of Cologne may be taken as the great type or exemplar of this style; it corresponds pretty nearly in character with such English buildings as the east end of Lincoln cathedral, the chapter-house and nave of York, the nave of Exeter. St Ouen at Rouen, the choir at Amiens, are French examples. Germany and the Low Countries abound with them: along with Cologne we may mention Altenburg, Oppenheim, Strasburg. This mode of architecture seems, in fact, to have occupied almost the whole of Europe, at least north of the Alps, with a singular identity of spirit and character; and with a very remarkable uniformity in subordinate members, and even in minute details. In different countries it succeeded, apparently in different manners, the previous architecture which had been formed by an imperfect imitation of Roman models: and in each case, when the architects have entirely emancipated themselves from the forms of this degraded Roman, they fall into the same new style; which

dicular throughout. And the term *Rectilinear*, which has been suggested, would not apparently be an advantageous substitute for Perpendicular; for the mullions, the only members to which the description applies distinctively, are rectilinear only so far as they are perpendicular. The term "Early English" has *accidentally* a peculiar propriety, inasmuch as this style is found almost exclusively in England: at least it does not occur in Germany.

thus seems to afford, in each country, a goal and resting place after a period of progression and change.

In England, indeed, the case was somewhat peculiar. We possess a style, the "Early English" of Mr Rickman, preceding that Decorated to which we have ascribed this European diffusion; and this style may be considered as retaining very few traces of the Roman or Romanesque character. It may be said that with us the Gothic system was fully established when this style had become universal*. Though fully established, however, the new character was not thus completely matured. The differences between this English architecture and the Complete Gothic of the Continent are clearly marked; and it is obvious that the additional changes introduced in the latter are such as to present a still further developement of the Gothic principles. The abundant use of window-tracery in the latter case, compared with its entire absence in the former, is a sufficiently broad distinction; and besides this difference, the modes of clustering the shafts and mouldings, and of forming the buttresses and windows, are limited with a sort of

* What is here said will shew in what sense I have in the following pages used the phrase "Complete Gothic." In Germany it designates the Decorated style, because there they have no previous fully developed Gothic: but in England it includes both the Early English and the Decorated.

severity and monotony in the Early English style, which, in the continental edifices of this, and the English edifices of the next period, is exchanged for a freer, more flexible, and more fertile rule.

It seems to me a most curious fact, that the English architects should have gone by a path of their own to the consummation of Gothic architecture, and should on the road have discovered a style, full of beauty and unity, and quite finished in itself, which escaped their German brother-artists. It will, I think, be proved that this is the case, by any one who examines the German churches. Those of them which belong to the steps of the transition from the Roman manner to that of Cologne, have nowhere a character clear and independent, and distinct from either of those. They differ by gradations of more or less, by changes of one part or another, the style advancing over the interval without apparently finding any intermediate position of equilibrium. For the sake of collecting into one view the phenomena of this transition, and of noting local peculiarities, I have given an enumeration of the characters of *Early German* architecture. But by this term I designate, not a single and definite style like the *Early English* of Salisbury and Lincoln, but the collection of all the forms which occur after the great change had begun, and before it was completed; from the just-wavering Romanesque of Mentz or

Worms, to the multiplied but not quite Gothic elements of Limburg and Gelnhausen.

I fear that some of my readers may expect to find in the following pages more information than I have given, concerning the dates of particular buildings, or the exact chronology of the different styles of architecture. I am obliged to abstain, at present, from entering directly upon this field. I am well aware that such discussions might be more interesting than description and theory can hope to be; and it is undeniable that those enquiries are very essential to complete our knowledge of architectural history. But strong reasons withhold my pen from such topics. The unavoidable length to which these antiquarian lucubrations spread, and the quantity of time and learning which they require, may excuse their absence from a small and subsidiary essay like the present one: and besides this consideration, there seems to be an advantage in studying separately the two things which we are afterwards to compare;—the differences of style, and the differences of date. If there really be any consistency and uniformity in the several buildings of the same epoch, we ought to be able to detect this agreement by examining the buildings alone: and when we are satisfied of this common character, we shall know what problem we have to solve in investigating *when* and *how* these epochs followed each other. We

have to compare the *internal* evidence of derivation or succession with the *external* evidence of time; and what I have here contributed, is intended to illustrate the former term of this comparison.

To tell the truth, the difficulties of the historical branch of the enquiry are sufficient to deter any one from engaging himself hastily in its perplexities. The paucity and indistinctness of the notices of the erection of early buildings; the difficulty of identifying those described with those that still exist; the confusion of works protracted, suspended, built in imitation of others, or in accommodation to them; the alternation of destructions and reparations;—all the chances that can happen to edifices or to authors, combine to unsettle the faith of the architectural antiquary. And the lesson thus taught us seems to be, that though we are to examine the history of particular buildings as carefully as we possibly can, we are not to give to any one of them too great a weight in determining our architectural chronology; but to take rather the age which is collectively inferred from many resembling churches.

If we reject this maxim, we may be left in no small embarrassment; and this, in fact, seems to have befallen the architectural enquirers of modern times; as, for instance, in the case of Coutances. The cathedral of Coutances in Normandy is, for the most part, in a style which

has a great resemblance to our Early English, and appears to be not less advanced than our good buildings of that class. Its towers have tall pointed windows, divided into two lights by single or double slender shafts; they have clustered shafts at their corners, and octagonal turrets, also decorated with shafts, and finished with a pyramid of stone. The interior in like manner has throughout pointed arches, abundance of small roll mouldings, slender shafts with capitals of upright leaves, variously clustered, grouped, and supported by corbels; the profiles of piers and of mouldings, the vaulting, the triforium balustrade, the clerestory windows, are all in the same style. In short the cathedral is decidedly Early Gothic, with few or no traces of Romanesque or Norman. This Early Gothic, or, as we term it, Early English style, is by the best authorities held to have made its appearance among us about 1189; and it has been commonly believed, that the generality of churches in France agree pretty well with this English epoch. But if we receive the date which the best evidence seems to fix for Coutances, we shall have the new style fully developed in Normandy a century and a half too early for this doctrine. M. Gerville, in the first volume of the *Memoirs of the Academy of Antiquaries of Normandy*, has endeavoured to shew that the church in question was built and dedicated before the year

1056; and he has offered evidence better than can generally be had in such cases, to prove that the building, of which the Monkish chronicler gives us this account, was not replaced by another at a time more consistent with the received theory. This case is important, because the anomaly at Coutances is not the pointed arch only, which may probably be produced of as early a date in other instances, but the whole style of the building, which according to M. Ger-ville's view is an anticipation by 130 years, of our architecture.

There appears to be a case in Germany almost as rebellious as Coutances to established opinions, in the cathedral of Bamberg. This church is an instance of what I have called Early German architecture. It has pointed pier arches, and pointed vaulting; the piers have slender shafts attached, the mouldings are small rolls; there are clustered and banded shafts with capitals of upright foliage; a polygonal west apse, vaulted with very acute cells, and many similar features. The German antiquaries would agree very nearly with our English ones, in attributing this building, from the evidence of its style, to a period somewhere about the middle of the 12th century. But it seems, that so far as the external evidence goes, we must take a date considerably earlier. The foundation of the bishopric of Bamberg by the emperor Henry II. in 1007,

is an event which occupies a prominent place in German history; and in connection with this occurrence, we find that the cathedral which had been already begun, was dedicated in 1012. Bishop Otto, who held the See from 1104 to 1130, is stated to have rebuilt the west end, which had suffered by a fire; and accordingly there are in this part the features of a style somewhat later than that of the eastern choir.

In the same manner the church of St. George at Limburg on the Lahn, which shews a still more clear approximation to the Gothic, is said to have been finished in 1058. It is exceedingly difficult to reconcile such statements with the character of buildings which are known to belong to dates approaching these.

The succession of the earlier style seems to be preserved unbroken in existing edifices. Spires, Mentz and Worms, are spoken of in the succeeding pages as three great examples of the Romanesque; and the greater part of these mighty edifices is clearly and altogether different from the succeeding style. Of these buildings the dates are said to be historically known. Spires was founded by Conrad II. in 1030, and finished in 1061. The east end of Worms is earlier still, and is of the time of Henry II. (who died 1024.). The oldest part of Mentz is said to be of the date of Archbishop Willigis, between 978 and 1009.

These buildings, except Spires, have pointed arches in the vaulting, but all the other arches and openings are round, and the members altogether Romanesque. Other remains in Germany enable us to pursue still further back the Romanesque architecture. St. Mary Capitoline at Cologne is said to be incontestably of the ninth century: the chapel at Lorch, so eminently Roman in its character, is attributed to the same age; and if we include Italian buildings in our researches, there will probably be no difficulty in tracing the gradations of this architecture from the classical times, to the period when the rudiments of the newer style begin to prevail.

But if we descend in the order of time, it seems to be a much harder task to determine the epoch and progress of the transition from the Romanesque to the Gothic. It does not appear that the dates of the transition churches of Germany are generally known there; even buildings of considerable splendor belonging to this class, as Gelnhausen, Andernach, Boppard, are dated by writers according to internal evidence only: and the cases where we have other testimony, as Bamberg and Limburg, serve rather to make the matter more obscure. We may however hope for much light from the spirit of research and interest on this subject, which appears at present to be so extensively and actively at work in the neighbourhood of many of these edifices.

If we descend still further, we find ourselves among buildings of which the date is somewhat more certain: and the period of the full developement of the Gothic style may perhaps be fixed with some accuracy. And it would appear, that this style in Germany belongs to a time somewhat earlier than the *resembling* style in England, though not so early as the earliest *good Gothic* in this country. The same also appears to be the case in France, so far as the investigations of Dr Whittington and others have gone. If we take the dates of the most conspicuous examples of Early Gothic buildings, we find them as follows. The *Early English* of Salisbury and of the south transept of York belongs to about 1220. Westminster, also of good Early English work, was begun in 1245, by Henry III. The *Decorated* Architecture of Germany treads close on the heels of this. Cologne was begun in 1248: the front of Strasburg built in 1276. The resembling examples in our own country are but a little later. The presbytery of Lincoln is of 1282, retaining much of the Early English in its character. The chapter-house of York, and the nave of Exeter come in later, between 1291 and 1330: the chapter-house of Wells between 1293 and 1302. Oppenheim was built between 1262 and 1317, and is of a more advanced character than our English buildings of that date. The window-tracery is of the

flowing kind; the walls are covered with panneling and feathering; and their remarkably small thickness (not more than 18 inches) is supported by rich and deep buttresses with crocketing, &c. The nave of York has flowing tracery, and is said to be after 1320. Amiens, which is generally compared with Salisbury, being nearly of the same date, is incontestably more advanced in style, having window-tracery, triangular canopies, crockets, panneling, &c. Indeed it is not difficult to conceive why the English architects did not adopt, so soon as the Germans and French, all the Decorated features; for we may easily imagine that they would abandon with regret the beautiful simplicity and sobriety of the Early English, even for the rich and elegant complexity of the succeeding style.

It will be a matter of great interest to obtain hereafter, as it may be hoped we shall, a more accurate and extensive comparison of the synchronisms of Gothic architecture in different parts of Europe. Another curious enquiry which as yet has not been critically pursued, is, over what geographical extent of countries the genuine Gothic style prevailed.

It has no doubt been widely diffused, but probably has not so completely covered the face of Europe as is often imagined. So long indeed as *Gothic* was synonymous with *barbarous*, and was applied to all architecture which deviated from the

classical rule and spirit, it was easy to find Gothic in every European country, and even in other quarters of the globe. But if we use the term Gothic in a definite sense, to designate a kind of architecture which has its principle of unity no less than the Classical, and of which those only are genuine features which we find in good examples constructed upon this principle, we shall learn to restrict the local extent of this style within narrower limits. These limits I hope will hereafter be defined by those who give their attention to this branch of art. Going eastward, I know that the style extends as far as Magdeburg in the north, and Vienna in the south of Germany. On the west, it is said that there are in Spain good cathedrals of Gothic architecture. Those at Segovia, Toledo and Burgos are particularly mentioned; and I should think it likely that the last of these three for instance, is of proper Gothic character, though hardly of the pure style of the best time, since it was built by German architects, John of Cologne and his son Simon, after the year 1442. The Moorish architecture of Spain, from which some writers have endeavoured to derive the Gothic, is certainly not Gothic, and is connected with that style only by slight and superficial resemblances.

I am not so much acquainted with Italy as to be able to pronounce whether the true Gothic found its way over the Alps. So far as one can

judge by barely passing to the Italian side of that barrier, the tramontane architecture was never fairly established in the country. The great cathedrals of the middle ages in the Italian cities, exhibit a most curious and peculiar Romanesque, but this did not, as in the more northern regions, transform itself into a new and independent style. It is indeed easy to imagine that the spirit of the classical ages never ceased to haunt the efforts of Italian art: and that whatever propensities did arise towards a set of forms different from the antique, were perpetually interrupted in their developement by the surviving models and maxims of the ancient times. The tendencies opposite to the Roman system, instead of being freely and energetically pursued till the result was another system, were checked and thwarted as fast as they appeared; not eradicated indeed, but blighted in their bud. Before the Italian artists had fully seized the principles which had been so well followed out in Germany, these principles were again overturned by the revival of classical architecture along with classical literature*.

The cathedral of Milan is so celebrated as a grand Gothic edifice†, that I shall perhaps be

* I am happy to be able now to refer to Mr Willis's admirable characterization of Italian Gothic. (Note, 2d. Ed.)

† Madame de Stael, whose words may be taken as an expression of the popular admiration, says in her *Corinne*, that this edifice is the master-piece of Gothic art in Italy, as St Peter's is of Roman.

excused, if I speak of this church in particular. I regret to have to dissent where others admire, but I am obliged to say, that Milan has no claim to be considered as a good example of Gothic architecture. In order to possess excellence in this, as in any other style, a work must have the requisite parts clearly exhibited and well-proportioned. Now the principal parts of the interior of a cathedral are, as is explained in the following Essay, the piers, the pier-arches, the triforium, the clerestory, and the vaulting. At Milan, scarcely one of these members can receive a critical approbation. The *piers* are of imposing bulk and height, but lose much of their due effect from having no proper capitals: and the group of niches which crowns each pier, displacing the capital, ruins entirely the relation of these supports to the rest of the edifice. The *pier-arches*, thus cut off from their pillars, and thrown into obscurity, hardly catch the eye. There is not any attempt at a *triforium*: and the *clerestory* also is quite frittered away by being cut into two portions on each side. For there are five aisles, and of these the center one is higher than the two immediately adjacent, and these again than the exterior aisles, the clear elevation of each higher part being pierced by small windows. In this way a single clerestory wall of sufficient elevation is replaced by two smaller descents; and thus this member loses all its characteristic appear-

ance. Lastly, the *vaulting* is not striking as an architectural work, though very brilliant as to its painted decoration. If we pass from the interior to the exterior, we shall still find a defect of consistent architectural principle. The west front, though fringed with pinnacles, is not formed of decided Gothic features: the sloping lines of the magnificent flying buttresses, strongly marked and often repeated, become the leading lines of the building, because they are not stopped and controlled by commanding masses of vertical pinnacles at their lower ends, as is the case at Cologne, and other genuine Gothic churches which possess such members. Finally, even the forest of pinnacles which crowns this gorgeous edifice fails to give an upward character to its outline: for each of these pinnacles is a well-executed statue; and though such ornaments, *in subordination* to other upright masses, are quite consistent with the Gothic spirit, they are felt, in the present instance, to transgress this condition: the numerical strength of this marble army makes it the governing power; the statuary domineers over the architecture; and we collect, out of all this host of personages and attitudes, no definite lines and regular forms, such as alone can give architectural effect.

If the reader will refer to pages 31 and 32, where I have endeavoured to draw the contrast between the characters of Romanesque and of

Gothic architecture, he will see how impossible it is, consistently with the principles there enunciated, to give the name of genuine Gothic architecture to that of Milan; although the passage was written with no reference to that particular example, and expressed merely a general impression collected from a comparison of many buildings. In Milan, several of "the mouldings, cornices, and capitals" *have* "classical forms*," in various parts, for instance in the front, "rectangular surfaces, pilasters and entablatures" do *not* disappear; the enrichments are introduced "by sculpturing surfaces," *rather than* "by repeating and multiplying the component parts," and there

* I speak of course of the part which aspires to the character of Gothic architecture, according to the statement in the inscription on the front itself; not of the doors and windows, parts of the former front of Italian architecture, which were spared "on account of the elegance of the workmanship," and remain encased in the present façade. I insert here the inscription to which I refer.

TEMPLI . FRONTEM
 GRÆCO . OPERE . INCHOATAM
 GOTHICO
 AD . MOLIS . UNIVERSE
 CONSENSUM
 INSTAURANDAM . PERFICIENDAM
 OSTIORUM . LUMINUM
 ANTEPAGMENTIS
 OB . ARTIFICII . ELEGANTIAM
 INTACTIS
 XX . VIRI . EDIFICATIONI
 PROCURANDÆ . DECREVERUNT
 ANNO . MDCCLXXX.

is *not* "a predominance of vertical lines and members.

If we would employ the term *barbarous* with any significance, it is not to be applied, I conceive, to one style of art merely because it differs from another. A Gothic building is no more barbarous than a Grecian one, if the ideas which govern its forms be fully understood and executed; but those attempts rather are to be called barbarous which imitate the features of good models, and which, not catching the principle of the art, exhibit such parts incongruously combined and imperfectly developed. In writing Greek, an Anglicism is a barbarism: but we shall not now be willing to allow English to be barbarous because it is not Greek; and a mixture of the two is equally barbarous whether it pretends to be one or the other.

When the questions have been investigated which concern the formation and diffusion of the general European Gothic, there is another enquiry which remains to be pursued in order to complete the history of the art, and which offers interesting comparisons and curious details. In the same manner in which different and distant nations of Europe converged by different paths to a sort of central idea of Gothic, it appears that they afterwards diverged, and formed out of this common style various degenerate kinds of architecture different in different countries. In

all the cases, the nature of the change was, that the ornaments become more profuse and universally applied, the small parts more multiplied and more like one another; the large features and portions less marked and dominant. Of the derivatives of the Gothic which thus appeared after it had lost something of its original purity, perhaps the most beautiful and the least degenerate is that which we have in England, the Perpendicular or *Tudor* architecture. In some cases indeed, this style possesses so much boldness and breadth of parts, combined with its fulness and richness of detail, as to be scarcely inferior to any form of Gothic architecture. The style of degraded Gothic which occurs in France, has been distinguished by the term *Burgundian**. (See Quarterly Review for April, 1821, p. 126.) It has great community of character, though considerable differences of detail when compared with our Tudor architecture. It seems to be marked by a peculiar form of arch, the elliptical or flat-topped, as the Tudor style is characterized by the four-centered arch. In the Netherlands we have another form of the decline of the Gothic, which we may call the *Belgian* style, in the magnificent town-houses of Ghent, Louvain, &c., of which the architecture, though very cele-

* In a succeeding part of this volume it is described under the name *Flamboyant*, which the French antiquaries have given it. (Note, 2d Ed.)

brated, has not, so far as I know, been critically examined. It appears in like manner, that the edifices of the period corresponding to this in Germany have their peculiarities, and these, like the last, have not, I believe, been selected and brought together.

All these forms of architecture, and perhaps others which are requisite to complete the examination, would be interesting subjects of research. They were the medium through which the art became advantageously applicable to domestic and civil, as well as to religious and warlike, purposes. With these styles, properly speaking, commence the magnificence of streets and cities, the beauty and splendour of the houses of the great.

Whether or not what I have said may produce conviction on speculative points, on subjects where language is necessarily vague and demonstration impossible, I hope that those parts of the following work which are descriptive will be found sufficiently intelligible by those who prefer facts to theories, that is, particular facts to general ones. And I trust that the classifications there employed are only such as may give clearness and connexion to the descriptions. Descriptions in detail without some classification are scarcely readable; and it is only by comparison of resemblances and differences that our observations become either instructive or interest-

ing. I have therefore attempted to refer buildings to their places in the order of art, instead of giving from my note book a succession of extracts relating to particular churches. The style which I have more especially endeavoured to characterize, the Transition or Early German, has not yet, so far as I know, received much distinct attention. Dr Moller, however, in the course of his valuable *Denkmaehler*, has recently given us excellent representations of the cathedral at Limburg on the Lahn, which is a very admirable specimen of this kind; and has noticed the intermediate and transition place which this edifice seems to occupy in the developement of the German style.

Though, in the second chapter of the ensuing Essay, I have professed to describe only the Transition style, it will be found, I believe, that I have also mentioned most of the characters of the Romanesque, in the way either of contrast or parallel. Of the complete Gothic I have said less, inasmuch as my object is not to give a complete account of church architecture, but to point out what is peculiar to the German churches, and illustrative of the formation of the Gothic style.

In architectural description I have ventured to employ a few new phrases: or rather, I have fixed and limited the meaning of some of the phrases which I have used, with a view to their being employed steadily and precisely for the

future. I hope the courteous reader will not consider this to be a criminal assumption of philological power. It is scarcely possible to describe new features without thus much of innovation, or to describe any thing distinctly without thus much of technicality. Mr Rickman has shown, that by the careful use of terms well selected and previously defined, language may convey almost as exact and complete an idea of a building as can be got from the reality or the pencil: but in order to do this with the greatest advantage, our architectural vocabulary should be much extended. We may learn from the descriptive sciences, as for instance Botany, how much may be taught by means of a copious and scientific terminology; and architects are already in possession of a very numerous list of terms of art which refer to the Classical Orders; so full, indeed, that there could scarcely ever be much difficulty in describing a building belonging to that style. To establish a complete language for Gothic architecture likewise, is a proceeding which might not be beyond the jurisdiction of our eminent architectural authorities; but such a language would require to be illustrated by abundant drawings and references. I have not pretended to invent or define any words except such as I had occasion for in my own descriptions*.

* Among the liberties taken with language for which I ought to apologize, perhaps I should mention the employment
of

Most persons who attend to ecclesiastical architecture are in the habit, more or less, of making memoranda of noticeable churches which they see. It seems likely that this task might be executed more completely and expeditiously, by following a fixed plan in the selection and arrangement of the parts described. I should even conceive that when a person has to make notes upon several churches, it might be advantageous to prepare a regular skeleton-form or tabular schedule, in which the same blanks should be filled up according to the peculiarities of each instance; and the register thus formed of the members of our churches, would probably be more secure from omission and more easy of comparison, than accounts drawn up at random: at any rate this mode of proceeding, though it might be thought needlessly formal, would make the persons who agreed together to use it, more intelligible to one another. I have not ventured to construct such a skeleton church; but I have recommended what appears to me to be the best order to follow in dissecting any proposed example, as may be seen in Chap. III.

of the word *aisle* for the central space (nave or choir,) as well as for the lateral spaces, of a building separated by longitudinal rows of pillars. I believe I am far from being the introducer of this phraseology; and though etymology is, I fear, against me in the use of this word, I can find no other which applies to the three spaces of which it was necessary for me to speak in common.

In taking notes of vaulting, I found that the form of the construction could often be expressed both more briefly and more clearly by means of a few lines of rude drawing, than by words; and the marks which I thus employed gradually assumed the character of systematic symbols. Since these are few and simple, and, as it appears to me, easily understood, I have given them with their explanation for the benefit of any architect who may be willing to make a trial of such aid. Besides these marks, which can hardly be called drawing, no skill in drawing is absolutely necessary for the architectural observer, though such skill may of course be very valuable when it exists. Some of the most desirable drawings may be made sufficiently well without the draftsman's eye and hand; for example, profiles of mouldings, which are very important elements, and should be copied; since those of Gothic work cannot be exactly conveyed by means of any terms which have yet obtained reception among architects.

In spite of all that I have said in commendation of verbal descriptions in architecture, I am well aware that most of my readers would prefer receiving information from drawings of buildings; and for their sakes I regret that my plates are so few and so humble. There exist, however, several valuable publications with good plates on the subject of German architecture, and more

will probably appear in a short time. Dr Moller's work (*Denkmachler der Deutschen Baukunst*) already contains excellent specimens of every style of German buildings, and offers additional interest and beauty in each new number: Mr Müller's work on Oppenheim, mentioned in the following pages, is of almost unequalled splendour of execution: Dr Boisserée's magnificent engravings of the cathedral at Cologne are already known and admired in this country. Besides these, a work on the architecture of the Upper Rhine is publishing at Freyburg in the Brisgau; and I believe some others have appeared which I have not seen. With the spirit which now prevails among Germans on such subjects, we may expect them still further to add to this stock of such representations, as they certainly have still abundant materials for their labours. If Dr Boisserée, after the completion of his work on the cathedral of Cologne, should execute his design of giving to the world the other churches of that city and neighbourhood, it will be an invaluable contribution to these studies*. Other works, which we may perhaps hope to see, are—an adequate description of the very curious and ancient abbey church at Laach:—a comparative account of the three great Romanesque cathedrals of Mentz, Spires and Worms, a work

* This valuable work on the Churches of the Rhine has recently reached this country. (Note, 2d Ed.)

which would have a singular interest:—a worthy description of the very beautiful cathedral of Bamberg:—and representations of the many admirable and important specimens of architecture which are to be found in the city and neighbourhood of Nuremberg. Such works as these will enable men to speculate with profit and pleasure on the history and character of German architecture. And when we consider the great learning and diligent observation of the German antiquarians; their pleasure in the beauties of art, and their reverence for the spirit of antiquity; we may expect that they will ere long illustrate as it deserves this portion of the history of their land.

I cannot here part with my reader, without apologizing for the incompleteness, perhaps the inaccuracy, of the following Notes. They were the results of a hasty tour of a very few months, collected originally without any view to publication; and are now printed in order that the information, however trifling, being once collected, may not immediately be lost. I shall consider myself well rewarded, if they assist any one to observe more thoroughly, or induce him to contribute any thing more complete.

CHAPTER I.

OF THE CAUSES OF POINTED ARCHITECTURE.

SECT. 1. *Of the Romanesque and Gothic Styles.*

THE ancient churches of Europe offer to us two styles of architecture, between which, when we consider them in their complete development, the difference is very strongly marked.

During the first thousand years of the Christian period, religious edifices were built in the *former* of these two styles. Its characters are a more or less close imitation of the features of Roman architecture. The arches are round; are supported on pillars retaining traces of the classical proportions; the pilasters, cornices and entablatures have a correspondence and similarity with those of classical architecture; there is a prevalence of rectangular faces and square-edged projections; the openings in walls are small, and subordinate to the surfaces in which they occur; the members of the architecture are massive and heavy; very limited in kind and repetition; the enrichments being introduced rather by sculpturing surfaces, than by multiplying and extending

the component parts. There is in this style a predominance of *horizontal* lines, or at least no predominance and prolongation of vertical ones. For instance, the pillars are not prolonged in corresponding mouldings along the arches; the walls have no prominent buttresses, and are generally terminated by a strong horizontal tablet or cornice. This style may conveniently be designated by the term ROMANESQUE. The appellation has been proposed by Mr Gunn, as implying a corrupted imitation of the Roman architecture; and though the etymological analogy according to which the word is formed, is perhaps not one of extensive prevalence, the expression seems less liable to objection than any other which has been used, and has the advantage of a close correspondence with the word *Romane*, which has of late been commonly employed by the French antiquarians to express the same style. This same kind of architecture, or perhaps particular modifications of it, have been by various persons termed Saxon, Norman, Lombard, Byzantine, &c. All these names imply suppositions with regard to the history of this architecture which it might be difficult to substantiate; and would, moreover, in most cases not be understood to describe the style in that generality which we learn to attribute to it, by finding it, with some variations according to time and place, diffused over the whole face of Europe.

The *second* style of which we have spoken, made its appearance in the early centuries of the second thousand years of the Christian world. It is characterized by the pointed arch; by pillars which are extended so as to lose all trace of classical proportions; by shafts which are placed side by side, often with different thicknesses, and are variously clustered and combined. Its mouldings, cornices and capitals, have no longer the classical shapes and members; square edges, rectangular surfaces, pilasters, and entablatures disappear; the elements of building become slender, detached, repeated and multiplied; they assume forms implying flexure and ramification. The openings become the principal part of the wall, and the other portions are subordinate to these. The universal tendency is to the predominance and prolongation of *vertical* lines; for instance, in the interior, by continuing the shafts in the arch-mouldings; on the exterior, by employing buttresses of strong projection, which shoot upwards through the line of parapet, and terminate in pinnacles.

All over Europe this style is commonly termed GOTHIC; and though the name has often been objected to, it seems to be not only convenient from being so well understood, but also by no means inappropriate with regard to the associations which it implies. That the Goths as a particular people had nothing to do with the

establishment of the style in question, is so generally notorious, that there can be no fear of any one being, in that respect, misled by the term. The notion which suggested the use of the word was manifestly the perception, that the style under consideration was a complete deviation from, and contrast with, the whole principle and spirit of Roman architecture; and that this innovation and antithesis were connected with the course which taste and art took among the nations who overthrew the Roman empire, and established themselves on its ruins. And this is so far a true feeling of the origin and character of the new architecture, that we may consent to accept the word by which it has been thus designated, without being disturbed by the reflexion that those who first imposed this name, considered it as conveying the reproach of barbarism. We, indeed, should take a very different view from theirs of the merit and beauty of the new style. We should maintain, that in adopting forms and laws which are the reverse of the ancient ones, it introduced new principles as fixed and true, as full of unity and harmony, as those of the previous system; that these principles were applied with as extensive a command of science and skill, as great a power of overcoming the difficulties and effecting the ends of the art, as had ever been attained by Greek or Roman artists; and that

they gave birth to monuments as striking, of as august and elevated a character, as any of which we can trace the existence in the ancient world. Our present business however is not with the merits, but the history, of the art.

The question of the causes of the transition from one of these styles to the other has been much agitated during the last half century. In the course of these discussions "the origin of the pointed arch" has generally been put forwards as the most important branch of the enquiry; a natural result of the common disposition to reduce a problem to the most definite and simple form. This is however an imperfect statement of the real question; for the pointed arch, far from being the single novelty in that change in architecture to which reference is made, is but one among a vast number of peculiarities which, taken altogether, make up the newer style: and this style would continue to exhibit a contrast with the one which preceded it, even if the round arch were used instead of the pointed one, as in some instances is actually the case.

Still, however, if we could shew with probability the reason which produced the prevalence of the pointed arch, this would be an important step in the history of the architectural revolution, and might throw much light on other parts of this history. Now we can point out a cause, which not only might possibly, but which must

almost necessarily, have given rise to the general use of such arches; and it is one object of this Essay to illustrate this necessity, and the manner in which it affected ecclesiastical buildings.

The cause to which I refer, is the mode of VAULTING churches; and the instances in which I have been enabled to trace its operation, are the churches in the neighbourhood of the Rhine principally, and also in some other parts of the Continent.

SECT. 2. *Of the Origin of pointed Vaulting.*

The combination of vaults in the roof of a church is not easy to represent by figures, and hence there is some difficulty in conveying an exact conception of the contrivances which I have to describe. It may, however, perhaps be understood in the following manner.

In a vaulted church, we have in general one vault which runs longitudinally along the church; and the upper windows open into the sides of this longitudinal vault by shorter vaulted spaces, which, running perpendicularly to the length of the building, may be called *transverse* vaults. And the intersection of longitudinal and transverse vaults in this, and similar situations, would naturally lead to the introduction of pointed arches.

To make this evident, let us consider a single *compartment* of the church, that is, a portion of

the center aisle (nave or choir) consisting of one arch, or one window in length, and of the breadth of the center aisle for its breadth. If this length and breadth be equal, such a compartment can be exactly vaulted over by means of semi-circular vaults intersecting each other, and strengthened by semi-circular arches, as is represented in Fig. 1. Each vault may be built exactly as if it were single; the two vaults will meet in an edge or groin of a regular elliptical form, lying diagonally across the compartment, and the lines running along the top of each vault will be horizontal lines. This kind of vaulting was practised by the Romans, and for the sake of brevity I shall call it *Roman vaulting*.

But the case will be different, if we suppose this equality of length and breadth no longer to subsist: if, for instance, the breadth of the window-space be smaller than the breadth of the aisle, as in Fig. 2. If, now, each of these breadths be vaulted over by semi-circular vaults, as in that figure, the transverse vault will not reach to the top of the longitudinal one, but will cut it obliquely in an irregular curve: the line running across the top from one window to its opposite, will be a broken line: the forms will be of some complexity to calculate, and can only be executed by great skill, and with much difficulty. This kind of vaulting is to be seen in modern buildings, for instance, in St Paul's in London,

but may be supposed not to have occurred as practicable to the architects of the middle ages.

If in this case, however, we suppose that the narrower space, (the window) is covered with a *pointed arch of the same height* as the semi-circle, and with a vault corresponding to this arch, the forms of the vaulting become much easier both to determine and to execute. The lines running along the top, both of the longitudinal and of the transverse vaults, will again be continuous horizontal lines; and the edges formed by the intersection of the two vaults will follow nearly, but not exactly, the diagonals of the compartment. See Fig. 3.

But if instead of supposing one of the vaults only to have a pointed arch for its form, we suppose the longitudinal and transverse arches to be both pointed, and of the same height (which is always possible, whatever be the disproportion of the breadths) the arrangement will become still more convenient. This is represented in Fig. 4. All the divisions of the roof will be of similar forms, and capable of being planned and executed in a similar manner: and the edge or intersection of the two vaults will be more nearly than before in the direction of the diagonal of the compartment, and will also be nearly in the shape of a pointed arch, resembling the original longitudinal and transverse arches.

If we erect, upon each diagonal of the compartment, a pointed arch of the same height as the longitudinal and transverse arches, the vault may, by a slight accommodation of the curvatures, be made exactly to fit this arch. This arch, when marked by a projecting band of stone, is called a *diagonal rib*: and this form of vaulting, with transverse and longitudinal pointed arches, and with diagonal ribs, is the most simple and the most prevalent form which occurs after the completion of the architectural revolution.

It is not only that the forms and bearings of the parts in this arrangement are more easy and simple than in any other which suggests itself, capable of answering the same ends, but also its strength is more easily secured, and the mechanical construction of the vault much facilitated: the longitudinal, transverse, and diagonal ribs being probably first erected, and then the vaulting parts added, without the necessity of wooden *centering*, covering the whole compartments.

This account is not proposed here as new. It is the theory which Mr Saunders published in 1811, and which he has very ably and ingeniously explained in the 17th volume of the *Archæologia**. In the same volume, Mr Ware appears to be of a similar opinion, and the same

* I may venture to observe, however, that the opinion which supposes Canterbury to be the first instance of pointed vaulting, appears to be untenable.

view, or at least one nearly approaching to it, was taken of the subject by Mr Essex, as appears by Mr Kerrich's statement (*Archæologia*, Vol. xvi. p. 315.), and seems to be entertained with more or less distinctness by several continental antiquaries. My object is to illustrate the opinion somewhat further, by considering this part of the construction of a church in connexion with other portions of the edifice: and also to show the necessity which produced this change shews itself in various buildings in Germany and elsewhere.

It will be observed, that this theory of the origin of pointed arches must be considered as standing upon different ground from other theories which have been proposed, inasmuch as they only shew how the *form* of such an arch *may* have been suggested, not how the *use* of it *must* have become universal. The hypotheses which derive pointed arches from the intersections of branches of trees—or from the pointed form of doorways made by two stones leaning against each other—and even the very favourite opinion which supposes such arches to have originated with the intersecting round-headed arcades of the earlier architecture, must be considered as without value on this account. It is true, that, in these ways pointed arches would occur; and so they would in many other ways; for instance, as has been observed, in proving the first Proposition of Euclid. But this *possible* construction of the pointed arch

affords us no key to its adoption—does not explain to us why it grew into use, *rapidly* as to time; *universally*, as to its application in all members of the building; and *exclusively* as to the final rejection of the round arch previously employed, and of all the other forms, many of which would be as obviously suggested as this form of the pointed arch. Whereas, the theory which I am now to develope, pretends not only to shew how this arch *might* be invented; but that it, or something like it, *must* have been wanted, discovered and employed.

That the adoption of this arch led to the other changes which combined to form the Gothic, is not capable of being proved with the same cogency; but yet we shall, it is hoped, be able to trace a natural and almost necessary influence of this element upon the other parts of the building, which seems to explain better than any other hypothesis the formation of the new style.

It will appear, I think, from what has already been said, that the vaulting of a space of which the length and breadth were different, could only be effected by abandoning the semi-circular arch. The forms which the vaulting assumed when this arch ceased to be exclusively employed, were various. They were, moreover, variously affected by the distribution of the other parts of the building, and I shall consider the consequence and progress of this combination of causes.

SECT. 3. *Of the Aisled Form of Churches.*

A circumstance in the arrangement of Christian Churches which very remarkably influenced the subordinate parts, was their distribution into a center aisle and two side aisles. Some may perhaps be disposed to trace this construction to a remoter origin. Something resembling it is indeed found in the religious edifices of very distant times and countries. The Egyptian temples of Ybsambul and Hermontis are separated by two rows of piers or pillars into three alleys. The division of the central from the lateral spaces by longitudinal rows of pillars, is found also in the Opisthodomos of the Parthenon at Athens, and seems to have been general in the hypæthral temples of the ancients, as for instance in that at Pæstum. In this very ancient temple, indeed, we have another remarkable approximation to the arrangement of a Christian Church, for we find over each of these inner rows another range of smaller pillars, exhibiting a striking resemblance to a clerestory.

Others may consider this form of Christian Churches as directly deduced from that of the Roman basilicæ, many of which are stated to have been applied to religious uses after the legal establishment of Christianity. These buildings consisted of two parallel ranges of covered porticos with an intervening space; and when this

intervening space was covered in, obviously formed three aisles.

But, however this form may have originated, being once adopted as the usual construction of churches, it gave rise to many peculiarities, and determined most of the component parts of our ecclesiastical architecture.

The columns which separated the three aisles from each other became the *piers* of the church. These columns almost universally supported arches, which were generally used in the vaulting of the side aisles, and these are the *pier arches* of all aisled churches.

The center aisle was most frequently raised above the side aisles by walls resting upon the pier arches. The central elevated space was then lighted by windows pierced in this wall over the side aisles, and thus we have *clerestory windows*.

The side aisles were mostly vaulted with stone, and had over the stone roof a wooden one sloping upwards towards the clerestory. In this manner, a space necessarily intervenes between the top of the pier arches and the bottom of the clerestory windows. This space, when ornamented in the interior by a range of openings or pannels, became the *triforium*.

These different parts are seen in Fig. 6., which may be considered as the general type or pattern of two compartments of an aisled church*.

* The triforium is here represented only by a blank space in the wall.

The parts which have just been mentioned occupy in all complete churches the positions in which they are here drawn; and the differences in the form and decoration of these parts characterize the different successive styles.

But in order to see the whole effect of the triple arrangement, we must consider the manner in which the building was roofed.

SECT. 4. *Of the Kinds of Vaulting employed in Churches.*

Before we describe the combinations of vaults which occur in the roofs of churches, there are two kinds of simple vaults which must be mentioned.

No. 1. The *cylindrical* vault*, resting on the tops of the side walls with its axis in the longitudinal direction of the building. This is a very common and ancient mode of vaulting, but is rarely used to form the roofs of churches. It does not conveniently admit of clerestory windows, and is on that account ill-suited to such edifices. There is, however, one part of many very early churches where it is constantly found, namely, in the roof of the compartment which intervenes between the *apsis*† of the church and the

* This kind of ceiling is also occasionally called a waggon, barrel, tunnel, or cradle roof.

† The semi-circular or polygonal portion usual at the east end of the choir is so called. The same term is applied to a similar termination at the end of the transept or nave.

*crossing** of the transept. This compartment is also generally different from the rest of the church in other respects, and for the sake of compendious reference will be called the *intermediate compartment*. It is covered with a cylindrical vault at St Aposteln, St Martin, St George, and St Mary Capoline, all of them churches existing, with many others of the most ancient and curious construction, in the very remarkable city of Cologne.

The cylindrical vault is found on a very large scale in ancient buildings. It occurs in many modern churches, of which I may mention St Peter's at Rome. It is not very common in England, but is almost universal in the churches of Cornwall, where each of the three aisles is so roofed.

No. 2. In the ancient churches, the semi-circular east end is the general form, and is covered with a plain *semi-dome*: viz. the half of a hemisphere, smooth and ribless. This domical apsis is usually somewhat lower than the end of the choir to which it is attached; so as on the outside to shew the gable wall of the choir above the semi-circular termination. This semi-circular part has also very uniformly a peculiar open gallery, and other constant arrange-

* The portion of the building which is over that space in the ground plan where the transept crosses the nave is called the crossing.

ments, outside; and the interior construction of the apse which has just been described is equally constant in the oldest structures. Besides the Cologne churches mentioned in the last paragraph, all of which have this form, we may adduce St Gereon, St Maurice, St Cunibert, St Pantaleon, in the same city; the great cathedrals of Mentz, Spire, and Worms; the great abbeys of Laach near Andernach on the Rhine, and Eberbach near Elfeld in the Rheingau; and indeed almost all the churches of pure Romanesque character. Not only the choir, but the side aisles also have frequently this termination eastward; and this construction seems to be the earliest form of the church which we commonly find. This form is also very generally diffused, both in Normandy, and in Germany. To this prevalence Cologne, however, offers an exception. In that city four or five of the most ancient churches, which are formed into a group by their resemblances of style, have a plan in which, instead of this triple eastern apsis, we have apses at the *ends* of the transept, similar to that of the choir.

The combination of a center aisle with the side aisles introduced various methods of vaulting, which may be enumerated as follows:

No. 3. The simplest mode of vaulting *three* aisles is to make them all of the same height and width, the width being that of the pier

arches; and to repeat the Roman vaulting for each square compartment thus produced.

This vaulting, with plain semi-circular bands, and no diagonal ribs, is found in many ancient buildings of small size, for instance, in the Ottmar-Capelle in the Burg at Nuremberg, and, with some modification, in the Margareten-Capelle, which is underneath the former chapel. It may be seen on a magnificent scale in the superb cellars of the ancient monastery of Eberbach in the Rheingau. In crypts it is extremely common both in Germany and in England; and in these cases is often repeated for more than three aisles, as at Canterbury, where it extends to five.

This mode of roofing is occasionally used in all the successive styles, the pointed arch being introduced instead of the round one, and the details altered accordingly. The Eucharius-Capelle at Nuremberg exhibits it with a mixture of round and pointed arches, belonging to the transition from one style to another. The Temple Church in London is a beautiful instance of the same arrangement in the style of the early English Gothic. The smaller of the two churches in the monastery of Eberbach just mentioned has a similar disposition, with the details of a still earlier pointed style. The mode of vaulting churches with three aisles of equal height was, however, most practised on a great

scale at a considerably later period, when we have very large edifices of this construction, with characters which imply a decline from the best Gothic style. Among many instances, I may mention St Stephen at Vienna, St Lefrau at Oberwesel, St Stephen at Mentz, the cathedral at Frankfort, St Martin at Landshut. The gigantic height of several churches thus built, their openness and lightness in consequence of the size and distribution of the windows, are circumstances which often make them impressive and imposing, in spite of the defects of their details and execution. They are generally conspicuous externally by an enormous height and breadth of slated or tiled roof, and by the absence of a clerestory.

No. 4. In most churches, however, the center aisle is both higher and wider than the side aisles, and the building then requires a different mode of roofing.

The side aisles, being generally narrow, did not offer any considerable difficulty to the architect. They were built with a breadth nearly equal to the span of the pier arches, and then covered with equal intersecting semi-circular vaults on each compartment, according to the Roman vaulting described in Section 2. They had semi-circular vaulting bands across the aisle between each compartment, and generally had no diagonal ribs. The compartments of the

vaults are very frequently more or less *domical** in their form.

Of the ways of covering the center aisle, the first which I shall mention, is to place a flat wooden roof upon this space. In this case, the roof may rest upon the level tops of the clerestory walls, and we have no occasion for any pillars at all in that part of the edifice. If, however, the wall is faced with pillars or pilasters, these run up to the top of the wall, and have their capitals at the wall-plate, so as to support the beams; whereas, in walls intended for vaulting, the capitals of the vaulting pillars are necessarily much lower, so as to support the vaulting bands; in most instances they are nearly at the level of the bottoms of the clerestory windows.

In Fig. 6. the capitals are considerably below the top of the wall; but if the vault be removed, and a roof placed on the tops of the walls (the wall which is here drawn as imperfect being supposed to be completed to the same height as the opposite one) the capitals would naturally be carried to the summit of the wall.

This method of roofing large spaces seems in England to have been exclusively used during

* That is, the intersection of the diagonal edges or ribs of each compartment is somewhat higher than the summits of the transverse and longitudinal arches by which the compartment is bounded.

the prevalence of Norman architecture. I know no instance of a large center aisle of an Anglo-Norman building which possesses, or was intended to possess, a stone roof*; and the above-mentioned position of the capitals clearly indicates the original design. Thus Peterborough, the nave of Ely, St Peter's at Northampton, Steyning, Romsey, are calculated for flat roofs. In the latter church, even the nave, which is executed in the Early English style, has the same arrangement; probably for the sake of accommodation to the rest. The large buildings of Normandy of the earliest style in that province, have the same disposition; which obtains till we come to the two great Abbayes at Caen.

In Germany, as we shall shortly see, the art of vaulting large spaces seems to have been prac-

* It is here asserted, that no building of Norman architecture exists in England with the center aisle covered by original vaulting. It appears that there is an exception to this rule in the case of the Chapel of "the White Tower" in the Tower of London. This Chapel has side aisles separated by massive Norman piers, and covered with Roman vaulting; but the center space is vaulted with a *cylindrical* stone vault, resting on the walls of the triforium; the eastern termination being coved so as to accommodate the form to the semi-circular apsis of the chapel. The upper windows let in the light through the triforium arches. A room below the Chapel is vaulted in the same manner, the spaces under the side aisles being, in this story, solid wall.

This tower is said to have been built by Gundulph, bishop of Rochester, in, or soon after, the year 1078.

tised extensively, while in our country it was unknown. At the same time, however, that this was in use, many churches were built for flat roofs. Thus the abbey-church of Limburg on the Haardt, which was founded the same day as the neighbouring *vaulted* cathedral of Spire, is of the flat-roofed kind. Other German churches of the same class which may be noticed, are Schwarzbach near Rastadt; the Schotten-Kirche, the Obermünster Kirche, and the church of St Emmeran, at Ratisbon; St Burckardus at Würzburg; the church of Paulinerzelle in Thuringia; the old church at Schaffhausen in Switzerland; the churches at Ditkirchen on the Lahn; at Ems on the same river; the ancient church on the Johannisberg; and, finally, St Pantaleon and St Cecilia at Cologne. In Italy this construction is still more common: the art of vaulting churches in stone in early times having been in that country far less practised than in Germany, if at all. Thus, St Zeno at Verona and most of the old churches at Rome have flat roofs. In many of these Italian churches, the side aisles likewise are flat-roofed, which is the case also at Paulinerzelle: but in general, both in Germany and England, the side aisles, in such cases, are vaulted with Roman vaulting.

All the churches above-mentioned are of the most decidedly ancient and Romanesque charac-

ter, and many of them highly curious. But this mode of covering churches was resumed in later times, and in England is extremely common in that which Mr Rickman terms the *Perpendicular* style; of which construction Great St Mary's at Cambridge is a good instance.

No. 5. Instead of this wooden roofing, it is obvious that the architects would be tempted to extend to the center aisle the same art by which the side aisles were vaulted. Here however several difficulties offered themselves. The center aisle with its clerestory would have been altogether inadmissible without making it wider than the side aisles. If therefore it were covered with Roman vaulting, the distance of its pillars must be different from that of those in the side aisles, and thus the spaces, without some adjustment, would not correspond.

The artifice which was at first employed, and which forms our fifth method of roofing, was to make the center aisle *twice* the width of the side aisles, and to cover it with compartments of Roman vaulting, retaining the use of *semi-circular arches in both directions*.

By this means the pillars which supported the vaulting of the center aisle coincided with the *alternate* piers, and the pier arches were distinguished into pairs. The roof of the center aisle was divided into squares, by transverse semi-circular ribs, springing from the pillars which

belonged to the alternate piers, and these pillars had also semi-circular arches running longitudinally from one to another along the clerestory wall. Each compartment of the center aisle corresponded to two compartments of the side aisles. See Fig. 6.

This mode of vaulting, with semi-circular arches both ways, and with no diagonal ribs, is still found in several ancient churches; though it has often been replaced by more modern vaults. It is found with considerable dimensions, in the churches of St Maurice and St George, at Cologne; the ancient monastery churches of Laach near Andernach and Eberbach near Elfield; and on a still grander scale in the gigantic cathedral of Spire, where the span of the vault is about 45 feet; and though the storms of war have so often and so fiercely burst upon this city, it is confidently asserted by the most learned antiquaries, that part of the vaulting is of its original form. In most of these instances, and especially at Spire, the compartments are considerably *domical*, the intersection of the diagonals being higher than the summits of the bounding arches. The above instances of Roman vaulting are, however, far inferior in magnitude to those executed by the Romans themselves. The great hall in the baths of Diocletian, now the church of S. Maria degli Angioli, has a span of 67 feet, and the vaulting of the Temple of Peace at

Rome is said to have extended as far as 83 feet*.

This arrangement produced some peculiarities in the members of the building which deserve notice.

a. The alternate distinction of the piers is variously marked in buildings of this class. The *principal piers*, or those which possess vaulting pillars†, being generally more massive and important; and very often altogether different from the *intermediate piers*. The observations which are to be made on this subject apply to some of the other modes of vaulting hereafter to be described, and will be best illustrated by the notice of examples.

Mentz, Spires and Worms are three colossal buildings belonging to the system now under consideration. Mentz has plain *pilaster masses*‡ for the intermediate piers, while the principal piers have in front of the pilaster a vaulting shaft rising from the floor to the vault. Worms has the same arrangement, except that the vaulting pillar, instead of being a simple shaft, is a pilaster with a shaft in front of it. Spires, the vaulting of which is the greatest example of this fifth

* Ware. Archæologia, Vol. xvii. p. 47.

† The pillars which run up to the clerestory, and support the vaulting of the center aisle, are called *vaulting pillars*.

‡ Rectangular pillars or portions of wall, with impost mouldings.

mode, has pilasters faced with shafts, in two stories, for the principal pier, while the intermediate pier has a shaft which runs from the floor to the clerestory uninterrupted.

In several of the ancient churches of Cologne, this alternation is differently marked. In St George, the vaulting pillars are columns in front of pilaster masses, while the intermediate piers are columns* with cushion capitals†. In this case, however, the compartment of the center aisle corresponds not to 2, but to $2\frac{1}{2}$ of the compartments of the side aisles. At St Maurice the intermediate piers are low pilaster masses, the vaulting pillars tall pilasters. St Cunibert, in a later style, has the same difference. At St Aposteln the intermediate piers have the impost moulding at the sides, but not in front; the vaulting pillars are half columns from the

* I shall use the term *columns* exclusively for pillars possessing some approximation to the effect of classical proportions; *shafts*, for those which are too slender and long to have such an effect. Pillar is a comprehensive term including all such upright members.

† The capitals which I have distinguished by this term are extremely common in Romanesque work both in England and in Germany. They consist of large cubical masses projecting considerably over the shaft of the column, and rounded off at the lower corners. Sometimes they are cleft below, so as to approach in form to two or more such round-cornered masses. They may be considered as rude imitations of the very projecting ovolo and thick abacus which compose the capital of the Grecian Doric.

floor. At St Andrew, the intermediate pier has a pilaster mass of some width, with half columns in the sides, supporting the pier arches.

In the transition style, where the triforium is a prominent feature, the vaulting pillars alone run up to the clerestory, the intermediate piers being low masses, as at Andernach, Sinzig, Boppard, and the churches at Coblenz.

As we advance to later examples, these differences become more complicated; consisting often in a greater number or different form of shafts and mouldings in the alternate piers, as at Bamberg, Limburg on the Lahn.

This alternation of the piers is seldom found in England. It is, however, to be seen at Canterbury, with that kind of vaulting which we shall call *sexpartite*, and at Durham, where it occurs associated with a kind of vaulting shortly to be described, in which the cause of the alternation is almost obliterated.

b. The distribution of the clerestory windows is also affected by this style of vaulting. The obvious construction was to put one such window in the archspace of each arched compartment of the clerestory wall. But it was also usual to have a window in each compartment of the side aisles. According to this arrangement, therefore, the clerestory windows would only be half as numerous as those of the aisle, and would fall between the alternate pairs of the latter.

This is the case in some churches vaulted in the manner now described, but, in general, the light thus afforded, with the small windows then in use, was not sufficient; and attempts were made in various ways to remedy the inconvenience. One of the most common was to place *two* clerestory windows in each compartment of the wall under the transverse vault; and these windows were necessarily near each other, in order that they might be under the middle and highest part of each arch. In this way, the clerestory windows are in pairs, and though equal in number to the aisle windows, do not lie over them. And the occurrence of the vaulting in double compartments may be discerned outside, from this arrangement of the clerestory windows at alternately greater and less intervals. See Fig. 6.

The former arrangement of windows is found at Laach, though the vaulting in this case is in single compartments. At Bamberg we have it with alternate blank windows outside the clerestory, for the sake of regularity. The other distribution obtains very generally in churches vaulted according to this method, and to the one next to be described. Thus in the cathedrals at Mentz, Spire, and Worms, the clerestory windows are in pairs. The same is the case in St Martin's at the latter place; in the abbey at Eberbach; in the churches at Sinzig and at Andernach on

the Rhine, and in St Maurice at Cologne. I do not know that it occurs any where in England, except in the side aisles of the choir at Durham.

No. 6. We have now to notice cases where the vaulting is modified by the introduction of the pointed arch. And, in the first place, where *the transverse ribs* only are pointed*, the *longitudinal* ones being, as before, semi-circular, and each compartment of the center aisle still answering to two in the side aisles. This vaulting is not, at first sight, much different from the preceding kind. It varies however in this, that the breadth of the center aisle is no longer necessarily double of that of the side aisles; and also in almost always possessing *diagonal ribs*, which the preceding vaulting in general has not. The alterations of the other members of the architecture which begin to make their appearance along with these and the succeeding changes of vaulting, must be described afterwards. What was said in the last article of the alternation of the piers, and of the distribution of the clerestory windows applies here also.

Mentz is the greatest example of this kind of vaulting. St Paul at Worms, the church at

* The arches which form projecting strips on the surface of the vaulting are called *ribs*; those which run in the direction of the length being called *longitudinal*, and those which run across the length, *transverse*.

Andernach, are other instances: the cathedral at Trent is also of this class. In St Aposteln at Cologne, the transverse ribs are semi-circular, the vaulting being of a kind hereafter to be mentioned; but, commonly, when one of the bands only is pointed, it is the transverse one.

No. 7. The next step in the order of change, is that where both *the longitudinal and transverse bands are pointed*. We have here universally diagonal ribs, and this is by far the most common vaulting in all churches belonging to times after the invention of the pointed vault. It is capable of any proportion of length and breadth, and, in its later form, generally includes lengthways only one compartment of aisle. In the early form however which we have more particularly now to consider, it often contains two compartments, and two clerestory windows, arranged as in the two former cases.

Spires, Mentz, and Worms, the three great Romanesque cathedrals, form a progression with regard to vaulting which illustrates the divisions now explained; at Spires the arches are circular both ways; at Mentz the transverse one is pointed, the longitudinal being round; at Worms both are pointed. The church of St Martin at Worms is vaulted exactly as the cathedral. Bamberg cathedral is an excellent specimen of the same kind; as are the transepts at Gelnhausen and Sinzig, and the nave at Bonn. St Ambrose and

Santa Maria delle Grazie at Milan may also be mentioned.

When, quitting the transition style, we come to the completely formed Gothic, we find in all countries where that architecture prevails, numberless instances of this mode of vaulting. The nave of Salisbury cathedral is a good simple example of it. In England the vaulting subsequently became complicated and varied with a much greater number of parts; but in Germany this kind of plain pointed vaulting is continued without any additional ribs into the period of the richest and most complete Gothic work, for instance, at Freyberg in the Brisgau. It may be observed, that in the German vaulting, the parts which have been above described have seldom even the longitudinal rib along the top of the vault which is so common in England.

No. 8. Another kind of vaulting which seems to be as early, or very nearly so, as that just described, and which is very frequent and characteristic, is what I shall call *sexpartite vaulting*. It will be necessary to explain the construction of this and the related classes of vaults.

In the kinds of vaults hitherto described, we have had four hollow spaces or *cells* diverging from the intersection of the diagonal ribs. These cells, which were round or cylindrical in the Roman vaulting, were pointed in the kind last

described. This species of vaulting may be called *quadripartite*. If, now, we conceive a compartment which has two pointed clerestory windows on each side, and suppose, from the center of the longitudinal vault of this compartment, oblique pointed vaults to diverge to each of the four windows, we shall have the compartment covered with a roof consisting of six cells, which may be called, therefore, *sixpartite*. We have in this case six ribs diverging from the intersection; namely, the halves of two diagonals, and of the transverse rib between the pair of windows; besides which the compartment is bounded by transverse bands at each end. See Fig. 5.

This mode of vaulting is exceedingly common in early German churches, invariably accompanied by characters which imply that the transition from the Romanesque architecture is already in progress. St Cunibert at Cologne is a good instance, and St Aposteln was so, till the vaulting was altered a few years ago. In the latter instance, as has already been noticed, the transverse arches are circular, which is not common. Other examples are, Limburg on the Lahn; Sinzig, St Sebaldus at Nuremberg, and a part of Bamberg cathedral. This species of vaulting is found in England in the choir at Canterbury, and though somewhat distorted, in the chapel of the Nine Altars at Durham. The nave at Lincoln

has compartments of sexpartite vaulting*. St Stephen at Caen is thus vaulted, and the contemporary Abbaye aux Dames is constructed in the same manner, except that each pair of windows is covered, not by two arches, but by two half-arches, separated by a vertical wall.

No. 9. In the same way in which we speak of quadripartite and sexpartite vaulting, we may also speak of *octopartite* vaulting, when we have eight cells diverging from a common point. This is a mode very commonly employed in vaulting the towers which occur at the crossing of the transept. It may be employed either *on a square base*, each side of the square being divided into two halves: or *on an octagon base*. The square made by the transept's crossing the nave is often converted into an octagon by arches thrown over the corners, and then the latter kind of octopartite vaulting is employed: for instance at St Aposteln; in the cathedrals at Mentz, (the western tower), Worms and Spire; in the churches at Gelnhausen, Limburg, Sinzig; and many others.

St George de Bocherville in Normandy has a tower with octopartite vaulting on a square base: so also Lincoln.

* The choir of Lincoln has a most peculiar combination of vaults, which, to correspond with the nomenclature in the text, might perhaps be called *alternately semiquadripartite*.

It is very usual to vault the ends of the transept with a roof, of which the compartment towards the nave belongs to the quadripartite, and the other three quarters to the octopartite form; this occurs at Seligenstadt.

No. 10. The vaulting of the polygonal east apse is most commonly half (or rather $\frac{5}{8}$) of an octopartite compartment. In this case the cells are often very acute, as at Gelnhausen, Bamberg, Limburg, Mentz, Worms, &c. sometimes having windows in the escutcheon-shaped end of the cell.

SECT. 5. *On the Nomenclature of Fan-tracery
Roofs, or Concavo-convex Vaulting.*

The nomenclature by which I have above proposed to designate the kinds of vaults, applies only to the simpler kinds of vaulting, which class is what I have principally to describe; it contains no provision for the representation of those more complex roofs, which at a later period became so frequent in this country. These roofs are commonly called roofs of "fan-tracery," and are described by Mr Ware, in his *Observations on Vaults*, as "ribbed vaults by ribs of the same curvature." It may, perhaps, be allowable here to mention the manner in which I would propose to describe these, so as to keep in view their connexion with those enumerated in the present work.

Between two successive *transverse* cells in a groined vault, the roof on each side of the building consists of a mass in the form of an inverted curvilinear pyramid or conoid, which occupies the spandrels both of the transverse and of the longitudinal vaults, its point being at the capital of the vaulting shaft. This space I will call the *spandrel-conoid*: and I shall employ this term, whether its form be horizontally circular or not. In common quadripartite vaulting, this spandrel-conoid will have its horizontal section a rectangle at all heights from the point. Its concave surfaces are the same as the surfaces of the longitudinal and transverse cells; the transverse ribs run along its surface, and the diagonal ribs along its edges.

The vaulting becomes *complex*, when the surface of the spandrel-conoid is subdivided by additional ribs or *veins** diverging from the top of the vaulting pillar. In this case the faces between these veins are often inclined to each other: the spandrel-conoid becomes a pyramid of many sides with a curvilinear slope, and its horizontal sections become polygons; and, by a change of the same kind, the surfaces become curvilinear, and the sections become circles.

In these kinds of vaulting the portions of the roof are concave to a person looking vertically

* The French have a convenient and expressive term for these lines, "nervures."

upwards from the interior, and convex to a person looking horizontally. I would therefore call them both *concavo-convex* vaulting. The chapels of King's College at Cambridge, and of Henry the VIIth at Westminster, are instances of circular concavo-convex vaulting. The vaulting of the Lady-chapel at Wells is octagonal concavo-convex.

In both kinds, the ribs or veins which run along the surface of the conoids and diverge from the top of the vaulting pillar may be called *the diverging veins*. These diverging veins, especially in circular concavo-convex vaulting, are crossed at various distances from their origin by horizontal lines or circular bands, which may be referred to the point of divergence as their center; and these I will call *the concentric bands*. The spaces in the roof bounded by the diverging veins and the concentric bands, are *the pannels* of the vaulting.

The detail of the vaulting will depend upon the number and position of the diverging veins. In concavo-convex vaulting these may be described by stating *how many pannels* there are *on each side of the transverse rib*, with other peculiarities of decoration. In polygonal concavo-convex vaulting, we often have also shorter ribs or veins tying together various points of the larger ones, (with ornaments or *bosses* at the junctions) and these accessory ribs are in some instances multiplied, so that the roof may be described as *covered with reticulating ribs*.

In all the concavo-convex roofs there occur between the bases of the spandrel-conoids certain spaces along the ridge of the main or longitudinal vault, which from their form I would call *the ridge-lozenges*. These often contain ornamental bosses, &c.

According to this nomenclature, the roof of the Chapel of King's College, Cambridge, would be thus described. It has circular concavo-convex vaulting, with diverging veins, crossed by four concentric bands. The bands are ornamented with coronet points. The transverse ribs are large and prominent. The concentric spaces on each side the transverse rib are divided into twelve pannels (except the space contiguous to the top of the vaulting pillar, which has only six) and these pannels have cinque-foiled heads. The ridge-lozenges are feathered, and have large bosses, a rose and a portcullis alternately.

The singularly complex and artificial roof of Henry the Seventh's chapel at Westminster consists of circular conoids; the two lateral semi-conoids of each transverse section are (or *appear* to be) supported by the vaulting shafts; while the two intermediate conoids as well as that which occupies the ridge-lozenge, have no visible support, and appear as *pendents*. The roof is covered by an exquisite net-work of the veins and pannels which diverge from the points of these conoids. The real support of the roof are

the transverse ribs which proceed from the intermediate pendent conoids to the wall, and are connected with the roof by a web of open tracery.

SECT. 6. *Order of Succession of the Kinds of Vaulting.*

All the kinds of vaults enumerated in Sect. 4. are found abundantly exemplified in the ancient churches of Germany; and there cannot be much doubt as to the order in which they began to be employed. This order may be inferred from two circumstances: the construction of the vaults themselves, and the accompanying details of the architecture; and the two determinations agree in a remarkable manner. And though much difficulty and uncertainty attends the historical investigation of the dates of the parts of buildings from external evidence, it appears that the testimony of historical writers, as far as we have it, is quite consistent with the inferred succession of inventions. It is to be observed, however, that though we may with tolerable certainty collect from internal evidence the *order* of these modes of vaulting, we cannot in this way determine any thing precise with regard to the *date* of each.

The oldest forms of vaulting which remain to us, are the two first enumerated; Nos. 1 and 2; the cylindrical for the choir, and the domical

for the apsidal end. This is the vaulting of St Mary Capitoine at Cologne, a building which is asserted to be certainly of the eighth century; and of no less than five or six other churches of great antiquity in the same city. The cylindrical vault possesses no clerestory windows; and it is unfortunate that no nave remains of the date of the above buildings, to show us how the earliest builders arranged that part of the edifice.

The oldest complete church-vaulting, therefore, is No. 5, the Roman vaulting of the center aisle, and this is employed in Germany at a period when the Normans and English did not vault large spaces, but covered them in the way described as No. 4. I shall not attempt to draw any inference from this difference: but it may be noticed, that one advantage which the Cologneese possessed for the construction of vaults, was the extremely light and durable volcanic tuf which occurs in their neighbourhood, and of which the surfaces of their vaults are composed: the ribs both in this and in the preceding styles of vaulting being of harder stone.

The three great Romanesque cathedrals of the Upper Rhine offer, as has been said, a graduated progression of the earliest forms of cross vaulting, Nos. 5, 6 and 7, and it is scarcely possible, on considering the details and connexion of their members, to believe these vaults to be any other than original. These cathedrals, as to their earliest

parts, were all built about the year 1000, or soon after; and a great number of other churches offering the same forms of vaulting claim the same date.

The *sexpartite* vaulting, No. 8, succeeded, along with No. 7, to the earlier forms; it is never however found without the indications of a later style than the one just mentioned. The quadripartite vaulting with one window in each compartment, is, in the same manner, manifestly later than the vaulting like that of Worms, where though both arches are pointed, the clerestory windows are still in pairs.

I have said that associated with the kinds of vaulting last explained, we find innovations in the other elements of the architecture. What these alterations are, and how they seem to have been produced by the previous introduction of the pointed arch, we must now endeavour to explain.

SECT. 7. *Influence of the Pointed Arch on other Parts of the Architecture.*

The following is proposed as a theory of the way in which the use of the pointed arch led to the general principle of Gothic architecture, and thus, in the course of time, altered and transformed all the subordinate parts.

The leading and predominant lines of Grecian and Roman architecture are horizontal, and this

principle continues to have a considerable sway in the Romanesque style.

One result of the operation of this principle is, that the arch lines in this style are looked upon as having an analogy with the horizontal members. The tablets which follow the arch are considered as a kind of entablature; they are called the *architrave* of the arch; they consist of the fascias and mouldings of the horizontal architrave; the arch is horizontal at its summit, and the face of the wall is considered as the frieze of its architrave. The vaulting ribs of Romanesque buildings are flat and square-edged like the horizontal elements.

But as soon as ever the pointed arch makes its appearance, this aspect begins to change. The diagonal ribs of pointed vaults are never flat and square-edged like the vaulting ribs of the Romanesque. *Rolls*, or bent cylinders, constitute these lines. At the same time the transverse ribs themselves begin to have their square edges formed into beads or smaller rolls; in a short time the flat part vanishes and the square rib becomes a roll. It then becomes a cluster of rolls, then a cluster of mouldings; and when the change is advanced so far, parts of the cluster may separate and ramify, and assume any of the endless forms of Gothic architecture.

Now this change seems to be clearly connected with the adoption of the pointed arch.

When that step is once made, the attribution of a horizontal character to the arch line necessarily ceases. It has no longer a horizontal summit, or an uninterrupted path from one point to another in the same horizontal line. Its form manifestly indicates an upward direction. It thus loses its correspondence with any part of the entablature, and we are naturally led to refer the arch line to the supporting pillar; to consider it as a continuation of that member, and to give it that cylindrical form which implies such an origin.

This tendency being once admitted, the rest of the change proceeds by a still more obvious connexion. The pillars being thus conducted beyond the capital, we lose all perception of a limitation of them in the direction of their length; they may be prolonged in extent and diminished in thickness as much as we chuse; their capitals must no longer be square so as to stop them by a marked rectangular interruption: the common tendency of two shafts to prolong themselves indefinitely upwards, makes it natural to place them in contact; to form them into clusters; to combine them into groups, and to take up again in the arch mouldings the members of this group. And after this has been done, the formation of those flexible and upward-tending lines into the tracery of roofs, and all the varied forms of the richest Gothic work

proceeds by a gradation which it is agreeable to trace, but unnecessary to detail.

But while this change of character takes place in the frame-work of a Gothic building, a similar progression may be considered as going on in the openings. When the clerestory windows have become pointed, they share the tendency of the rest of the edifice towards upward prolongation. To construct buildings in which this tendency operates, the architects adopted the excellent mechanical contrivance of strongly projecting buttresses. These were further improved into flying buttresses; and furnished with these admirable implements, the architects of the complete Gothic style seem to have delighted in lifting to an immense height in the air the most gigantic and magnificent clerestories, enclosed by enormous areas of transparent wall. In this way are constructed and suspended the magical structures of Amiens, Strasburg, Freyberg, Cologne, and in the neighbourhood of the latter, the exquisite abbeychurch of Altenburg. Sometimes, indeed, the architect "*magnis excidit ausis*"—attempted more than he could execute; as in the instance of Beauvais, splendid even in its failure; where the unexampled height and boldness of the clerestory were imposed on a lower story, which was found too weak for its task, and was subsequently relieved by interpolating a new pier in each interval of the old ones.

Such was the completion of the architectural revolution. The peculiarities of the German churches offer to us a confirmation of this account of its rise and progress; and at the same time seem to shew that the direct operation of the causes of the new architecture is to be sought rather in Germany than in our own country.

For it is worthy of notice, that in the churches of the Rhine, the pointed arch makes its appearance in the vaulting before it affects any other part, and is used to roof buildings in which all the other arches and openings are round: whereas in England, the struggle between the round and pointed styles seems to be carried on in all parts of the architecture at once, giving rise to most curious mixtures and combinations, and seeming to be the result of caprice and indecision rather than of any general cause.

It would be too much to say that we can trace the effect of the causes above indicated in all the novelties of detail which occur in the passage from the Romanesque style. Many, however, of these innovations are easily referred to the general spirit of the change now described; and it is conceived that the succeeding Chapter, which contains the characters of the transition style, will further illustrate the formation of the complete Gothic.

CHAPTER II.

OF THE CHARACTERS OF TRANSITION OR EARLY GERMAN ARCHITECTURE.

SECT. I. *Difference of the Early English and Early German Styles.*

THE observations just made apply only to the instances where the change of architecture is completed; and in these, the style of the German buildings resembles very exactly what Mr Rickman has called the Decorated English Style. But there is a large class of buildings in Germany constructed during the period which elapsed while this change was still in progress; and these buildings exhibit features somewhat different from any of those styles which we find in England. The architecture which in England immediately succeeded the Romanesque or Norman, has been called the *Early English* style; and though it may be doubtful whether the first steps which carried architects beyond the Romanesque were made in England, it seems to be certain that the Early English style, as it exists at Salisbury, for instance, was not developed in the same

manner in Germany, and is not, in its most characteristic shape to be found in that country*.

* The differences between the styles in England and Germany which have the nearest correspondence, is by no means confined to the transition style. The Romanesque of Germany, which German writers often call Byzantine, varies in several respects from the Romanesque of England, which we have been habituated to term Norman. Thus we never find in the German churches the ponderous cylindrical piers which we have at Durham, Malmesbury, Steyning, &c.: we have not there the piers carved and channeled as is so frequent with us; (a few exceptions, such as the crypt of St Gereon, hardly disturb this rule.) The German buildings have not the deep rich succession of mouldings to which we are accustomed in the door and pier arches; the latter, especially, are in Germany universally quite plain. The Romanesque of that country does not exhibit the extraordinary multiplicity and fantastical variety of mouldings and ornaments which so distinguishes our Norman—the *beak-head*, the *embattled fret*, &c. are hardly or not at all known. The *zig-zag* and the *triple-billet*, however, are used very prodigally in certain parts of German churches. The complete Gothic, of Cologne cathedral and Oppenheim for instance, coincides very nearly with our best Gothic of the 14th century; the *Decorated* style of Mr Rickman, with *geometrical tracery*. The German buildings are generally purer and plainer in their details than ours, and the absence of dripstones is a remarkable difference. The tall clerestory and polygonal east end form very characteristic parts of the appearance of German buildings of this class.

The complete Gothic which is thus attained alike in England and Germany, is found with the same features in France, as in St Ouen at Rouen.

After this general coincidence, the styles of different European nations seem again to diverge; the beautiful Perpendicular or Tudor architecture which was so much cultivated with us, being quite different from the contemporaneous or corresponding styles of France, Germany, and the Netherlands; and these again apparently being different from each other.

That the English and the German architects beginning from the same point—the Romanesque, and arriving at the same result—the Decorated or Complete Gothic, should have gone by different roads, and made the transition each through a separate style, is a curious circumstance, and worthy of illustration. As the intermediate style in England has been called Early English, I shall call the intermediate style in Germany the *Early German*; and the following pages will be employed in an endeavour to characterize it; which, so far as I know, has not yet been attempted. I shall, for this purpose, point out its differences from the preceding or Romanesque style, for the differences between it and the complete Gothic are more obvious. The general character of the style is rather Romanesque than Gothic, though it has pointed arches and various other Gothic elements. The general character of the Early English on the other hand is decidedly Gothic; and, indeed, it cannot be considered otherwise than as a fully developed Gothic style.

To a person who has made himself acquainted with the Early English style, the differences which the Early German presents are very obvious. They have in common their slender shafts, other. And in these different paths the different countries seem to have gone on till the introduction of Italian or the revival of Classical architecture.

clustered and banded, their pointed arches, and their mode of vaulting; but we do not commonly find, in the interior of the transition churches of Germany, the circular cluster of shafts,—the arches moulded into a broad and deep mass of small rolls with deep hollows between,—the circular abacus with its rounded upper edge,—the single lancet-headed windows, tall and narrow,—and the peculiar line of open flowers which is used so profusely in all Early English work. Nor do we observe, on the outside, the dripstone to the window,—the moulded or shafted window-sides*,—the projecting buttress with its chamfered edge and triangular head,—the pyramidal pinnacles,—of our early cathedrals. What the elements are which we have in this style in Germany, will appear by the following description; and for the purpose of exhibiting the characters of Early German churches, I shall consider their parts in the following order: the Plan, the General outline; the Vaulting; the parts of the Interior; and of the Exterior.

* The edge of the window opening when sloped or broken into mouldings, cannot, in Gothic work, be properly called the architrave. It is frequently necessary to mention it, and I have for this purpose used the term *window-side* in a fixed technical sense.

SECT. 2. *Characteristic Details of Transition or Early German Architecture.*

I. THE PLAN.

The *Plan* of the church in the Early German, as in the Romanesque style, consists principally of three aisles, of which the center one constitutes the nave and choir, and has a polygonal or semi-circular apse at its east end. In considerable buildings we have also generally a transept, and various other chapels for altars, besides the eastern altar. A difference observable in these points is, that in the older style the apse is generally semi-circular, in the transition style it is polygonal. In the old churches the eastern sides of the north and south transepts were formed in like manner into semi-circular apses (as in the old church on the Johannisberg, in the ruined church of St Peter at Gelnhausen, and in the abbey church at Laach). And though in the succeeding style also it is common to have chapels on the east of the transept, these have seldom a simple semi-circular form; but have sometimes an additional recess, as at Gelnhausen and Sinzig; or some other form, as at Limburg; or disappear along with the transept, as at Bamberg, Andernach, and Boppard.

We have already had occasion to mention another arrangement very common in the early churches, and especially in those of Cologne, viz.

that in which each end of the transept is formed as an apse (for instance, St Mary Capoline, St Aposteln, St Martin, &c.) And this also is occasionally imitated in the transition style, still substituting a polygonal for a semi-circular end, as at Bonn, and at Marpurg, if the latter be not too late to be here introduced. It is remarkable, that we find in many churches a round apse in one part, and polygonal ones in other parts. Thus at Bonn the end of the choir is circular, of the transepts angular. Here also may be mentioned instances such as those of Mentz, Worms, and Bamberg, where we have an apse at each end, round at the east, and angular at the west: the latter being in all these cases, as well as in the western apse of St Sebaldus at Nuremberg, of the style now described.

In such cases of an eastern and western apse, we have also generally a western as well as an eastern transept, as at Mentz: and this second transept is found in several other churches, mostly Romanesque ones; as St Aposteln, St Andrew, St Pantaleon at Cologne; St Paul at Worms; the Schotten-kirche at Nuremberg. St Cunibert has likewise a western transept.

The towers in many of the churches of the earliest style are near the east end. In the transition style it is very common to have towers both at the east and west, as at Bam-

berg, Andernach, Bonn, Arnstein, Limburg. The latter, indeed, according to the plan, would have had two towers at the west end of the nave, and two smaller ones at each end of the transept, besides the central octagonal tower which it has in common with Gelnhausen, Seligenstadt, Sinzig, Heimersheim, and Bonn.

II. THE GENERAL OUTLINE.

The *general outline* of the church must depend principally upon its towers. If we suppose the great cathedrals of Mentz, Spire, and Worms, to be executed according to the original plan, which seems to be preserved to us in the form of the church of Laach, it would appear that the complete type of a large church consisted of four towers, (the two pairs having different forms and magnitudes,) and of two cupolas or pyramids. We have probably one of the best external elevations of such cupolas in the graceful octagonal pyramid of St Aposteln. In this manner the outline of a single cathedral would present a group of edifices, clustered and varied like the view of a fine city. We see a specimen of the effect of such a group at Laach, just mentioned; where the deserted abbey church, standing with its six towers on the banks of the remarkable lake of that name, is a highly picturesque object*. Mentz has a striking appearance, but is some-

* A sketch of this church is given in Plate 3.

what spoiled by the inappropriate restorations which it has undergone. Worms is another instance of a group of towers. This complexity of outline does not appear to have been imitated by the architects of the Transition style; and in their buildings we have either two pairs of towers, as at Andernach, Bamberg, and Arnstein; or a center spire with a pair of towers; either eastern towers as at Gelnhausen, and we may add St Cunibert at Cologne; or more generally western towers, as at Limburg, Bonn, Sinzig, Heimersheim, Seligenstadt, though the two first have smaller turrets besides. Boppard has two, and Bacharach one western tower only—at least remaining. The subordination of the lateral to the central towers in the group where that combination is found, and the perspective configurations of the two pairs, in churches with four towers, produce a very pleasing effect in these buildings when perfect.

The towers of the Early German style, as well as of the Romanesque, have generally their sides terminated by pediments. It appears to be generally true, that in the earlier style these pediments have the angle at the summit nearly a right angle, and the horizontal, as well as the inclined cornices, strongly marked. In the later towers the pediment is more acute, and the cornice lighter. Sometimes, as at St Martin and St Cunibert, the tops of the towers are horizontal.

III. THE VAULTING.

The kinds of vaulting used in the churches of Germany have already been described in Chapter I, and we have noticed the order in which they succeeded each other. It will be sufficient to remind the reader, that the cylindrical intermediate compartments (No. 1.), and domical east end (No. 2.), belong to the oldest Romanesque buildings—that the Roman vaulting (No. 3.), is used for crypts and for side aisles—that in the oldest Romanesque buildings, we have over the center aisle either flat roofs (No. 4.), or large Roman vaulting (No. 5.); that in the progress of art this vaulting becomes pointed, either in the transverse direction (No. 6.), or in both directions (No. 7.), the compartments being still *double* those of the side aisles, and the rest of the members continuing to be of a Romanesque character.

These latter species of vaulting are used also when the transition in the other members is already very manifest, as at Andernach, Bamberg, &c. The sexpartite vaulting (No. 8.), and the vaulting (No. 7.) with *single* compartments, belong more decidedly, however, to the transition style. At St Cunibert at Cologne a great part of the work much resembles the Romanesque churches in the same city; the plain round pier arches rest on pilaster masses, the east end is a semi-dome, &c. But the vaulting is sexpartite,

with cells slightly pointed; and accordingly we find other innovations: viz. the quadripartite vaulting of the side aisles has diagonal ribs; the vaulting pilasters have slender shafts at their sides; the shafts between the upper windows in the apse are three-clustered; the aisle windows are many-foiled semicircles; and the clerestory windows much larger than in the pure Romanesque buildings. And in the same manner we may trace in other churches a variation of the subordinate elements accompanying the newer kinds of vaulting. We may particularly observe the flat and square-edged vaulting-ribs of the pure Romanesque, first acquiring roll edges, and finally becoming curved mouldings, as has already been noticed in Sect. 6. of Chap. i.

The round east end so generally characteristic of Romanesque churches, where we have a domical apse lower than the choir, is, in the transition style, exchanged for a polygonal form; and is vaulted with diverging cells, and raised to the same height as the roof of the choir, (vaulting, No. 10.). It is remarkable, that in the cathedrals at Mentz, Worms, and Bamberg, the eastern apse is domical and ribless, while the western one has octopartite vaulting with pointed cells. The west end of St Sebaldus at Nuremberg is vaulted in the latter way; as are the east ends of Gelnhausen, Limburg on the Lahn, Seligenstadt, Sinzig, and the transept ends of Bonn. This

vaulting of the apse is also retained in the complete Gothic style, and has certainly great beauty.

The octopartite vaulting is also often used in the transition style to cover the crossing of the transept; or the octagonal tower which rises from it, as at Seligenstadt, Gelnhausen, Limburg, the western parts of Mentz and Worms, &c.

Sometimes, however, we have in such a situation a dome with octopartite ribs, as at Sinzig, and at Heimersheim, about a league further up the Ahr. This vaulting occurs also in the choir at Seligenstadt. We have the octopartite vaulting with a quadripartite cell next the crossing, in the transepts of the latter church, also in the transepts of Limburg and of St Cunibert, and the organ loft of Bacharach. The nave of Boppard is peculiar, its vaulting being a succession of domes on square bases, which have sixteen-partite ribs; but here perhaps, the walls were originally built for a flat roof.

The octopartite vaulting is used, as has been said, to cover an *octagonal tower*; and in the cases where such a feature exists, it is proper to notice the manner in which it is *set on* upon the square, (generally the crossing of the transept) which is its basis. A mode of making the junction which appears to belong to the earliest style (though not exclusively) is seen in St Aposteln at Cologne: the sides of the octagonal tower

which correspond to the angles of the square basis, and consequently project over them within, are connected with these angles by a portion of a concave ribless surface or *concha*, such that the main longitudinal and transverse arches which support the tower, and the upper boundary of this *concha*, form a sort of spherical triangle. The eastern cupolas of Mentz, Worms and Spires, the center towers of Seligenstadt and Gelnhausen, are constructed in the same manner.

But in the Early German churches there is another mode of supporting those octagonal towers, which seems to belong more peculiarly to the transition style, of which the western cupolas of Mentz, Worms, and the tower of Limburg are examples. In these cases the *concha* above-mentioned is hollowed, so that its upper boundary forms an arch in the side of the octagonal tower. These arches have well-marked mouldings; and along with them we have corresponding arches in the other sides of the octagon, shafts in its angles, and other decorations which did not appear in the former method of erecting such towers.

IV. INTERIOR.

I will next consider the *separate members of the interior*, taking them in this order: the piers and pier arches; the triforium; the clerestory; the side walls and windows; and the peculiarities which occur in the choir and transept.

1. *Piers and Pier Arches.*

The *principal*, or vaulting *piers* in the Romanesque style were often engaged columns, as at Laach, St Mary Capoline, St Gereon, and St Aposteln at Cologne; and as they are found in the aisles of a great number of churches, for instance, St Andrew, St Pantaleon, St Maurice at Cologne, the church at Ems, and many others. In other instances, the vaulting pillars were pilasters, springing from the ground as in St George and St Maurice; or from the impost as at St Ursula, and in the desecrated church of Eberbach, &c.

If we examine large Romanesque buildings, at Spires we find one column upon another, the upper capitals being of a very classical model. At Mentz the tall shaft is used alone. At Worms the pillar is too tall to be called a column, and has pilaster edges on each side. These three colossal cathedrals are remarkable for the simplicity of their parts.

When we approach the Early German style, we seldom find columns and pilasters approaching to classical proportions, in the situation now spoken of, and the alterations, though gradual, are very various.

We have pilasters with shafts at the sides, at Sinzig, Bonn, and St Cunibert; advancing still by a repetition of these parts, we have often an

assemblage of *engaged shafts and pier edges**, as at Limburg, Seligenstadt, Andernach, Bamberg; and sometimes triple shafts alone, as at Bacharach. In many instances, where the vaulting of this style has been added to an earlier building, we have vaulting shafts, clustered or single, springing from a corbel, or, more generally, from an end *hooked* into the wall above the impost. This occurs at St Mary Capoline, and St Martin, in the nave, and is, indeed, very common.

Between the principal piers occur the *intermediate piers*, and these either send up no vaulting shafts at all, as in the three great cathedrals just mentioned, and in quadripartite vaulting on a smaller scale, for instance, St Andrew, Cologne: or in sexpartite vaulting they supply vaulting shafts smaller and less important than the principal piers, as in St Cunibert, St Aposteln, Limburg and Bacharach, where these intermediate vaulting shafts spring from the *triforium tablet*†. These intermediate piers in large Romanesque buildings are tall pilaster-formed masses with imposts; as at Mentz, Spire and Worms, where they are on a gigantic scale. In other early

* I use this expression to describe a pier very common both in England, France and Germany, consisting of a number of *shafts set in square recesses*, according to Mr Rickman's phraseology. A plan of such a pier is given in Plate 4.

† The running tablet or cornice below the triforium.

churches we have piers of the same kind; for instance, at Eberbach; and at St Martin, St Maurice, the nave of St Mary Capoline, and St Aposteln at Cologne. And this occurs in many churches which seem not to have been intended for vaulting, as, for instance, Limburg on the Haardt, Schwarzach near Rastadt in part, the old church at Schaffhausen in part, the Obermünster Kirche at Ratisbon. We find, however, in such early churches, and, perhaps, as a form more prevalent in the earliest times, the arches supported by columns, of proportions nearly classical, and sometimes with a classical diminution of diameter upwards. These columns have very frequently a *cushion* capital. Such columns occur in the apses of St Mary Capoline, St Peter's at Gelnhausen, in the curious old church of St George at Cologne, in the churches at Schwarzach, Schaffhausen, and the Schotten-kirche at Ratisbon.

In other instances we find in the intermediate piers the columns *engaged* in the sides of a square pillar. In these cases they have more commonly, so far as I have observed, capitals resembling the Corinthian, and these often very well executed, as, for instance, St Andrew at Cologne, St Castor at Coblentz.

In such cases, the introduction of a thick roll-formed transverse vaulting-rib instead of a flat one seems to belong to a very early stage of the progress of the art. See St Cecilia, St Pantaleon and Ems.

When we advance from these Romanesque churches to the Early German ones, we find the intermediate piers in some respects changed. In a great number of churches the secondary pier becomes much lower and broader than before, a change which seems to be connected with the peculiarity of the triforium which we shall shortly have to mention. Thus at Sinzig, Andernach, Boppard, Bacharach; in Notre Dame and St Florian at Coblenz; and at Limburg on the Lahn, we have such low piers. At Bamberg, Gelnhausen, and Seligenstadt, they are not so low. In the cases where the pier arches are not in pairs, all the piers have of course vaulting pillars, as at Bonn.

The pier arches are sometimes round and sometimes pointed, without any apparent rule as to order of time: they retain the former figure in instances where the pointed arch is copiously introduced in other parts, and the style considerably developed, as, for example, at Bonn. The round arch is found in this situation at Bonn, and at Andernach; at Notre Dame, St Florian, and St John at Coblenz; at Sinzig, Andernach, Boppard, Bacharach,—on the Rhine; and at Arnstein on the Lahn. The pointed pier arch occurs at Bamberg, Limburg, Seligenstadt, Gelnhausen, and Heimersheim.

The arch is often merely a square-edged opening with no mouldings whatever. Sometimes

it has a rebated edge, and sometimes a roll, but very seldom any further ornament.

2. *Triforium.*

I speak next of the *Triforium*; and here I observe, that this member does not seem to have entered into the idea of the original Romanesque architects. The space over the pier arches and under the clerestory windows which the slope of the roof of the aisles occasioned, is left a blank, often with a rather awkward effect, in the finest early buildings. Thus, at Laach and Eberbach, we have not even a moulding to occupy it. At St George, St Ursula, St Gereon (choir) and St Maurice, the case is the same. In the three great Romanesque cathedrals we have a horizontal moulding and some pannel edges, but no important feature. This horizontal moulding occurs also at St Andrew, where it is enriched with excellent foliage; at St Cecilia, and in many other Romanesque buildings.

In England, in our Norman buildings, and almost constantly in the later ones, this space in large churches is filled by a row of openings or pannelings, of various kinds. It is mostly, however, a merely ornamental member, and I do not know that it was ever applied to any customary use.

But in the Early German churches the case is different. In almost all that decidedly belong

to this class, we have, instead of the blank wall of the former style, a large open gallery forming a second story to the side aisle. And in most of these instances, or at least in the churches on the Rhine above Bonn, this gallery is still appropriated to a particular part of the congregation, namely, the young men, and is generally called the *Männerchor*, or as I was told at Sinzig, the *Mannhaus*. This gallery naturally makes it convenient to have the pier arches somewhat low, which it has been already observed is the case. The openings of this gallery, which of course stand immediately over the pier arches, are variously arranged. Often there is a large plain semicircular arch, which however has frequently shafts at the sides when the pier below is plain. In Notre Dame at Coblenz, in Heimersheim and Bacharach, and in Ditkirchen on the Lahn, this is the case, though the latter has the appearance of being a Romanesque building with these openings cut afterwards. But the more general arrangement is to have this round-headed opening subdivided into two or three subordinate openings separated by shafts which are often in pairs. This is the form which obtains at Sinzig, Boppard, Andernach and Limburg on the Lahn.

At Bamberg this *Männerchor* is wanting, perhaps because the usage on which it depended was local. It is remarkable that none of the

churches at Cologne possess such a gallery (except St Mary Lyskirchen, where it is not so appropriated, and is apparently later than the building.) There are in that city several instances of ornamented triforiums. St Aposteln, which seems to stand on the boundary line between the Romanesque and Early German style, has a series of round-arched *pannels on shafts**. St Cunibert, which is a decided example of the latter style, has a similar row of pannels. Bonn, at the border of the district occupied by the churches where the Männerchor is general, and which belongs to the same period, has a row of pointed pannels on shafts, but no gallery. St Sebaldus at Nuremberg resembles Bonn. Limburg, in another part of the country, has an open gallery, and likewise a row of pointed pannels above. Arnstein, also situated on the Lahn, and resembling Limburg in its form, has a blank wall in the triforium.

In the construction where we have the Männerchor, there are of course two roofs to the side aisles, and they are generally both of the earliest or Roman kind of vaulting with no diagonal ribs. There is one remarkable exception at Sinzig, where the vaulting of the Mannhaus is of a kind, which, from its ribs, might be called tripartite, and which has two cells in the outer wall cor-

* That is, the shafts support the arches and separate the pannels.

responding to one pier arch. As the lower vaulting of the aisle is the plain quadripartite, two windows of the Männerchor correspond to one of the windows of the aisle, and stand in quincuncial positions to them. In other cases there are two rows of windows in the aisle which correspond to each other in a regular manner.

3. *Clerestory.*

Next, as to the *Clerestory*. The small round-headed window is almost universal in early buildings, and continues with little alteration, except perhaps an increase of size, after the vaulting and other parts have become pointed. But the disposition of these windows is often remarkable. In Romanesque buildings two small windows near one another are placed in the head of each semi-circular compartment, and thus the clerestory windows no longer answer to those below, even when the number is the same. This collocation must be considered as belonging to a very early style, inasmuch as it depends upon the supposed necessity of using a semicircular arch. It is found in the monastery of Ebrach; in the three great cathedrals of this style (less marked, however, at Worms and Spire) and in the Romanesque churches of St George, St Martin and St Cecilia. In the succeeding style, this arrangement also obtains at Andernach, though the transverse arches of the vaulting are there pointed. At

Bacharach and Boppard we have two rows of clerestory windows, one below the vaulting capitals and one above, but it is difficult to say if this was the original intention.

In many Romanesque churches, however, we have but one clerestory window in each compartment of the vaulting; and if in this case the compartments are subdivided into two in the aisles, we have twice as many windows below as above. This is the case in the ancient church of Laach; and this arrangement is adopted in the succeeding style at Bamberg and Limburg.

Besides these forms of the clerestory, which are common to the Romanesque and the Transition, we have frequently in the latter style windows of a new kind introduced. Thus, at Bonn, we have triads of windows of which the centre one is highest; but this form, though very common in Early English, is not general in Early German. A window which is frequently found and peculiar to this style, is a *fan-shaped* window, which may be described as the upper part of a circle (more than half) of which the circumference is cut into round notches. This obtains in the clerestory of Sinzig, and of the dome of St Gereon (which latter, however, has another range of windows above). The same window is found in the side aisles of Bonn, St Cunibert, St Gereon, and Notre Dame at Coblenz.

In speaking of the vaulting shafts, their capitals were not particularly described. In the earlier Transition buildings, the capital is often a bell-shaped block, or some similar form, with a square abacus; at a somewhat later period of the change, we have upright leaves like those of the Early English, still with a square abacus. This square abacus must be considered as a Romanesque feature, and the Gothic is not complete where it occurs; but it is one of the last traces of the Transition style which we lose. In England this form disappears at a much earlier period of the change. In the course of the transition, we have often two square abacuses set obliquely to each other in the vaulting, as at Bonn and Seligenstadt; and this occurs also in England, as at Romsey. In triple shafts, there is sometimes over the center one a projecting angle in the abacus, as at Ebrach near Bamberg.

Afterwards, we have the polygonal abacus which properly belongs to the Gothic, and under it either woven foliage, or crumpled leaves, or not unfrequently two rows of flowers, at at Oppenheim, and in several of the cathedrals of the Netherlands. The round abacus, so common in our Early English buildings, is found but rarely in Germany; it occurs in the shafts between the choir windows at Remagen and Heimersheim.

4. *Aisle Windows.*

The windows of the side aisles have been already described in speaking of clerestory windows; and the pillars of the aisle vaulting which stand between the windows have been mentioned in treating of vaulting. The wall in Romanesque and Early German churches has seldom any ornaments interiorly, and the windows have generally plain sides.

5. *Apse.*

The *apse* is generally distinguished from the rest of the building by various peculiarities of architecture. In small churches it has mostly no aisle, to which however St Mary Capoline is a fine exception. The east end of Worms has also an aisle. These apses generally consist of two stories of arches on pillars, some of the arches being open as windows. The pillars are various; single, as in the transepts of St Mary Capoline, and most small churches; or double, as in the choir of the same church. One of the alterations which takes place in passing to the Early German style is, that these shafts come to be clustered, often in threes, often banded; sometimes, as at Remagen, with a round abacus, though this is a resemblance to Early English shafts, which is rarely found in Germany. There is no part of the building where the transition from the earlier to the later style is more marked than in the

apse. The form becomes polygonal instead of circular; the sides of the polygon are extended upwards into *vaulting-escutcheons**; slender shafts, often banded, are placed in the angles of the polygon; the windows become pointed and are flanked by shafts; there are openings above the windows in the escutcheons, and the whole structure assumes an appearance of being elongated upwards, and of having its parts drawn into a slender and delicate form. This description applies to the east ends of Gelnhausen, Seligenstadt, Limburg, Sinzig, Heimersheim; to St Severin at Cologne; the north and south apses of Bonn; the west ends of Mentz, Worms, Bamberg and St Sebaldus at Nuremberg.

In Heimersheim and Remagen, which are small and ill-executed churches, we have apse windows which are comparatively tall and narrow. If we suppose the same plan to be adopted on a larger and more complete scale, we shall have an easy transition to the splendid, lofty and transparent polygons which form the apses in the fully developed Gothic.

6. *Intermediate Compartment.*

The *compartment next the apse* is very often differently constructed from those which make up the remainder of the church; especially in Ro-

* The wall at the ends of the pointed vaulting-cells has the form of an inverted escutcheon, and is here designated by that word.

manesque churches. In those which have a transept, this compartment generally fills up the *intermediate space* between the apse and the crossing of the transept; and in these cases it is very often without its windows above. This circumstance may sometimes have arisen from this part of the church having towers built against the outside. This blank occurs, for instance, at Laach, at the east end of Spires and Worms, and also at Mentz, though here this compartment has the cupola over it. Among the *transverse-triapsal** churches of Cologne, St Martin and St Aposteln have the upper part of the walls of this compartment filled up by two stories of small arches, some on shafts and some on little pilasters. St Mary Capoline has it with arches below and above like the other compartments of the apse, but without any opening. Something similar is the case in most of the other churches of that style. Perhaps the object was to give effect to the windows of the apse, which were generally filled with fine stained glass, by admitting no lateral light to distract the eye in their immediate neighbourhood.

Features, in many respects similar, mark this part of the church in the succeeding style. At

* Viz. the churches which have apses at the ends of the transept, as well as of the choir. They are to be distinguished from *parallel-triapsal* churches, where we have three apses all towards the east.

Andernach, Bonn and Boppard it is blank. At Sinzig, Limburg, and in Notre Dame at Coblenz, it has peculiar decorations in the triforium and clerestory, which, sometimes, as at Limburg, are the continuation of those in the transept. The lower story is often occupied by an arcade; and not unfrequently in the Early German churches, this consists of strong trefoil-headed arches on shafts or corbels, or intermixed. This we have at Seligenstadt, Gelnhausen, the west end of St Sebaldus at Nuremberg, and of the cathedral at Bamberg.

The lower part of this intermediate compartment is often modified by the intention of adapting it to the stalls, with which it was to be filled up. On this account, the vaulting pillars often spring from corbels, as at Bonn and St Severin, or from the triforium tablet, as at Bamberg.

In the last-mentioned church, the western choir is flanked by the two western doors; and to separate the choir from the aisles, which thus become entries, there are original stone screens which have trefoil-headed pannels, rich shafts, and sculpture. We have similar partitions at Mentz and at Limburg, and probably at other places, though these screens are often later.

7. *Transept.*

The decorations of the *transept* are for the most part a continuation of the members of the

nave or choir. These members are however frequently somewhat modified, but it is difficult to give any general account of the alterations which occur.

The mode of constructing the *ends* is sometimes characteristic. In the early and simple Romanesque churches, it is very common to have two plain small windows below and one above, as in the ruined church of St Peter's at Gelnhausen, in the old church of Eberbach, and in St Castor at Coblenz. In other churches, as at Spires (and this is the case with many Norman churches), we have three or more stories, and in each story, two round-headed windows.

But in the Early German style, there is a disposition to use triads of windows, and also very commonly circular windows variously ornamented, as at Bamberg, Ebrach, Gelnhausen and Mentz; in which cases the round windows are plates perforated with openings, so as to approach to the effect of tracery. These circular windows are also found in the west ends, as in St Paul's at Worms, and in Limburg; and on a smaller scale in the sides of the polygonal apse, as in the cathedral at Worms; or in the escutcheons of these sides, as at Gelnhausen.

V. EXTERIOR.

I have now to mention the *parts of the exterior*, and of these, the most important are—

the windows, the mode of ornamenting the side walls, the apse, the fronts (the west end and the transept ends,) and finally, porches and buttresses.

1. *Windows.*

The *windows* have little variety. They are generally, both in Romanesque and Early German work, small and round-headed: in the latter style, however, they are sometimes pointed and sometimes also accompanied by a roll moulding. It has already been noticed, that as the Early German advances, the windows are sometimes found in triads with the center one tallest.

2. *Corbel Table.*

The almost universal decoration of Romanesque side-walls, is the corbel table with circular *notches*, and with *pilaster strips** between the windows running up into it: and this is found in great profusion in most of the examples of that, and also of the succeeding style. In some of the cases where the workmanship is rich, as at Laach, we have flowers, &c. in the *notch spaces* of the corbel table, and the edges of the notches formed into a roll moulding: but to

* I use the term *pilaster-strips* to designate projections from the wall, which are about the breadth and proportion of pilasters, but have no capitals, and pass into the corbel table.

employ any other moulding, or to make the form of the notches pointed, as at Bamberg, belongs to the later style. This corbel table is replaced, in the transept end of Bamberg, and the neighbouring church of Ebrach, by a peculiar ornament with semi-circular horizontal notches.

3. *Apse.*

In very plain churches the Romanesque corbel table also runs round the head of the *apse* wall. But in the greater number of the churches of that style the apse is finished in a manner very peculiar. The windows are placed in round-headed pannels which are on shafts or pilasters, and run in one or two stories. Over these is an *apsidal gallery and cornice*: the gallery consists of open round-headed arches standing on small shafts two or three feet high, and *set two deep**: and in this line of shafts, groups of four, or other distinctions, occur at regular intervals. Above this, is a bold projecting moulding, consisting generally of two quarter-rounds with a hollow between, the lower round being cut into billets, the upper one enriched with leaves, as classical

* Shafts set two deep are a very common mode of enriching Romanesque buildings, and date apparently from a very early period. They are found for instance in the cloisters adjacent to the ancient churches of Laach, Zurich, and Aschaffenburg. They exist also in many ancient buildings in Italy, and in the palace of Frederic Barbarossa at Gelnhausen.

mouldings often are. Below the gallery is in most cases a line of small rectangular sunk panels. This particular combination of ornaments is employed with remarkable consistency and uniformity in a great number of Romanesque churches, as St Mary Capoline, St Martin, St Castor at Coblentz, the east end of Mentz, Spires, &c.: Laach is an exception.

And this mode of ornamenting the apse is employed with equal constancy in the next style, as for instance in the west end of the cathedrals of Worms and Mentz: in the east ends of St Paul's at Worms, Andernach, Bacharach, Sinzig, Bonn and Bamberg.

At Limburg the gallery has square-headed, at Gelnhausen trefoil-headed openings.

These open galleries certainly give great richness and beauty to the upper parts of the buildings where they are used, and seem to have been favourite decorations with the architects. They are often carried along other parts of the building besides the apse. Thus at Spires they are continued all round: at St Aposteln they run along the square part of the east end: and the octagons which occur in Romanesque and Early German buildings are often thus enriched; as at Worms, (both the octagons), at St Aposteln and St Gereon.

It is also to be noted with regard to the apses of the Early German churches, that we

see in them the buttress beginning to appear, though very flat and small. It has generally a triangular or *gable* head. See Mentz, the west end, and Bamberg, the west end.

In later work the galleries are carried along the clerestory, with arches somewhat larger, and often pointed, as at Limburg and Bonn.

4. *Towers.*

The Romanesque *towers* and those which succeeded them have at first sight a great resemblance; both consist of a number of stories with corbel tables and round-headed pannelings and openings to most of the stories. The trefoil-headed pannel as well as the round-headed one appears to occur in very early work, as for instance at St Castor and Laach.

On a closer examination however it seems not impossible to find differences between the towers of the two styles. The square towers have often their sides terminated upwards by a gable, so as to make the covering a square pyramid set on diagonal-wise upon the square of the tower. In the earlier churches these gables or pediments have not acute angles, and they are bounded both at the lower edge and at the inclined edges by a strongly marked cornice. The towers of the Early German style have, at least often, a more acute pediment, with the cornices, especially

the horizontal one, more slight, as for instance the west tower of St Aposteln.

The four towers of Bamberg, which must be considered as belonging to the transition style, are of a very rich and peculiar character, and, like the rest of that noble cathedral, of very excellent work.

Other differences are to be found in the corbel tables of the later churches. At Andernach, Boppard, Limburg, &c. besides the usual corbel table, there are, over the windows, in several of the tower stories, lines having embattled or wavy forms, and variously enriched. When the openings become pointed, the shafts banded, or clustered, or much multiplied, and the mouldings deeper and more complex, the features of the newer style are more obvious, as at Bonn, Sinzig, Heimersheim and Gelnhausen.

5. *Fronts.*

The *fronts*, and the west fronts in particular, of Romanesque and Early German churches, are not commonly distinguished by any very remarkable features. In many instances of the former style, as has been observed, the west end is an apse as well as the east. Laach, where this is the case, has at the west end a square court with cloisters, which forms a sort of portal to the church: so also has St Mary Capitoline. At Lorsch the very old and curious chapel which

is still preserved seems to have been a part of such a portal space*.

In most early buildings, where there is a west front, it has a few round-headed openings at the ends of the side-aisles, as at Eberbach.

But there are few cases where these fronts are visible as constructed by the Romanesque architects. They are often concealed by their connection with other buildings, or superseded by later erections.

In the west fronts of the succeeding style, and also in the transept ends, we have often to remark doors with pointed arches, detached and banded shafts, and enriched roll mouldings, which to an eye accustomed to English architecture have a more completely Gothic character than the other parts. This may be noticed at St Gereon, St Cunibert, Sinzig, Andernach, Bonn and Limburg.

A mode of ornamenting the roll mouldings of the arch, which is very common in these cases, is to give it bands, as if it were a shaft, at certain intervals: for instance, at the highest point, and at the middle points of the two sides of the arch. Another ornament which is common, is a little roll or *rouleau* placed transversely under the summit of the arch, so that its circular end just occupies the arch-point.

* We find similar portal cloisters in Italy, as in the church of St Ambrose at Milan.

The arrangement of windows in the transept end has been mentioned in speaking of the interior. Exteriorly the transept has often a pilaster or *buttress-strip** dividing the front into two halves, with windows on each side. This arrangement is also that of our Norman buildings. At Spires the pilasters have good Corinthian capitals, and the architraves of the windows are enriched.

Here may be mentioned the fronts of the old cathedrals which are found in the north of Germany, as at Brunswick and Goslar. They consist of a wall of very plain work pierced with a window flanked by octagonal towers, which have round-headed openings subdivided into double openings by shafts.

The Italian Romanesque fronts have generally one or more circular windows, and a quantity of arcades, horizontal and sloping, with other enrichments, and also the curious portico shortly to be described.

6. *Porches.*

We here speak of *Porches*, so far as they are to be found in these styles of architecture. In our Norman buildings in England such a member sometimes appears; but a distinct porch is not found in the Romanesque churches of Germany. In Italy, at least in Lombardy, it appears to be a common part of the earliest

* A broad flat buttress of slight projection.

buildings. Several of the old and curious churches of Verona, as St Zeno and the cathedral, have a remarkable portico, and this, from the representation in Mr Kerrich's paper in Vol. XVI. of the *Archæologia*, appears to occur also at Placentia, Modena and Parma.

This portico consists of a covering projecting from the wall of the church, and supported at each side by one or more pillars. The covering has a triangular pediment and sloping roof above, and a barrel vault below: and is very often in two stories, as in the cathedral at Verona, Placentia, Modena and Parma; and sometimes in one story only, as at St Zeno. The pillars at the sides generally rest on lions or other animals, and when there are more than one pair, as at Verona, are varied in their proportions and capitals, and are some of them twisted, &c. A portico similar to those of one story occurs on the south side of the cathedral of Trent; one somewhat different, with groining, being found on the north side of the same church.

In the German churches the style which succeeded the Romanesque has often porches at the west end of the church, consisting of a few compartments of groining (generally two) supported by pillars. Such porches are found at St Martin, St Cunibert and St Gereon.

Another member having some analogy to a porch should be noticed. It consists in the front

of a porch stuck against the wall; that is, the door, instead of being in the plain wall, is opened in a compartment having a slight projection, and bounded by upright returns to the right and left of the door. This *projecting face* of wall is sometimes ornamented with sculpture, of which the Schotten-kirche at Ratisbon is a very curious example. At other times it has only the mouldings of the other part of the wall, occasionally with the addition of the foliage of the capitals of the door-shafts continued as a running moulding. Instances are Andernach, Bamberg and St Sebaldus at Nuremberg.

This is found, so far as I have observed, principally in Early German work.

The doors in most of these cases are round-headed, and have the tympanum filled up and enriched with sculpture. And in such doors, the lintel which bounds the tympanum below has its upper edge formed into a low pediment.

7. *Buttresses.*

It must be considered remarkable that in the Romanesque style, where the vaulting is often very large and bold, *buttresses* seem to have been unknown, their place being supplied by the enormous thickness of the walls, and by the lowness of the spring of the arch, which threw much of the thrust of the main-aisle vaulting upon the vaults of the side aisles. Perhaps the hollowing out segmental

spaces in the wall between the pillars (as in St Castor at Coblentz) may be considered as an artifice indicating a perception of the possibility of employing buttresses instead of a uniformly thick wall; and when we arrive at the Early German style, we find buttresses make their appearance, as in the west end and transept of Mentz, at Seligenstadt, Heimersheim, Sinzig, &c. They are however in all these cases of small projection; are terminated usually with a plain triangular capping, and are not otherwise made conspicuous. It is not till we come to the next style (the complete or *Decorated Gothic*) that the advantage of them seems to have been fully perceived. In that style buttresses of deep projection, and often flying-buttresses, are used in a profuse and almost wanton manner to elevate into the air clerestories of vast height and of the most open and diaphanous workmanship, and thus they are the main instruments in giving to the structures of that period the extraordinary elevation and lightness by which they are characterized.

It will I think appear from the account which has been given of the transition style of Germany, that the introduction of the *pointed arch* was by no means immediately accompanied by all the other changes which distinguish the Gothic from the Romanesque. The old forms and

tendencies lingered long, and were replaced gradually: and the Early German architecture, for a considerable period, offers an image of the conflict and indecision of a revolution which is to end in replacing the prevailing principles by their opposites. At last the new character struggled fairly through, and freed itself from the fragments of the older system. And if we would select the most important of the improvements by which this complete developement was effected, we must, I conceive, fix upon the introduction of the *flying-buttress*. The inventor of this exemplification of architectural and mechanical skill must be considered as having done, for the advancement of Gothic architecture, far more than the inventor of the pointed arch: or rather as having given the means of executing in their full extent, those wonderful works of which the pointed arch contained the first imperfect rudiment and suggestion.

It would hardly be too fanciful to consider the newer religious architecture as bearing the impress of its Christian birth, and exhibiting in the leading lines of its members, and the aspiring summits of its edifices, forms "whose silent finger points to heaven." And this idea becomes more striking still when we compare our religious buildings with the graceful but low and level outline of the temples of heathen antiquity, whose favorite purpose seems to be to spread along

and beautify the earth which their worshippers deified. We may thus, with the poet's as well as the artist's pleasure, image to ourselves

——— the bulk
Of ancient Minster lifted above the cloud
Of the dense air which town or city breeds
To intercept the sun's glad beams;

and leaving far below it the pillared front and long entablature of the Grecian portico: while the *buttressed* clerestory, with its spiry pinnacles and woven tracery, hangs over the altar and the sanctuary, like a coronal upheld by the stony arms which the Christian architects learnt to make powerful and obedient for this purpose.

SECT. 3. *On the Complete Gothic Style in Germany.*

The progress of the style of which the characters have now been indicated led to the formation of the Complete Gothic. This style I shall not dwell upon; it is almost sufficient to refer to Mr Rickman's account of the Decorated English, and to the English specimens which exemplify that kind of architecture. The resemblance obtains not only in the general forms of the members and parts, but in the details also, the canopies, bases, profiles of mouldings, &c.

The earliest form of the Complete Gothic in Germany has, throughout, *geometrical tracery*. Cologne cathedral is the unrivalled glory of buildings of this class; the most splendid, and perhaps the earliest exhibition of the beauties of

this style. The abbey of Altenberg, at a little distance from Cologne, now a manufactory, had a church of the same admirable style, which still exists. This is said to have been built by the same person who was the architect of Cologne; and as it was finished, we are enabled, from the exquisite lightness and grace of its lofty interior, to form some conception of the splendid and majestic vision which would have been embodied by the completion of the original plan of Cologne. The church of Altenberg is particularly worthy of notice for the beautiful and varied forms of its window tracery, which in the interior view are seen to singular advantage, the glass being ornamented in white and grey patterns, which subdue without colouring the light*. The church of St Catharine at Oppenheim, near Worms, also in part a ruin, is another fine example of this style. and has been worthily illustrated in the magnificent work of Mr Müller. These buildings are remarkable for a purity and simplicity in their details which our Decorated Style does not always possess.

The splendid cathedral of Strasburg belongs to the same class as that at Cologne, and has

* It is melancholy to see this beautiful building tending to decay: perhaps a short time will deprive it of the advantage which its present completeness gives it over its more magnificent sister of Cologne. The roof is insufficient, and the south transept is broken down, so that the church seems marked out as a prey to speedy ruin.

some of the same peculiarities. Among other examples of prodigality of ornament, we have in both these buildings *double planes of tracery*; that is, two tracery windows or frames one behind another in the same opening; the pattern of the tracery being often different in the two. This extravagance (for it almost deserves to be so called) appears in the towers at Cologne; at Strasburg it is carried to such an extent in the west front, that the building looks as if it were placed behind a rich open screen, or in a cage of woven stone. The effect of this construction is certainly very gorgeous, but with a sacrifice of distinctness from the multiplicity and intersections of the lines. Freyburg is another great church with obvious resemblances to Strasburg; it is a very fine building, but is remarkable rather for the beauty of its composition and form, than for the delicacy of its details; nothing, however, can be more admirable than the open work of its matchless spire.

At a period a little later, we have *flowing tracery*, and this occurs with most abundant variety of form in most of the Gothic buildings: among others, in the cathedral at Freyburg, and with some very curious features in that at Strasburg.

Other buildings belonging to the complete Gothic style, are St Thomas and St Lefrau at Oberwesel; St Werner, in ruins, at Bacharach;

Lorch on the opposite side of the Rhine; St Stephen, St Quintin and St Christopher at Mentz; a very beautiful church and a chapel at Kidrich near Elfeld; the cathedral at Frankfort; the church at Neustadt on the Haardt; the cathedral at Ratisbon, and the church of the Minorites, now the Halle, in that city; St Sebaldus, St Lawrence, &c. at Nuremburg; St Mary and the Deutsche Haus at Wurzburg; and many others in almost every city in Germany.

Several of these buildings probably belong to different ages; for the separation of the pure Gothic from the styles into which it degenerated requires a particular study, and a scrupulous discrimination which it has not been my purpose at present to exercise.

CHAPTER III.

SUGGESTIONS ON THE MANNER OF MAKING ARCHITECTURAL NOTES.

SECT. 1. *On describing Churches.*

BY comparing actual buildings with descriptions conveyed in precise and determinate phraseology, such as is that of Mr Rickman, the architectural observer will become aware how completely words alone may avail to preserve and transmit distinct and adequate conceptions of an edifice. And when he has thus begun to feel the import and value of a technical language, a little practice and contrivance will enable him thus to register for himself, or for others, the principal features of any building which may attract his notice. If he should happen to visit the churches of Germany, it is hoped that the classifications and terms introduced in the preceding pages may be of service in enabling him to discover and characterize the most remarkable of their peculiarities. And should he examine the churches referred to in the previous Chapters, or other similar buildings not familiar to the English reader, of which there exist in Germany

a great number possessing very interesting characters, he may, by recording their peculiarities, contribute to throw light upon the history of architecture; for in this study, as in all others, any sound speculation must be founded on the accurate knowledge of an extensive collection of particular instances. If for this, or for any other purpose, he should make his memoranda concerning a number of churches in succession, some *method* in doing this may be of service. The subdivisions employed in the preceding descriptions indicate the points to which the attention is to be directed; and these may be made a guide in the survey of each church. But besides this general enumeration, several rules of order and selection will probably occur to the observer, tending to facilitate and expedite his labour; and such as have occurred to one person, may possibly be of some use to others. Under this impression, the following directions are offered to the reader, being such as I found it in general convenient to follow, in the course of the observations which gave rise to the preceding pages.

In describing a church, mention first what is the GENERAL STYLE of the work (Romanesque, Transition, Complete Gothic, Perpendicular, &c.) for this both conveys a general notion of its appearance, and modifies the interpretation of the terms afterwards used.

Describe next the **GROUND-PLAN**, and then the **VAULTING**: for these being given, the number and position of almost all the members is determined, and the rest of the description will have a reference to a known arrangement of parts. In the vaulting, mention whether it is Roman vaulting, or some other form of quadripartite, or sexpartite, &c.; if quadripartite, whether both transverse and longitudinal ribs are pointed; whether in single or double compartments; the ribs where they occur, their form and mouldings; and whether the side aisles are of the same kind as the center aisle.

Describe next one **COMPARTMENT** of the inside, selecting that which is most frequently repeated: and noticing—first the *piers*, whether they are columns, pilasters, shafts and pier-edges, clustered shafts, or piers of clustered mouldings, and what the difference is of the *intermediate* piers, if any: their *capitals*, whether Corinthian, cushion, sculpture, upright leaves, woven foliage, &c.: the *aisles*, whether they have pillars like those of the piers, (their vaulting having been already noticed,) what are the windows, and whether the wall is ornamented;—then the *pier-arches*, whether round or pointed, and whether the arch is plain, rebated, chamfered, or with what mouldings:—then the *triforium*; whether blank, pannelled, of detached shafts with wall behind, or of openings; the openings, whether

single, or double, &c.; or subdivided; and if either double or subdivided, how separated, whether by shafts, clustered shafts, pilasters, &c.; and whether with round or pointed openings:—then the *clerestory*; the windows, whether single, in pairs, or in triads; if not single, how separated; with what mouldings; what capitals to the vaulting shafts: and throughout, what capitals there are to shafts, and what mouldings are used, when they offer any thing remarkable.

Afterwards, notice any peculiarities or deviations from this compartment which appear in the *apse*, the *intermediate compartment*, the *transepts*; in the supporting piers of the *crossing*; and at the *west end*.

In describing the EXTERIOR, the order of description does not appear to be of much consequence. The most important points are, the number and position of the *towers*, whether they are at the east, at the crossing, &c.: whether their sides end in gables, and whether these have strong or light cornices, especially the horizontal lines; how the different stories of the towers are decorated:—the *apses*, whether round or polygonal; whether the peculiar *apsidal gallery* of the Romanesque:—the finishing of the wall; whether by a corbel table with notches, round or pointed, plain or moulded; or by a cornice, balustrade, canopies, pinnacles, &c. The *buttresses* also, or their absence, should be remarked:

what projection they have, what set-offs, what termination, how ornamented. *Flying buttresses* are to be noticed, and how they are stopped and supported at the lower end. Finally, the *west front* is a leading part of the building when it is ornamented, and the *porches* in the other parts; and these portions often contain the richest and most ornamented workmanship in the whole edifice. If the church has many subordinate members externally, and is remarkable in detail, it may be proper to take notes of a single *compartment* externally, from the ground to the roof in order. The *windows* in particular will require attention; the mouldings of the window-sides, the dripstones, canopies and pannellings which accompany them: and especially the *tracery*. If any one were to observe, in succession, a great number of different windows of the complete Gothic, he would probably be led to devise some simple and technical phraseology or notation by which the form of the tracery might be conveyed; but this does not fall within the main purpose of the present Essay.

SECT. 2. *Nomenclature.*

The clearness and definiteness of an architectural description must depend upon the use of terms accurately defined and steadily employed. The phraseology introduced by Mr Rickman

should be made the basis of such a language; but in applying this to foreign architecture, which he had not in view, it becomes convenient to introduce several additional words and phrases. Some of these have been made use of in the preceding pages, and they have generally been explained when first employed. The following is a list of such words, with a few others which we have also had occasion to illustrate.

List of Technical Terms which are explained in the preceding pages.

	PAGE
Romanesque style	32
Transition. Early German	76
Gothic	33
Longitudinal and transverse vaults	36
Compartment	36
Roman vaulting	37
Diagonal rib	39
Piers. Pier-arches. Clerestory. Triforium	43
Cylindrical vault	44
Apsis	44
Crossing	45
Intermediate compartment	45 and 97
Semi-dome	45
Domical compartments	49
Principal and intermediate piers	54
Vaulting pillars	54
Pilaster masses	54
Columns. Shafts. Pillars	55
Cushion capitals	55
Longitudinal and transverse ribs or bands	58
Cells of a vault	60
Quadripartite vaulting	60
Sexpartite vaulting	60

	PAGE
Octopartite vaulting on a square base.....	62
Octopartite vaulting on an octagon base.....	62
Rolls (mouldings).....	70
Architrave of an arch.....	70
Window-side.....	77
Concha.....	85
Pier of engaged shafts and pier-edges. (Fig. 13.)...	87
Triforium tablet.....	87
Männerchor. Mannhaus.....	91
Pannels on shafts.....	92
Fanshaped window. (Fig. 12.).....	94
Escutcheon.....	63 and 97
Transverse-triapsal churches. (Fig. 10.).....	77 and 98
Parallel-triapsal churches. (Fig. 11.).....	98
Notches of the corbel table.....	101
Notch spaces.....	101
Pilaster-strips.....	101
Apsidal gallery and cornice. (Fig. 15.).....	102
Shafts set two deep.....	102
Gable head of a buttress.....	104
Rouleau at the point of an arch.....	106
Buttress-strips.....	107
Door in a projecting face.....	109
Double planes of tracery.....	114

The following terms refer to Fan-Tracery Vaulting.

Spandrel conoid.....	64
Complex vaulting.....	64
Concavo-convex vaulting.....	65
Diverging veins.....	65
Concentric bands.....	65
Vaulting pannels.....	65
Reticulating ribs.....	65
Ridge lozenges.....	66

SECT. 3. *On a Notation to express Vaulting.*

Though the different forms of vaults may be described with sufficient distinctness by means of the terms already explained, viz. by referring them to their class as quadripartite, sexpartite, &c. and by noticing whether the cells are deep or shallow, what ribs exist, whether these are pointed or round, and of what mouldings composed; yet it is often possible to represent the vaulting more immediately and distinctly to the eye by means of a few lines drawn to indicate it. Having found the convenience and simplification which arise from such a notation, I shall here give an account of the method which I have employed.

A rude plan is drawn of one compartment of the vaulting in single lines: that is, a rectangle to represent the space occupied by the compartment, and diagonal or other lines for the ribs and intersections of vaults which occur.

The straight lines which here represent *arches*, have a small cross (×) marked on their middle if the arch is *pointed*: if it be round they have no mark.

The *cells* have a mark to represent whether they are pointed or round, the mark being a small apex (∧) turned towards the intersection of the vaults if they are pointed; and a small arc (⊂) similarly situated if they are round.

The lines which represent the principal ribs are drawn double, triple, &c. according to the magnitude and number of the mouldings: the smaller ribs being represented by a smaller number of lines, and an intersection without ribs by a single line.

Thus in Plate I, under Figures 1, 2, 3, 4, 5, 7, 8, we have the symbols by which they would on this system be represented.

A dome would in this method be represented by a circle surrounding the vertex of the dome; and a portion of a dome by an arc of such a circle.

In the ground plan of Mentz, Fig. 9, of St Aposteln, Fig. 10, and of Laach, Fig. 11, the vaulting is represented upon this system. The second of these churches has had, within a short time, a vaulted ceiling of lath and plaster substituted for the ancient tuf vaulting. The modern form is represented by the dotted lines.

SECT. 4. *On making Architectural Notes by means of Drawing.*

It may often happen that a very rude and imperfect sketch, such as it requires little skill to produce, will represent the form and relations of some members of architecture better and more briefly than a description in words. Where a building is thus noted, the following suggestions may be useful.

Draw a single interior compartment; either as a geometrical elevation; or, what is generally better, but more difficult, as an oblique perspective view. By this means we obtain both the forms and positions of the piers, pier arches, triforium, clerestory, and vaulting. It is sufficient to represent shafts by a single or double line, with a short transverse line for the abacus; and similar compendious representations may be employed for other parts.

If it be desirable to go into greater detail, as in good or remarkable churches it generally is, some of the following additional sketches should be added: the plan of the pier: its capital: the profile of the arch mouldings; any drawing which may be requisite to explain the combinations of shafts in the triforium and clerestory: the capitals of such shafts: the clerestory window-sides: the ornaments of the side walls: the tracery of the windows: the ends of the transept: the apse.

Externally, a general perspective view gives the grouping of the towers and their parts: the western front and the apse may also be characteristic: but such drawings are generally much more laborious and difficult than the memoranda of the interior above recommended.

In Plate IV. Fig. 12. is represented a compartment of Sinzig near Bonn, which exhibits a fan-shaped window in the clerestory.

SECT. 5. *List of Churches.*

The following are the principal German churches which I examined and noted according to the method just explained. The observations made on these, combined with what I had before noticed, have given rise to the preceding attempt to connect and discriminate these churches. In the list, R is added to indicate that a church is principally Romanesque, G that it is of the Gothic, and T that it is of the Transition Style. The most remarkable of the churches are distinguished by an asterisk. They are arranged according to their topographical succession, first ascending the Rhine, and then diverging into Bavaria and Franconia.

Near the Rhine.

COLOGNE.

- * St Mary Capitoline. R.
- * St Martin. R.
- St George. R.
- St Andrew. R. Choir. G.
- * St Gereon. R. Polygon. T.
- * St Aposteln. R.
- St Pantaleon. R.
- St. Cecilia. R.
- * St Cunibert. T.
- St Ursula. R. Roof. G.
- St Mary Lyskirchen. T.
- St Severin. T.
- St Peter. G.
- * Cathedral. G.

BONN.

- * Cathedral. T.
- Apollinarisberg. R.
- Remagen. T.
- Hemersheim. T. } on the
- * Ahrweiler. G. } Ahr.
- * Sinzig. T.
- * Andernach. T.
- * Laach. R.

COBLENTZ.

- * St Castor. R.
- Notre Dame. T.
- St Florian. R.
- St John. T.
- Neiderlahnstein.
- * Boppart. T.

Oberwesel.

St Lefrau. G.

St Thomas. G.

Bacharach.

* Lutheran Church. T.

* St Werner. G.

Lorch. G.

* Clemenskirche. R.

MENTZ.

* Cathedral. East end R.
West T.

St Stephen. G.

St Quintin. G.

St Christopher. G.

RHEINGAU.

Winkel. G.

Johannisberg. R.

Eberbach near Eلفeld.

* Large Abbey Church. R.

* Small do. or Hall? T.

* Cellars do. R.

Kidrich near Eلفeld.

* Church. G.

* St Michael's Chapel. G.

Eلفeld. G.

FRANKFORT.

Cathedral. G.

St Leonhard. G. Apse. T.

Seligenstadt. } on the
Aschaffenburg. } Maine.

Gelnhausen, on the Kinzig.

* Oppenheim. G.

Lorsch. R.

WORMS.

* Cathedral. East end, R.
West, T.

* St Paul. R. and T.

* St Martin. R.

Limburg on the Haardt.

Abbey Church. R.

Neustadt. G.

SPIRES.

* Cathedral. R.

Schwarzach. R.

STRASBURG.

* Cathedral. G.

St Stephen. R.

St Thomas. T.

FREYBURG.

* Cathedral.

In Bavaria.

Morsburg.

LANDSHUT.

St Eudoch. G.

St Martin. G.

Holy Ghost. G.

RATISBON.

* Schottenkirche. R.

St Emmeran. R.

Obermünster. R. Porch, T.

Niedermünster. R.

Minorites. G.

* Cathedral. G.

Old Cathedral. R.

NUREMBERG.

St Laurence. G.

* St Ottmar's Chapel. R.

* St Margaret's— R.

* St Eucharius'— T.

* St Sebaldus. G. West end, T.

BAMBERG.

* Cathedral. T.

Oberpfarrkirche. G.

St Stephen, a tower. R.

Ebrach.

* Large Abbey Church. T.
(Inside modernized).

Small do. T.

WURZBURG.

St Burckhard. R.

Schottenkirche. R.

Deutsche Haus. G.

Domkirche. R. Inside
modernized.
Neumünster. R. Inside do.
St Mary. G.

On the Lahn.

LIMBURG.

* Cathedral. T.
Bishop's Chapel. G.

Ditkirchen. R.
Arnstein. T.
Ems. R.

In Switzerland.

Schaffhausen (old Church). R.
* Zurich. R.
Lucerne. R.
Bern. G.

NOTES

WRITTEN DURING AN ARCHITECTURAL TOUR

IN

PICARDY AND NORMANDY.



INTRODUCTION.

A PERSON familiar with the chronological classification of English Gothic Architecture, naturally wishes to apply this classification in other countries. Besides the obvious and often-tried problem of the origin of this kind of architecture, many other questions offer themselves to any one who feels an interest in ecclesiastical edifices, either as monuments of antiquity or as works of art.—Are there in other countries the same successive styles of Gothic architecture as here, exhibiting the same leading characters, distinguished by the same differences?—Are the same great leading characteristics accompanied by the same details and groups of minuter peculiarities? Where the styles come in contact, do they manifest the same transitions, the same mutual accommodations and imitations as with us? And again; when we look at buildings with reference to their beauty, do the artists in the different countries appear to have been guided by the same principles and the same feelings? Each of the three styles of English Gothic has its peculiar kind of beauty, and probably each has its special votaries who admire the masterpieces of their favourite style as the perfection of the art.

Do we find this to be the case elsewhere? And so far as we can detect the supreme aim, the perfect ideal, of the genuine artists of each of the English styles, do we again meet with the same thought, the same purpose, in the great works of successive ages on the continent? In short, how close or how wide is the analogy which obtains in the principles and history of architecture in different parts of Europe?

To attempt to solve these problems generally is far from my present purpose. But it gives great interest to our journeyings through countries rich in ancient buildings, even to have such questions present to the thoughts; and it may perhaps not be unwelcome to some persons to read the reflexions which have arisen in the traveller's mind when employed in such speculations. In this hope it is, that the following few pages are printed.

It may be very reasonably objected to the remarks which I now venture to publish, that they are made from an arbitrary point of view, namely, the assumption of our English division of styles as a basis for the classification of other countries; and again, that in order to learn what the chronological succession of styles has been in France, or Germany, or Italy, we must carefully examine the documentary history of many buildings in each country, and not form our opinion of the relative date, merely by examination of

the buildings themselves. To this I entirely assent; and I can only urge in reply, that I conceived that a person might safely *begin* such an enquiry by a reference to the English styles, provided he were willing to give up the identity of the architecture of this with other countries as soon and as far as the facts directed him; that I am well aware that the subject requires much more labour and knowledge than I could contribute; but that I have done what my time and opportunities permitted; and that no one will rejoice more than myself, to find what I have put forwards superseded by the completer labours and sounder views of persons who may bring to this attractive study more leisure, talent and research. I have strong hopes that, both with respect to Germany and France, such a consummation may take place at no remote period.

The reader must therefore consider the following pages as the result of a tour in the north of France, made in order to discover and criticise styles of architecture resembling the English styles. The remarks were written at various intervals during the tour itself, and are now given to the public with only slight corrections, and the introduction of the titles of the paragraphs.

Before producing these remarks, I will in a few words present the point of view from which they start. The ecclesiastical edifices in England,

previous to the revival of the Italian taste in the time of Elizabeth, may be divided into four styles, which have been termed Norman, Early English, Decorated and Perpendicular. The first of these styles is found prevailing all over Europe, and is plainly a debased imitation of Roman art, whence we may, in this wider view of it, term it Romanesque. The succeeding styles belong to a form of art in which a new set of principles reigns; the architecture which is thus created, may, at least in its general features, be traced over most parts of Europe, and is commonly indicated by the term Gothic. Even the subdivisions of this architecture seem to offer themselves to us in France and Germany, though with some modifications. The "Early English," in its pure English form, is not commonly found in those countries: its place in the series of styles is taken by what we may call the Early Gothic; a style which differs from the Early English, in some respects by the retention of Romanesque members, as the square abacus; in others by the anticipation of Decorated features, as geometrical tracery. The Early Gothic was developed into the Complete Gothic: but the existence in France of a genuine Decorated style, distinguished both from the preceding and succeeding styles, was a point which I considered doubtful when the following tour was begun. Where, however, it seemed to occur, I have called it French Deco-

rated. The Perpendicular style does not occur in France and Germany, at least in the same form as here; those countries however possess analogous styles: the fact being that the Complete Gothic, which was very nearly identical in great part of Europe, afterwards broke up and degenerated into different shapes in different countries; all of them more florid, more complex, and more feeble than the preceding style. The French style which stands in this position has been called by the antiquarians of that country Flamboyant, from the circumstance that the lines which form the tracery of the windows have usually a flame-like shape; just as Mr Rickman has termed the English style Perpendicular from the leading lines of its window-tracery. The other resemblances and differences of these two styles will hereafter come under our notice.

I shall proceed, without further preface, to the architectural researches of my companion and myself.

Abbeville to Amiens.

WE began our speculations with Abbeville, where, as I knew from a previous visit, the church of St Wulfran has a splendid Flamboyant front. My companion was much struck with it, as any person acquainted with English architecture only must be. Indeed I think the first reflexion which occurs is, that the English never attained the art of making their Perpendicular fronts so rich and effective as this French one. A pediment between two towers, with three portals below, the whole covered with flowing tracery, open panneling, and statues in niches, give to this church a very florid aspect; and the composition is very fine and well marked; some parts very graceful, as for instance two staircase turrets at the internal angles of the towers, terminated at top by beautiful open crowns. I will not however say more of this part; for the features which occur here will be found in other instances, where they can be made more intelligible by comparison. The rest of the church, though very lofty and in many respects splendid, is not worth much description, being only the nave of the intended building. The concep-

tion and proportions, however, seem to have something of that fondness for inordinate height which is so strikingly exemplified in Amiens and Beauvais, as we shall presently see.

My companion found at a stall near the cathedral of Abbeville a wretched lithograph of the west front, and along with this, a similar representation of the west front of a certain church of St Ricquier, which, though of very different composition, appeared, so far as any thing could appear from such evidence, to be a large and fine church of the same style. Upon enquiry, it turned out that St Ricquier was a village about two leagues from Abbeville to the east, and off the great road; but we resolved to take it on our route to Amiens, and set off upon our voyage of discovery accordingly.

Our expedition was eminently successful, for the church was a very splendid and interesting one, though we had never heard of it before, and found very eminent French antiquaries in the same predicament. The west front was Flamboyant as we had supposed; but far more beautiful, as well as more rich, than anything we had imagined.

The west front of St Ricquier is different in its design from St Wulfran at Abbeville, and from most cathedrals, and is in fact on a plan more suited to a moderate-sized church. It has only one tower, which occupies the center

compartment. This tower, which of course makes the main feature of this façade, is managed with great skill and beauty. It is flanked immediately by two polygonal turrets richly pannelled, which end in crocketed and pinnaced conoids, on a level with the bottom of the belfry windows. The lower part of the tower is of course occupied by a rich portal, which has statues in its sides and top. The arch of this portal is surmounted by a canopy, of a kind of ogee form peculiar to Flamboyant architecture; and at a distance above this (the intervening space being occupied by niches and statues) is again surmounted by a triangular canopy, of which the pinnacle pedestal rises so high, that before it was broken (as it now is) it must to the eye have connected the rich pannelling of the belfry story with the rich portal below. The center compartment is flanked by the ends of the two side aisles, which have also rich portal doors and windows above. The details of this front are quite exquisite; nothing can present a finer exhibition of well arranged and well executed splendour; but the very nature of the architecture, consisting as it does of so vast an accumulation of parts, makes it impossible to give any detailed description without inextricable confusion and intolerable tediousness.

On entering this fine church the effect is very beautiful, from its being not only very rich,

but almost uniform, clean, and undisfigured by chairs; for it is not generally open, and has the floor of the nave occupied by benches. The nave is Flamboyant; and, as one strong feature of this style, it may be noticed, that the triforium string, carrying an open parapet, runs round the vaulting shafts in polygons which have concave sides, and thus forms a sort of lantern at each shaft. But the eye is struck by an apparent anachronism in the piers themselves, which consist of four smaller pillars engaged in a larger circular one: this is a form which might be expected rather in the earlier period of the Gothic, than in this style, in which the piers are generally not divided into pillars, but merely channelled with mouldings, having small prismatic bases at various heights. On looking further, we find additional symptoms of a mixture of styles. The choir has not the same appearance of Flamboyant work as the nave; and many parts of it appear on examination to be like what we should call Early English, at least as high as the capitals and pier arches. For me who have seen Amiens, it is impossible not to judge that the piers and arches of this apse and of that, belong to the same date; or else that one instance was copied from the other, probably this from Amiens; for the capitals are here crumpled foliage, while there they are upright leaves, such as belong to the earlier style. The

geometrical panneling of the buttresses, which is seen inside in consequence of the intermediate space being formed into chapels, is another good mark of resemblance between the two buildings: it is seen in one or two compartments, and where this occurs, the vaulting is of the Early English form and elements. If there were any doubt of the early style of this part, it would be removed by examining the vestry, which is a room of very decided character inside; and has, outside, in the face of a buttress, Early English pannels, with the mouldings and capitals exactly what they would be with us.

The interior of the church of St Ricquier, thus resolved into its two elements, the original Early Gothic construction which it has in common with Amiens, and the Flamboyant work raised upon this or adapted to it, of which we see so magnificent a developement in its front, is a very valuable and interesting specimen; and joined with what we may hope to see afterwards, will probably supply good materials for the proper appreciation of both these styles of French church architecture.

The road from St Ricquier to Amiens offers one or two country churches, which it is well to look at, because the relation of country churches to large and elaborate cathedrals, is in all Christian countries interesting and instructive; but I will not now dwell on this point. Through

roads far more difficult of traverse than anything which in England would claim the title of road, we arrive at a place with the encouraging name of Ailly le Haut Clocher; where there is a church, upon the whole of Early English character, but with tracery in the windows, apparently contemporary, and with some other peculiar features. We pass another "Haut Clocher" at a place called Belloy; but the spire here, though rather promising at a distance, turns out on nearer examination to be, as English eyes would judge, one of those vile imitations of Gothic which belong to the early part of the last century, in which the only principle appears to be to take care that no part is good architecture of any style then understood. It is well, after this specimen, to proceed directly to Amiens, where we are sure of finding something to admire.

Amiens.

The interior of the cathedral of Amiens is one of the most magnificent spectacles that architectural skill can ever have produced. The mind is filled and elevated by its enormous height, its lofty and many-coloured clerestory, its grand proportions, its noble simplicity. To a person fresh from English edifices, this effect is combined with surprize at finding a cathedral so complete and impressive, and yet in many

respects so different from the familiar type of English cathedrals. The proportion of height to breadth is almost double of that to which we are accustomed: the lofty solid piers which bear up this height are far more massive in their plan than the light and graceful clusters of our English churches, each of them being, as I have said, a cylinder with four engaged columns: the polygonal east apse is a feature which we seldom see, and no where so exhibited, and on such a scale: and the peculiar French arrangement which puts the walls at the outside edge of the buttresses, and thus forms interior chapels all round, in addition to the aisles, gives a vast multiplicity of perspective below, which fills out the idea produced by the gigantic height of the central space. Such terms will not be considered extravagant when it is recollected that the vault is half as high again as the roof of Westminster Abbey. Even the colossal figures of worshipping angels and saints, bending forwards at the bases of the piers of the choir, add to the sentiment which its architectural grandeur excites, and connect a devotional feeling with the upward lines which the eye traces to their concourse apparently in another region.

But my present business is rather with details than with generalities. Of what style, according to our rules, is this splendid building? —Does it fall in well with English classifica-

tions?—And if so, is the date of its erection that which we should have assigned to it? It was principally to solve such questions as these that we visited it.

To this I answer, that in a great measure it does fall in with our classification, but that this is to be understood with considerable modifications. It is, upon the whole, clearly what we should call Early English; and as the national term thus appears to be inappropriate, what we may term Early Gothic: but in this Early Gothic we have, what in Early English we have not, abundance of that kind of tracery which Mr Rickman calls *geometrical*, consisting of circles, trefoils, quatrefoils, and other figures which may easily be made by the compasses. This tracery is manifestly original, and in saying this, I am not under the necessity of depending upon the tracery of the windows, though it would be inconceivable that this should *all* have been inserted afterwards; but the faces of the buttresses are also pannelled with raised mouldings, forming tracery of exactly the same kind as that of the windows. If therefore we are to find a phrase to describe the architecture of Amiens, we must call it Early Gothic with Geometrical Tracery. The same kind of tracery appears in great profusion on the outside, in the canopies of the windows, the parapets of the walls, and other situations.

This Geometrical tracery with us belongs to the style which succeeds the Early English,—the Decorated; and in several other respects, as well as in this, Amiens has the features of this later style; thus the windows have, externally, triangular canopies, which run through the lines of the wall-parapet, and mix its tracery with theirs.

The reader is probably aware that Amiens is one of the strongholds of those who maintain that the advances of French Gothic architecture are anterior to the corresponding steps of English work. Whittingham's arguments are almost founded upon it, and very plausible they must be allowed at first sight to be. Amiens was built about the same time as Salisbury, both being begun a few years before 1250; and at Salisbury there is little or no tracery, though there are manifest symptoms that our countrymen were approaching to that kind of decoration. Upon the whole it is undeniable that Amiens in such features approaches nearer to our style of the 14th century than Salisbury does.

But on looking a little further, it is by no means so clear that the French architecture is advanced much beyond the English. Let us give up the point of tracery and look to other matters. The French building has not yet acquired the beautiful complex piers of Salisbury, in which the slender detached shafts combine so well with

the deep bundles of arch mouldings: instead of these mouldings it has a few plain members, which with us would belong to a much earlier date; it has a square abacus to most of the single shafts, a Norman feature which in England disappeared at the first dawn of good Gothic. It has no where the skilful accumulation of small parts producing deep lines of shades, yet exquisitely bold and free in the details, which we find so constantly in our Early English work. And even with regard to tracery we are not to make our concessions too largely; for if Salisbury has only those perforations of the heads of panels and windows which seem to be the mere germs of tracery, Bishop Lucy's work at Winchester, which is within a very few years of 1200, has these germs at least as much developed as Amiens; and Amiens, in many of its parts, as for instance in the triforium of the nave, has such perforations in the place of tracery.

The fact appears to be, so far as our evidence yet reaches, that our peculiar Early English style, which produced its effects by grouping single lancet windows, and which from choice or ignorance used no tracery, was not expanded into a distinct style in this part of France; and that here, as I have shewn was the case in Germany also, the Gothic forms and combinations were not fully developed till the windows began to be constructed with the tracery of our Decorated

period. The Early English, so far as Amiens proves, was peculiarly an English style.

It may serve to bring under notice some of the features of this building, if we attempt to trace the order of style in the different parts. The oldest part, according to our mode of judging, would be the nave; for the triforium here has no tracery, but only a trefoil pierced in the head of its double lights; while the triforium of the choir has tracery, and has, over the arch, a triangular crocketed canopy.

The transept makes the transition from the nave to the choir; its west side is the same as the nave, while its east side resembles the choir in having tracery, but wants the triangular canopy.

The aisles of the choir have the simplest, and therefore probably the earliest, geometrical tracery.

The tracery of the triforium of the choir is less simple; yet this circumstance must not be urged too far, for the clerestory, which is of course later than the triforium, has also simple geometrical tracery.

The side chapels of the nave have flowing tracery, and are additions of later date. Indeed the original outline of the buttresses, with its set-offs, may be seen in the walls which separate these chapels.

The back of the north tower of the west front is clearly of Flamboyant work.

With respect to this west front, the three great gateways which compose the lower part of it are very remarkable. They are probably of the earliest period of the cathedral, yet they are enormously deep, and have their sides filled with statues. This mode of forming the portals seems to have been at all periods a favourite arrangement with the French architects. In this instance, however, we cannot consider them as having attained the best mode of realizing their conception; for the gateway sides recede in a manner so rapid and so little architectural, that the recesses have quite the appearance of caverns; and all their statuary does not succeed in relieving their gloomy look, or in bringing out any one clear and satisfactory line or surface.

The general external form and appearance of Amiens is by no means so fine as the interior effect. The exterior appears to be altogether sacrificed to the interior; the enormous roof oppresses all the rest of the building, and the towers, though high enough, or nearly so, for the direct view of the west front, scarcely reach the ridge of the roof, and have no prominent effect in a side-view. Indeed they appear not to have been constructed with such a hope; for instead of being substantial square towers, they are thin in the direction of the length of the cathedral, as if they were not intended to be more than features of the western mask of the building.

I shall not however at present dwell upon the general question of outline, nor add any thing more on the subject of that of Amiens.

Beauvais.

The cathedral of Beauvais at first sight much resembles the choir of Amiens. There is the same amazing height; the same gigantic clerestory, almost as light as a greenhouse and taller of itself than most churches; the same tall piers and narrow arches. After the first sensation of wonder is past, the second impression, on the mind of one who brings with him the recollection of Amiens, is, that the building now before us, though perhaps more extraordinary, is less pleasing and harmonious. The extension of the dimensions upwards is in this instance carried to a degree which strikes the spectator as exaggeration. The pier-arch spaces lose all proportion, and the clerestory has such an excess of light, that it scarcely retains an architectural character. Amiens is a giant in repose, Beauvais a tall man on tiptoe.

Considered with reference to the classification of French architecture, the resemblance of Beauvais to Amiens is at first prominent. The plan of the piers is the same; the capitals are similarly formed of Early English stiff leaves with free curling tips, and run round the center pier as well as the shafts; the arches are of the same

form in the apse, namely, narrow-pointed-stilted; and the arch mouldings have the same very simple Early English character; the tracery of the triforium and of the clerestory is, like that of Amiens, of the geometrical kind; the lateral faces of the buttresses which, seen internally, divide the apsidal chapels, are ornamented with lines of geometrical tracery.

There are however differences which are soon perceived. The pier-arch spaces are narrower, the clerestory windows much taller, and the side aisles have equilateral windows in their heads, being taller than the outer chapels by a space which is filled by this window and by a quasi-triforium below it, formed of a little range of Early English trefoil-headed arches on short little shafts. The vaulting of the choir is also peculiar, being in six-celled compartments like several of the German cathedrals; and the vaulting of the side aisles differs remarkably from the German practice, in that each vaulting compartment corresponds to two of the pier arches; an arrangement which is connected with several peculiarities of detail.

One of these peculiarities is that the piers seem to have alternate differences, which we may explain by calling them principal and secondary piers. The sections of both kinds are nearly the same, but the capitals are different, those of the principal piers being, as has been said, clearly Early English, while the secondary piers have capitals

of crumpled foliage (of a Corinthianizing character in some instances) and other differences in the mouldings. We perceive too, that the wall below the triforium offers traces of arch lines superseded by alterations, as if the principal piers had at first been the only ones, and had supported wide arches, and the secondary piers had been afterwards inserted. The space between the heads of each of the two arches into which the original arch is thus divided is occupied by a circle quatrefoiled, which circle is, of course, cut in two by the vaulting shaft of the secondary pier.

This suggests the notion that the secondary piers have really been inserted; indeed the vast height and boldness of the clerestory may readily be conceived to be the work of an architect who intended to go to the extreme of architectural possibility, and who having in fact gone beyond this limit, made it subsequently necessary to provide additional supports for his church in the air.

This was the opinion which I had formed at a preceding visit; but it was pointed out to me by my fellow traveller, whose judgment was authority on such a point, that the supposition of the secondary piers being inserted after the erection of the clerestory, was quite untenable; for the subdivisions of the clerestory and triforium do not run from the vaulting shafts of one principal pier to those of another *without* making allowance for the space occupied by the vaulting

shafts of the secondary piers, as must have been the case on my hypothesis; on the contrary they are arranged so as to leave such a space, and have exactly the same reference to the shafts and members of the secondary as of the principal piers: besides which, he declared the insertion, after the clerestory had been formed, to be impossible as a matter of construction. At the same time he allowed that the work and circumstances of these secondary piers had every appearance of insertion.

On looking more closely at the triforium and clerestory, it is seen that the capitals are not of the Early English character, like the parts below. They are of crumpled foliage in two rows, and have all the appearance of our Decorated work, or of that of St Ouen at Rouen (1330).

We appear therefore to be left to the supposition that the secondary piers were inserted *after* the erection of the principal piers, and *before* that of the triforium; and with this supposition the appearances, so far as they have yet been described, will agree. And we thus find the French architecture arranging itself according to the divisions already suggested: the Early Gothic of Amiens, and the Decorated Gothic of St Ouen, succeeding each other; the Romanesque preceding these two, and the style which we have called Flamboyant succeeding them, by a

transition of which we have still to investigate the details.

We have made out the order of the dates of different parts of the building from internal evidence alone: and the above conclusions were in fact obtained without any knowledge of the history of Beauvais. We may now refer to what is known of the building of this cathedral, in order to see how far it agrees with these determinations. We find that after the destruction of the ancient cathedral, founded in 991, of which the remains are probably the ruinous building still remaining to the west of the cathedral, Miles of Nanteuil, Bishop of Beauvais, undertook in 1225 (that is, five years after the date of the commencement of Amiens) to rebuild the cathedral on a more extensive plan. The piers of the building thus commenced being placed at too great a distance from each other, the vaulting fell in, in spite of the precautions which had been taken to support it, by using iron braces and chains to hold the side walls together. The vaulting is said to have been reconstructed and finished in 1272, but the architect was again unsuccessful, for it once more fell in, twelve years afterwards, in 1284. This accident having proved the insufficiency of iron braces to hold the piers in their places, with so great a height and so wide a span as had been given them, it was resolved to erect *intermediate piers* in the spaces which inter-

vene between the original ones. Forty years were employed in executing this plan of repairs. In 1338 the Bishop and Chapter chose Enguerrand, surnamed the Rich, as their architect, intending to complete the cathedral*, and the work was begun, and continued with zeal for several years; but the intestine wars which so repeatedly desolated France during more than a century, and the occupation of a great part of its territory by the English army, interrupted this labour; and it was not resumed till 1500, under the episcopate of Villiers de l'Isle Adam, who laid the first stone of the transept with a very splendid ceremony. The rest of the chronology is less likely to give rise to any difficulty.

The Flamboyant Style.

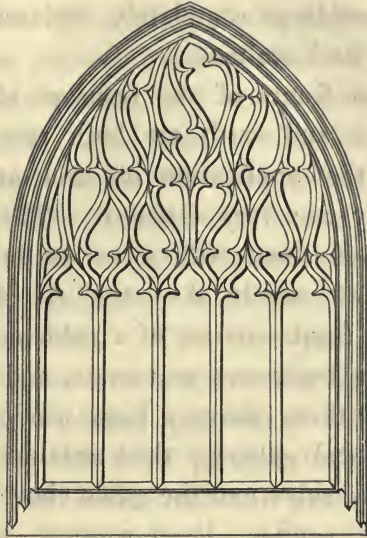
The architecture of the Transept of Beauvais, which thus appears to have been begun in 1500, and which was finished in 1555, is an example of the style which we have called Flamboyant, and may serve as an opportunity for describing some of the characteristics of that style. The kind of architecture which belongs to this date in France must have been noticed by most travellers, for it is very abundant, and has a strong general likeness; but I do not know that any one has given a technical account

* M. Gilbert says the choir, but the only meaning, consistent with the facts, is the one I have given.

of its peculiarities. A learned English antiquary has described a particular portion of this kind of architecture by the name Burgundian; and Mr Pugin has given many details. I shall speak of it as it occurs in the churches of Picardy and Normandy.

It resembles in many respects our Perpendicular, or Tudor architecture, but exhibits many very marked differences when we compare it with that style. Thus we have, in both these styles, pinnacles crocketted, finialled, grouped, and formed into niche-canopies; surfaces covered with moulded pannels; pierced parapets; and, as we advance, Italianized members and arrangements make their appearance in both. But while the Tudor style has the four-centered arch peculiar to it, the Flamboyant has the three-centered, and the horizontal line arched at the ends. It is also far more common in the French than in the English style to have in various situations a multitude of niches filled with statuary, and especially in the hollow mouldings of arches. The lines of Flamboyant panneling and tracery are not by any means distinguished, as those of the Tudor times with us are, by the universal predominance of perpendicular lines. On the contrary, they run into peculiar flame-like forms, from which the name has been taken. This will be best explained by the following figure, which is copied from Mr Rickman's account of French

Architecture, (Archæologia, and Architecture, 4th Edition).



Some of the features of the Tudor and the Flamboyant styles which most deviate from the Gothic of the better times, probably indicate in both a nearer approach to the period of the revival of the classical architecture; as—polygonal pedestals and abacusses with concave sides—the prevalence of hollow horizontal projecting mouldings filled with flowers—strings terminated by lines of coronal points above—and lines curved and broken in various ways, substituted for the straight sides of the triangular heads of pinnacles. The superiority in richness and variety appears to be on the side of the French style, at least we have nothing which can well be compared with the richest members of their work; especially

their portals with free tracery hanging like an edging of lace from the border of the arch, and the arch-mouldings completely replaced by lines of canopies and statues.

The two fronts of the transept of Beauvais to the north and south are both very fine specimens of the application of this architecture, though they are very different. The following comparison of them will serve to indicate the differences of which the style is susceptible. Both these fronts consist of a gable-end, flanked by projecting buttresses or turrets, and consisting of a portal; then, above, a large window, divided by a horizontal gallery; then another horizontal gallery above this; and the gable above all. The gable, upper window, lower window, and portal, recede in order each behind the others; and hence the portal has a deep recess, which is closed by a double door with an ornamented straight-topped arch to each doorway.

The north transept is one of the specimens of the Flamboyant style which approaches most nearly to our Perpendicular. Its effect depends more upon large members, lines and shadows, and the proportion of decoration of different parts, and less upon carving and tracery, than is usual; and there is a great predominance of perpendicular lines. The portal has its arch-mouldings made up of three lines of free feathered tracery, each accompanied by a string of foliage, and alternating with these, two bold masses of mouldings,

the middle member of each mass being well marked, and accompanied by finer strings, also well marked. The sides of the portal are occupied by fine pinnacles and niches. The original wooden doors remain, and are of excellent work, and very rich. The head of the doors has two straight-topped arches (flowered mouldings) under one arch. The tympanum is flat, beautifully sculptured with a genealogical tree, with escutcheons hanging from each branch mixed with feathered pannels. The first parapet is solid panneling, good and simple; the second parapet is bold open flowing panneling, with pinnacles at intervals; the third parapet is also of open panneling, and behind this the gable is enriched with attached pinnacles in pairs. The portal has a triangular canopy with crockets, large and few as usual in this style; which ought to have, and probably has had, a proportional pinnacle—now gone. This canopy is crossed by the first parapet, and the remaining spandrel spaces are occupied with perpendicular-lined feathered panneling. The window has tracery with feathered heads below the transom gallery; and, in the head of the window itself, very rich flowing tracery forming a fine circle. The buttresses are plain and bold, the eastern one having a staircase turret engaged in its angle.

The leading difference of the south transept, at first sight, is in the flanking turrets, which here

take the place of the buttresses. These have almost an Italianizing character; they consist of round or polygonal stories of decreasing diameter as they ascend, with rich foliage mouldings running round the upper edges of the parapets, and all the faces covered with pinnacles and canopies of abundant richness. The turrets are round, at the level of the first parapet, and also at top; and are decagons (engaged) in other parts. But there are other differences from the north transept, all of which tend to make this front a more indiscriminate mass of ornament than the other. The portal parapet is open, and the transom-gallery parapet has no pinnacles; both are finished upwards with lines of double feathering of various patterns, somewhat resembling in effect our Tudor flower. The arch mouldings are occupied in the usual way by canopies over figures and groups, and the tympanum by projecting niches. There are also in this front variations which seem to indicate that the architect was no longer satisfied with the established Gothic forms. Thus we have these figures in the heads of pinnacles and in



tracery, instead of the usual straight lines and arches, and the polygonal plan of the tower has concave sides.

There is, however, one part of this front which exhibits a more elegant management of the perpendicular principle than appears in the north front. The outer line of free feathered tracery round the portal arch is framed as if it were the feathered head of a perpendicularly paneled space, so that the primary arches of the feathering have unequal sides. In the corresponding member on the other front, the free tracery is of the usual kind, with the *addition* of some of the lines of the perpendicular paneling of the spandrel, which appear there by interpenetration.

Outline of French Cathedrals.

Before I quit this cathedral, I may make an observation or two on the consequences of the enormous height which the French architects were so fond of giving to their cathedrals. The effect, under various circumstances, is no doubt very striking; as, for instance, when we view them from a favourable position in the interior, and find the eye carried by their leading members from the floor along the graceful lines of the tracery, to the figured and coloured lights of the clerestory, and further still to the remote region of the vaulting lines—a region so distant, yet still architecturally connected with the spot

on which we stand; and this configuration, repeated by each of the compartments, under a varied perspectival aspect, produces an impression so different from that of smaller buildings, that it may well be called magical. Externally also, when seen at a distance, rising over the tallest houses and trees of the city, with no deficiency of visible height, the appearance of such a church is truly amazing. But when we come to look more steadily at the external form of this mass, we find that its height has extinguished almost all possibility of well proportioned dimensions and parts. Amiens, which is as long as some of our largest English cathedrals, looks short, and Beauvais, having no nave, is absolutely shapeless. Moreover the enormous height of the roof, which has no architectural character, is very fatal to grace, and the vertical and flying buttresses which rise around the building are so many and so large, that they utterly obliterate its outline. At Beauvais, the buttresses are broad pillars of wall with three lines of flying buttresses connecting them with the building, and have, at a distance, where alone the eye can disentangle them, the effect of what they really are, an exterior scaffolding of stone. The pinnacles on the tops of these pillars are quite insignificant compared with the masses on which they stand, like a man at the top of a tower; and yet could not be much

larger without interfering with the dignity of the building itself, by altering the scale of the parts. The clerestory is the only part of the building seen at a distance, although the side aisles are very tall: we lose therefore here all effect of the cathedral arrangement. And, with this enormous height, it becomes impossible to have any towers which bear such a proportion to the rest of the building as to give it a good outline. Those of Amiens are hardly free of the roof line; and yet are not, even so far, well-made towers, for the dimension in the length of the building is such as to make them rather a front screen than anything else. At Beauvais a center tower was built, which was 455 French feet high; but this fell in the space of 12 years from its erection, probably in a great measure in consequence of being built before the nave was there to receive its lateral pressure.

At every stage of the building of this cathedral of Beauvais, indeed, the "boldness" of the architects appears to have been pushed beyond the limits of prudence, and to have been repaid with defeat. The well proportioned magnificence of the neighbouring edifice of Amiens, perhaps, excited their emulation. It has already been noticed, that the first attempts to erect the clerestory to its present height ended in its fall, and the arrangement of the pier-arches and of the clerestory-windows still tells the story of this

failure, as well as the details of masonry and ornament. The erection of the tower is said to have been resolved on after 1555, instead of the continuation of the nave, in consequence of the fame which Michael Angelo had obtained by the construction of St Peter's. The Tramontane architects Waart and Marechal, wished, it is said, to shew that *their* style was capable of reaching a greater height than that of the Greeks and Romans. If they had not, in some measure, forgotten or neglected the principles of the Gothic architects of the better times of the art, perhaps their boast might have been verified; as it was, the architect who was sent to examine the tower when it was suspected to be dangerous, had but just time to warn the congregation of its approaching fall, which took place before he reached the bottom.

There is at Beauvais another church, that of St Stephen, which offers some points worthy our notice. The nave is of that Transition style from Romanesque to Gothic, of which we have examples in England, and with which I had become so familiar in Germany. It is extremely plain, with round pier-arches and small round-headed clerestory windows. The vaulting shafts are clusters of three, with the Early English, (that is the Attic) base, and rude

Early-English-formed capitals; and some of the pier-shafts towards the side-aisles are edged, as in Early English is common.

The west front of this church very much resembles a plain Early English front of our own country, having three portals in projecting high-pitched pediments, (like Salisbury). Above these the wall is pierced in the center compartment with three lancet windows, and above these, with a circular window, and also with a circular window in each lateral compartment. The arches of the lateral portals have good Early English mouldings; that of the center has these replaced by several lines of niche-canopies; the doors are double, leaving a large tympanum. This, being probably an Early Gothic front, serves to shew the prevalence of the conception on which most of the French west fronts seem to be formed. The front of Amiens is the same in arrangement as this of St Stephen's; but there all the three vast recesses of the portal-arches have the mouldings filled with canopies and statues. In the later edifices this general form of front receives additional richness in various ways: the pediment is cut into open tracery, and has (in Flamboyant work) an open gallery parapet carried across it: the window fills the whole space between the buttresses, and has also a transom gallery with open parapet carried across it, the tracery of the window-head still exhibiting the

circle: and another parapet, with a gallery, runs along the bottom of the gable; while all the flat parts are covered with paneling, and the arches are edged with free tracery.

Comparison of French Decorated and Flamboyant.

Rouen.

We appear, in proceeding to Rouen, to have a good chance of discovering more clearly than we have hitherto done, the distinctive features of the successive styles of French Gothic; for that city possesses vast treasures of architecture, and a series of highly ornamented edifices of very distant dates. We may, in the first place, take the two fronts of the transept of the Cathedral, looking north and south, for these (the central parts of them) are clear examples of our Decorated style with geometrical tracery, triangular canopies, mullions having capitals of crumpled foliage, and so forth. Both these fronts are portals which may be compared with those of the Flamboyant class in order to discover the leading differences.

On such a comparison, we find the following circumstances in the *north* front of the cathedral different from those which would occur in a Flamboyant front of the same kind. There is no paneling in the spandrels of portal or window, the crockets of the canopies are of moderate size and distance. The mouldings do not any of them

consist of lines of woven foliage cut hollow and projecting, but when the moulding is enriched with foliage, the leaves adhere to the solid form and curl outwards at the points only. The buttresses which flank this portal are simple but good; they are square with a single canopied panneling in the breadth of the outward face, subdivided and having geometrical tracery. There is no transom gallery. The sides of the portal have several solid square pedestals with their faces sculptured in bas relief in small compartments. The arch-mouldings have three lines of statues, but are much more clear and simple in their general appearance than the usual character of Flamboyant work, being well divided into three by two strong lines of mouldings. The tracery is geometrical, except the pediment of the window-canopy, and the mouldings are rounds, well made out and *not* faced with a fillet. The effect of this rich front, between the moderately ornamented and well divided buttresses, is better than that either of the north front of Beauvais, where these members are too plain, or of the south front of the same cathedral, where they are too rich.

The south front of the transept agrees in most of the above characters with the north; but there are some differences which, judging from the building itself, would induce us to place it a little later, as it appears to have made an advance towards the Flamboyant style. The

flanking buttresses are much more broken and ornamented; having at their front angles on the set-offs, *buttressesets** placed diagonally; and these have, in the first and second story, open pinnacles formed of square crocketed and pinnaced pyramids set on four slight shafts, and inclosing statues. There are also statues in the front face of the third story of the buttress. The tracery in the canopy-heads, and in the wheel of the window-head, is more studiously varied than the opposite front, but is not so graceful. The canopies, both of the portal and of the lowest pannel-head on the front of the buttresses, are doubly-feathered outwards, instead of being crocketed. The canopy-head of the window, instead of tracery, is occupied by a bold group of statuary with overhanging canopies.

The above description was written previously to making any reference to history, either for the absolute date, or the order of priority of the two fronts. It appears, by historical research, that the "Booksellers' Portal," which is the one to the north, so called because a small court which it terminates, was occupied by persons of that trade, was begun in 1280. This is a little, and but a little earlier, than the date we should assign to it in England. The upper part was not

* I give this name to members which have the form of buttresses, but which are so small or so subordinate as to be obviously only decorative.

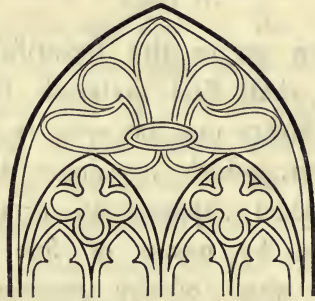
completed till 1478. In fact, the gable, and the gallery which crosses the lower part of the gable, are of Flamboyant details.

The building of the south front, the portal de la Calende, is not recorded separately from the other; so that *probably* the difference of time was not great.

St Ouen.

If we now go to the beautiful church of St Ouen, we shall find materials for a similar comparison. Every one has seen or heard of its exquisite tower, which is square to a certain height, and then supports an octagonal crown of open work, by means of fine flying buttresses. The whole of the transept and choir, with the lower part of the tower, are manifestly of our Decorated character. But the upper story of the square part, and the octagonal crown, seem at first sight to offer some grounds for thinking them of a later date: for the tracery, which is of the geometrical kind below, becomes here flowing, and displays some rather fantastical forms. The corner-turrets of the square tower have pepper-box tops; and its parapet has open panneling, of which the tracery compartments exhibit a reference to a mid rib, a character which appears to be very common in the Flamboyant tracery of windows. A string which runs round the middle of the octagon is finished up-

wards with an ornament resembling the Tudor flower, and the open parapet at the top is set with fleurs de lis, which are seen quite free against the sky. Yet a closer examination makes us again doubt this being of a later style than the Decorated. As to the tracery, the oddest-looking of the forms is produced by tracing a fleur de lis; and is, it may be supposed, suf-



ficiently explained by the grounds of selection of that cognisance. The crockets are not distant and large, which is the Flamboyant fashion, but moderate in size and as close as usual. The window sides have not the Flamboyant double hollow; the mullions have bases and capitals; and in the highest part, where the windows have triangular canopies of open work, these canopies cut through and intercept the tracery of the open parapet, instead of having the lines of this parapet carried across them, as we often find in the Flamboyant style. The buttresses at the angle of the square tower are simple and very moderately adorned, having no canopies or pan-

neling, except when we reach the pinnacle faces above the highest set-offs. Altogether this front may, from external evidence, be Decorated and not Flamboyant, except the art of adaptation was very studiously practised.

The nave, on the other hand, appears certainly to be of the later style, though very much modified by being accommodated to the choir. The most decisive evidence perhaps of the Flamboyant character is to be found in the bases of the piers, which consist, as in the later style is so common, of various columns and shafts with certain nearly constant mouldings and long polygonal pedestals, engaged in a moulded pier, the shafts dying into the projections of the pier as they run downwards, and the mouldings of the various shafts and of the pier being at different heights, the former intercepting the latter and giving rise to appearances of interpenetration. This peculiar base appears to be decisive of a late style. The base of the choir suits perfectly well with the Decorated character of that part of the building, and is quite different from the one just described, having two flattened sloping rounds and a polygonal pedestal with a string and notch below, while the section also consists of rounds and hollows.

But the nave, if it be thus clearly of later times, shews that the artists of those times could, in adapting their works to those of earlier date,

divest themselves of a great part of their peculiarities; for the capitals and arch-mouldings of the nave and choir are apparently the same, and though the tracery in the nave is flowing, the lines are rounds not filleted. Moreover the mullions have bases, and though in the side-aisles they have no capitals, in the clerestory they have capitals like those of the choir; and these are not usual Flamboyant characters.

We are led therefore to consider the nave as Flamboyant much adapted to Decorated, while the octagonal tower becomes again doubtful in consequence of this evidence of the habit and talent of adaptation.

Turning to the history, we find that after the building of the earlier parts with which we are not here concerned, the eastern part of the church was founded by Bishop Marcargent in 1318, and built from the apse to the transept in 21 years, a date which agrees perfectly with the pure and beautiful exhibition of the *Decorated style* in the choir. Though Charles the Sixth gave 30,000 livres in 1380 towards the completion of this church, it does not appear that any progress was made till about 1400, when Alexander de Berneval, as architect, founded or finished the transept. The two roses which form the heads of the north and south windows were executed in 1439. The heads of these windows are semicircular, with flowers in the hollow mould-

ing. Thus, though the general character of the transept is a very ornamented stage of the Decorated style, such as we might expect to find in 1400, we discover, when we reach a period so late as 1439, marks of the succeeding style.

In 1464 a grant of indulgences was obtained from Rome, with the result of which the nave was begun and two compartments executed, according to the historians. The rest of the nave is stated to have been finished in the space from 1491 to 1515 by Bishop Boyer. The front was built in 1515 by Cardinal Cibo. I have not spoken of it, because it is obviously of late character; though its circular window of graceful tracery, with the smallest mouldings subordinated to the large ones by four successive gradations of size, and the featherings all tipped with flowers, is beautiful enough to do credit to any age.

It appears then from history that the nave is late, as we had inferred it to be from the architecture, and that the resemblances between this and the preceding style are the marks not of transition, but of accommodation; and it may be observed that this explains the existence of a door on the south side of the nave, which is of the most manifest Flamboyant character, having one of the fancifully shaped canopies of which we have spoken, but which is so connected with the masonry of the rest of that part that we cannot but conceive it contemporaneous.

On similar authority it appears that the tower was finished towards the end of the 15th century; and we must therefore consider this part of the building as another example of accommodation. We may also draw the inference that the differences which are noticed between this and other instances of Flamboyant architecture, (as the triangular window-canopy interrupting the parapet,) are of less consequence, and the resemblances, (as the flowing tracery and the pannels of tracery which have a mid rib,) of more consequence, than we had supposed in our former decision.

It appears from the above account that two compartments of the nave next the transept are stated to have been built 30 or 40 years earlier than the remainder. If we go back to the church to see whether we find any traces of this interruption, we have no difficulty in discovering them; for the two piers of the nave next the transept have the same bases and the same section as those of the choir, which are very different, as we have seen, from those of the arch of the nave; and these latter have also corbels and canopies forming niches in their fronts, which those towards the transept have not. Nor is it difficult to trace the line of division of the two portions of masonry. This correspondence of the building with the narrative, is a valuable confirmation of our interpretation of the latter.

The work of 1464 agrees therefore, in the bases of the piers, as well as in most other features, with that of the early part of the 14th century. This is no doubt an accommodation, and this accommodation was discontinued in the succeeding piers, because, when it was resolved to put niches in front of the piers, it was thought right that the prismatic *stem* of the corbel should enter into the composition of the pier, and similar prismatic shafts were introduced on other sides of the same pier, according to some notion or other of congruity; the pier thus lost its Decorated character, and became, as to its base at least, unequivocally Flamboyant.

But notwithstanding this use of accommodation, there are still general differences between the work of the 13th and that of the middle of the 14th century. One of these differences is the use of flowing tracery in the latter, and of geometrical tracery at the former epoch, which we find to obtain at St Ouen, and which applies to the two earlier compartments of the nave as well as the rest.

Yet we may observe that geometrical tracery appears to have prevailed in France to a much later period than in England, and indeed not to have been entirely displaced till very late. Still upon the whole, the difference between geometrical and flowing tracery is one which marks a difference of style. It is remarkable

enough that the difference of the kind of tracery, which is so sure a mark in English work, is also a very important feature in French architecture, though the peculiarities are altogether changed by which our judgement is directed. In England the style which succeeds the Decorated is the *Perpendicular*; and the arrangement of the tracery of windows which gave rise to this denomination is so common, that we rarely find a window after 1400, in which vertical lines are not introduced in a manner different from that which would have been adopted at an earlier period. In France, the perpendicular principle of making out the tracery of windows never seems to have come into play; indeed one is not surprized at this, half so much as at the universal prevalence of the principle in England. It is true that the windows, and more especially the panneling of the French, have often a multitude of vertical lines; but this character in them never takes the lead, as with us. The windows of this time, and similar spaces in the architecture, are occupied by tracery which we very properly call, as M. Le Prevost has called it, Flamboyant. It is somewhat curious that window-tracery should in both countries be so distinctive a mark of style and date, while the forms connected with the same style in the two countries are entirely different.

*Comparison of Early French and Early English.**Louviers.*

Another comparison which we shall soon have to make is, that of the French Early Gothic, with the English corresponding style, which we have been accustomed to call the Early English. Louviers, which we pass at this period, offers some curious points for this comparison. The original portion is of 1218, and there cannot be any contest on the subject of this date, since this is the period when the church was built in a new situation (A. L. P.) The architecture answers very tolerably to this period, with some little anticipation on the progress of things in England. The clerestory windows are not threes or fives of lancets, nor do the French *ever* appear to have had these combinations; they are two-light windows struggling towards tracery by means of circles in the head of the pair, and made into one window by a roll moulding running round the whole head, which thus assumes a trefoil form. The triforium is a little square opening in each compartment, bisected by a shaft, and included in a trefoil pannel formed by a roll moulding; the square opening admitting daylight. The piers have clear Early English foliage-capitals, but are singularly short; and the arch moulding has an external roll and a truncated edge, but the section has a squareness which in

England was soon abandoned for a rich slope of rolls. There are lancet windows in the choir, which, however, does not appear to be of the same date. The west front, of the geometrical-tracery style, is very good, but does not here concern us. There is, moreover, a rich Flamboyant porch on the south, over-ornamented no doubt, as the style always is, but with one or two very good features, and among the rest a fine double canopy, the *intermediate* impost being a pendent.

Evreux.

On proceeding to Evreux we do not find much peculiarly adapted to throw light on our comparison of Early French and English Gothic. The nave is too early to answer this purpose, being Norman below, though the arch-mouldings of the round arches are more complex than those of the pointed arches of Louviers; and the choir is too late, as well as the triforium and clerestory of the nave; for they bring us to the times of geometrical tracery. But there is here a great deal of excellent Flamboyant work; the interior ends of the transept are quite models in their way, and the octagon lantern is set on the square crossing in a very elegant and artist-like manner. The exterior of the north transept is perhaps the best we have yet seen; the flanking towers being very rich, without outshining the space flanked by them, and being

terminated by very graceful clusters of canopies and pinnacles. This front appears to have succeeded in attaining that uniform richness and elegance at which the south front of Beauvais has aimed and failed.

If any one wished to trace the Flamboyant to its final disappearance in the revived Italian, Evreux offers many good materials for such a task. A most admirable series of wooden screens to the chapels surrounding the choir gives examples of almost all the ways in which one of these styles can modify the other; and shows, what we might not have so readily supposed, that in wood at least, many beautiful mixtures may be made of them. The two towers of the west front are also examples of a similar, or rather a later mixture, made by two different methods; and probably neither of them will be judged so favourably as the woodwork. They are to be considered as Gothic conceptions expressed in Classical phrases.

Lisieux.

On arriving at Lisieux, however, we find, at length, the means of making our comparison in an instructive and satisfactory way; for here we have a church which throughout, and in the closest manner, resembles Early English work. Here then we may make some comparative observations. We still find the distinguishing character of French work, the square abacus; but

along with this we find the octagonal abacus occupying a large portion of the triforium, and the arcades under the windows in the choir have the round abacus, with foliage, capping-mouldings and arch-mouldings which at home would not be distinguished from English work. The bands of the piers also are of the Early English type, or nearly so, with the exception of a square plinth and a curl of foliage on its corners, not common in England, though very frequent in France. The string over the arcade also resembles the Early English form. The general arrangements are strikingly English: thus the triforium has pointed arches on shafts inclosing two pointed arches on shafts, the tympanum pierced with a quatrefoil; the clerestory has single-light windows; the vaulting has transverse and diagonal ribs with Early English mouldings. Still, however, there are considerable differences. The piers are *columns* with corinthianizing capitals, and their abacuses are squares with the corners slightly truncated. There are strings about the vaulting shafts, both of the clerestory and the aisles, but these are less marked than the English bands are wont to be: and there is a difference to my eye in the arch-mouldings, though my companion will hardly acknowledge it, of this kind;—they more resemble a classical architrave than ours do; for, instead of a dripstone, they have a raised fillet or edge

separated from the receding mouldings of the arch by a fascia-like space. It is true, this very easily passes into a dripstone, and is not anywhere very clearly distinguishable from one, but still the appearance is somewhat different. At the west-end interior this architrave is filled with foliage, and looks perhaps still more drip-stone-like. This west end, inside, is a sort of interior porch with a vaulted compartment above, such as we have at Jumieges, and at several churches in Germany (Laach, Ratisbon, &c.); and the outer mouldings of the internal arch of this porch are much enriched; the abacus here has a vertical face sculptured with arabesques of foliage, like the north door of Rouen cathedral west-front. This mode of ornamenting surfaces appears also in the pedestals of the exterior doors of the north front of this church, and is an exhibition of a style of Early Gothic, or rather late Romanesque, which we should probably find more frequent and more developed in other parts of France or in Italy. This west exterior end is a very fine Early English front; and, like most of our fronts of that kind, (Salisbury, Peterborough, Wells,) contains some vestiges of the earlier style. Thus, while the north tower has beautiful lancet-arch windows of great height, occupying the whole of its side, and divided by a single very tall shaft, the south tower has, on the same parallel with these windows, three

stories of small windows, consisting of round-headed openings inclosing pairs of pointed openings (as at Shoreham), with interpenetrating mouldings. These two towers have in other respects every appearance of being contemporary, and the latter one is covered by a stone spire which, by its tile-cut surfaces and stiff crockets, appears to be of the date of the original Early English part of the building. The doors below this work (the north and south door, for the center one has had all the shafts removed, and the mouldings cut smooth away) are also good Early English, being *doubled* sets of arcades on four shafts in their sides. It is to be observed that there are in this building strings (not however very long) of an ornament, either identical with, or very closely approaching to, the Early-English toothed ornament, so abundant with us in works of this style. This ornament occurs also in (a situation where ours is very familiar to us) the outer mouldings of the windows, in the south transept-front, in the interior face of the end of the north transept, and in the mouldings of the internal arch of the internal west porch. But we cannot pretend to say that in any of these cases it is cut so clear and free as to be comparable with good English work; and it occurs very sparingly. On the exterior we have flying buttresses, which, like most French flying buttresses, appear to be

too little sloped. This difference is very remarkable in many places, as for instance at Beauvais, where the buttresses have the appearance of a scaffolding, as has already been noticed.

On Different Kinds of Norman.

Jumieges. St George de Bocherville.

Besides the question of the determination of the characteristic differences of the successive styles of French architecture, and their relation to the corresponding styles in England, which we consider to be a peculiar object of our own, there is a question which hitherto seems to have occupied almost entirely the attention of our Anglo-Norman antiquaries, which it will not be advisable to lose sight of, though it is both much more obscure, and, as it seems to me, much less instructive and amusing. This is the problem of the determination of the relative antiquity of different kinds of Norman or Romanesque work, before any clear appearance of Gothic; and the discovery, if it be possible, of any well-authenticated and distinguishable style which may be considered as anterior to the Norman of the time of the Conquest. This has been considered so important a point, that the greater part of the advice which previous travellers had given us, had gone upon the supposition that it must necessarily be the main purpose of our researches. Our

English antiquaries speak very confidently of two successive kinds of Norman in our own country. One, very plain and massive, as exemplified in Waltham Abbey, the transept of Walkelyn at Winchester, Lanfranc's Tower at Canterbury, the Chapel in the Tower of London, &c.; the other, which occurs mostly after 1100, exhibiting all that variety of ornament with which the observers of Norman architecture among us are well acquainted. It never appeared to me very clear that the difference of these two sets of buildings was sufficient to constitute a clearly marked difference of style, implying a difference of dates; for there is not, in the most ornamented Norman, (when the ornaments are of the appropriate kind) any manifestation of a new principle which would by its developement conduct us to a new style of architecture, or would lead, by a modification of one member, to a modification of others, as is the case at other periods of change in our architecture. The principal exception to this remark is the appearance of the *roll-moulding* in arches; for this, if *repeated* and multiplied, and the rolls made consequently more slender, would bring a Norman arch to resemble an Early English one in circumstances which are at least as essential as the pointed form, as may be seen for instance at Glastonbury.

In order to try to apply this distinction to Norman in its own country, we go in the first

place to Jumieges and St George de Bocheville, both of which, upon apparently undeniable evidence, are stated to have been built before the Conquest. The Abbey Church of Jumieges is a magnificent example to start from, on account of its majestic size and solidity; and suits well enough the doctrine of early plainness. The pier-arches, plainly rebated, stand on great pilaster-masses, with half-columns attached in the sides and towards the aisle. Certain vaulting shafts in the front of these piers are obviously later insertions. The bases of the attached columns appear to have consisted of little more than a simple slope, and the capitals are rudely-sloped bells with an abacus. There is no ornament in the way of fillet or zigzag mouldings in the old part of the work, except that the top of the clerestory wall and of the western towers have a triple billeted-moulding, which seems to be old. These towers end in octagonal turrets, and have stories of narrow pannels and windows, which give them a resemblance to the lighter towers of later times. In the interior, this church put me much in mind of my old German acquaintances. The pier-masses and the plain pier-arches are such as are common in Germany, and we have here moreover, as well as there, the triforium gallery with the double vaulting of the aisles, as at Gloucester; and the vaulted gallery at the west end, as at

Laach. The rest of this splendid ruin belongs to later times, and serves to throw no light on the question now under consideration.

But if Jumieges falls in with the notions of some English antiquaries concerning the two kinds of Norman, St George, which is held to have equal antiquity on equal authority, falls out with them. Here, it is true, we have very rude bases, some looking like an attempt at a round between two hollows, and others like a trial at the more common combination of a hollow between two rounds. And a person who was resolved to maintain to the last the cause of early simplicity, might hold that the bases belong to the historical epoch, and that the rest is more modern. I do not think this compromise would long avail him, but besides, it is without any countenance from the building itself; and I think if we are to reason from the edifice at all, we must allow it to be for the most part of one date, and that, as has been said, the first half of the 11th century. Now here we have a great abundance of those things which are an abomination to the supposed first Norman style. Zigzags large and small, frets lozenged and embattled, cable-mouldings, studs, &c. The pier-arches have *rolls*, the capitals are sculptured, not without some skill, the triforium is an arcade of small *beaded* arches. The turrets of the towers have so much of later character that they will of

course be abandoned by all except the most extravagant maintainers of the precocity of Norman work in Normandy as compared with England; but omitting these, the chapter-house, which is said to have been built by an abbot who was buried there in 1087, is another great advance on any thing English which our antiquaries would attribute to such a date. It has very rich and well-executed sculptures of considerable delicacy, six-celled vaulting with double-rolled ribs, and the soffits of the three openings into it also enriched with ribs in a six-celled arrangement occupying only the thickness of the wall. The corbel-table from which the vaulting springs has pointed *notches*, and the windows in the wall-scutcheons of the vaulting have pointed heads: the vaulting also has pointed cells, being cross-vaulting in two center compartments, and accommodated by diverging cells to three windows at each end. The capitals of the shafts are upright foliage with serrated edges.

I will not however insist longer upon this remarkable chapter-house; but I think the church itself goes very far to carry back the usual Norman ornaments to a date earlier than that which our intelligent countrymen seem willing to allow. And when from this point we proceed to Caen, the wonder seems to be how there should be any doubt about the matter. For the two great Abbeys there built by William the Con-

queror and his Queen, have as incontestable a claim to their date of 1066 as any thing can well have; and here again we find nearly all the peculiarities which have been mentioned. Embattled frets, rolls, zigzags, occur in both. Much has been said of the great difference between the two; but when they are stripped of the additions of manifestly later date, this difference nearly vanishes, with the exception that the Abbaye aux Hommes (St Stephen's) has an arch above the pier-arch looking into the aisle, as is the case in the nave at Rouen. This has been called a triforium arch, but not with exact propriety, for though the aisles are now vaulted below as well as above these open arches, so as to make a gallery, the lower vaulting is manifestly an addition of the 13th or 14th century; and probably to the same epoch belongs the open triforium balustrade which runs along this member, and makes it appear a triforium. In other respects, as mouldings, arches, clerestory, &c. the two buildings much resemble each other, and confirm our persuasion that they perfectly represent the style of architecture of their asserted date. The choir of the Abbaye aux Hommes may by some have been associated with the nave, but it is, to an eye a little practised, manifestly Early Gothic closely approaching our Early English.

*Further Account of French Early Gothic.**Caen.*

If however we take this choir of St Stephen's for the purpose of continuing our comparison of the French and English Early Gothic, we find very considerable differences between the two. For instance, the piers consist of engaged shafts between square pier-edges; the pier-arches have Early English mouldings, but one larger roll is cabled. In the apse, the piers are columns two deep. In the side-aisles the wall-pillars are circular piers (engaged) surrounded with shafts, of which those only are detached which can shew the light of the window between pillar and shaft in consequence of their oblique position; an arrangement which shews, both that the architect of this part was alive to the beauty of detached shafts, and that some impediment, probably the nature of his material, prevented his attempting this rich mode of ornament when its effect was not likely to be prominent. The abacus of each of these clusters is a circular one common to the whole cluster, and not resulting from the aggregation of a circular abacus to each shaft, as occurs in our way of forming such piers. The triforium has round-headed arches including pointed ones, with trefoils in the tympanum, as at Salisbury; but the clerestory consists of a triplet different from any of ours, the middle light being pointed

on shafts, but the lateral ones being only half-lights with quadrantal heads, so that the middle one being removed, they would make a round-headed one. This is the internal face of the wall of each compartment, while the corresponding external face is occupied by two small pointed windows. The pier-arches have sunk stars or cinq- or sixfoils in the spandrels. An arrangement which gives great lightness and variety to this apse, is that the buttress-walls separating the apsidal chapels are pierced with an arched opening on shafts, the soffit enriched with another rib on shafts.

The choir of St Stephen gives us an example of a very early stage of Early Gothic architecture in France. We may find other examples in the city or neighbourhood. The church-tower of the village of Ifs, about a league from Caen, ought perhaps not to be included in this class; for its ornaments are altogether Norman—zigzags, billets, &c. Yet it has pointed arches in the upper story, which has no appearance of being later than the rest; and if any doubt should arise in consequence of this circumstance, it might be removed by observing that the ground-story has also, internally, pointed arches mixed with round ones. Moreover the arcades of pannels (some of them windows) which occupy each story have two or three shafts in the side of the opening, and as many rolls in the mouldings of its head,

which must be held to be a mark of approximation to Gothic. This mode of covering the outside of towers with rows of tall narrow arches, on shafts, or separated by slips alone, with ornaments of various kinds, must have prevailed for a considerable period, for we find it at two other villages in this neighbourhood, Haute and Basse Allemagne, where the workmanship is rude and the joints are thick; and in the former of these two towers the pannels are formed by intersecting arches; the spaces which they include, necessarily pointed however rudely, are pierced. This tower is supported on four little piers, with thick transverse and diagonal rolls, so low that you may touch the abacus with your hand, and yet not clumsy.

Ardenne.

There is a ruin near Caen which has not been mentioned, so far as I know, by any of our travellers or antiquaries, but which is very beautiful and remarkable, and well adapted to illustrate the other extremity of the history of the Early Gothic—its transition into the Decorated or Geometrical Gothic. This is the ancient Abbey of Ardenne, now a farm-yard.

I do not linger at its fine gate-tower, which contains a wide semicircular-headed gate and a pointed wicket, the former as well as the latter with good Early English mouldings, but with

the addition of a line of square billets. I enter beneath the vault of this tower, of good Early English structure, with corresponding ribs; I look back at the apartment above, with its little trefoil-headed windows, originally double; I pass by its magnificent stables, and a buttressed barn, which puts to utter shame the largest of our edifices of this kind; I proceed past the roofless halls and Italian saloons, now undergoing demolition, of its mansion-house, and hasten to the beautiful church, now converted into a hay-house. This strikes us at once as strongly resembling the Early English of our best abbeys (Bolton or Newstead), and on examination we find the resemblance in details, closer than in any instance we have yet seen. Its piers consist of a central column surrounded by four shafts, not detached, perhaps for the reason already suggested at St Stephen. But they have the Early English double base, retaining its circular outline to the very floor; and the abacus of its proper Early English form over the upright foliage of their capitals. The pier-arch has on each face its three rolls, (the middle one filleted), with intervening rectangular channels. The vaulting shafts spring from the floor, and have Early English capitals, and the triforium has open trefoil-headed pannels with beaded edges, and lines of small sunk trefoils in the spandrels and over the heads of these pannels, (which only occupy the foot of the

window), this triforium being capped (as well as supported) by a strong string, which is stopped only by the vaulting shafts. The windows have a Decorated character, being divided into two lights by a mullion which splits at top and takes a trefoil between its branches.

But the west front is perhaps the most noticeable part, being in its details excellent Early English, while in its plan it appears to be a sort of first sketch of the Flamboyant Fronts, of which we have several times had to speak. The center compartment is divided from those which close the side aisles by engaged octagon towers, of which the front face assumes the form of a buttress with two plaited set-offs, and these towers were probably at first terminated by octagonal pyramids. The central compartment has not the three galleries of the later fronts, which we may call the portal-gallery, the transom-gallery, and the gable-gallery; but their effect is in part given by two considerable slopes corresponding to the two former members, and a remarkable line of small acute pediments which runs along in front of the foot of the gable. This pedimented parapet is pierced in quatrefoils below, and in trefoils and single holes in the pediments, and these, within the roll which forms their edge, have a line of points producing partly the effect of the toothed ornament. These pediments, as well as the gable itself, have had stiff crockets along

them. The window is filled by a rose ; but, unlike the common French windows, has this rose *in* a pointed arch ; while in general, even in buildings clearly not later than Decorated, as the west front of St Peter at Caen, the rose forms the head of the window, and makes it semicircular. The tracery of the rose is also English flowing tracery, not French Flamboyant, and is very gracefully formed by throwing out six leaves from the center, bisecting these by other leaves, doubling these in the extremities, and trefoil-feathering each point thus produced. The part below the slope which comes from the bottom of this rose is solid, with panneling lines raised and feathered. But the portal itself which comes below the next slope is the richest part of this front. Its mouldings rest on shafts not only detached, but having behind them a line of shafts supporting pointed heads with little trefoil spaces between. The abacuses of these shafts are, however, square, the capitals of upright curled foliage, most beautiful and delicate in its workmanship, but somewhat different from common English capitals in having small fruits sculptured on the lower part of the wall of foliage. The mouldings are eminently bold and good, but among them are two lines of foliage-moulding rather French than English, one, on the outside, of leaves cut hollow, folded obliquely over ; the other a broad and large line of stiff-pointed curled

tufts of foliage curling upwards and bending forwards. The door has been double, with a horizontal line in the pediment, and above this a trefoil-headed niche and sculpture. The doors of the side compartments and the windows above them are also excellent Early English. The doors have segmental heads below, and a six-foiled arch in the tympanum. Flanking these compartments, are buttresses with triangular heads and a single plaited set-off. The side doors are surmounted by windows with stout shafts and good mouldings, in one feathered light.

The mouldings and details of this work are so much like those of our country, that we can hardly help suspecting some English influence, while the general arrangement is such as might easily lead to the north front of Rouen Cathedral, though the interval of this developement may be conceived to have been considerable.

Norrey.

At a succeeding stage of our researches we discovered, by what we considered good fortune, though it cost us no small trouble in the sequel, a country church which is as genuine and beautiful a specimen of Early English as England itself can supply. This is the miniature cathedral (for though only a village-church it may be so termed) of Norrey near Caen. The choir of this church, with its transept, is in perfect

preservation; the nave is very plain, and has no aisles and few windows, having been apparently a good deal injured. The choir, small as it is, has a splendid effect. All the mouldings are deep, free, and repeated after the Early English fashion, so as to give the greatest strength of line to all the parts. The piers, the pier-arches, the wall-arcades, the bands of ornament under the strings, the windows in the side-aisle, formed by piercing the center light of a triplet on shafts, the capitals, the beautiful sculpture, the bases, (two rounds with a hollow, or with a line of studs between the two tori,) the external slopes of the window-sides, the dripstones running horizontally as strings, the triangular heads of buttresses, their plaited set-offs, the polygonal turrets terminated by pyramidal caps and enriched by shafts at their angles;—every thing, in short, brings before us the purest and simplest kinds of Early English architecture. Even perfect and free-cut toothed ornament is to be found, which hitherto we have never seen. It occurs in the exterior moulding of the south porch, of which the mouldings in other respects resemble those of Ardenne. The choir consists of three well proportioned stories, the pier-arch being supported by small clustered piers, which however are not free, and have certain fillet edges between them, not corresponding precisely to any thing in our Early English piers. In the

apside, where the narrow arches require narrower piers, these consist of two columns set double in the direction of the wall. The triforium is four pointed beaded pannels on triple shafts (not detached from each other), and the clerestory is a single window without shafts, but with a roll. Below the horizontal strings are lines of trefoil holes, and the vaulting shafts spring from the capital in the apse, but from the floor in the rest of the choir. The aisles are eminently rich, having lines of arcades with bold free mouldings, and above these a line of sculpture of considerable breadth, very well executed, fanciful, and varied. The most curious part of the church are two polygonal apse chapels, which open into the aisles in the usual manner, with diverging vaulting cells from shafts in their angles. These chapels have the wall-string and its accompanying sculpture, and have moreover very good piscinæ, the shaft having below it a well-cut string of foliage: they are roofed with curious pyramidal stone roofs, very tall, as if those had belonged to a much higher church. There is also a good porch under a triangular pediment, containing a double door with a straight head and niches in the tympanum.

The part of the church which first attracted our attention by its remarkable appearance at a distance, and induced us to visit Norrey, was the tower, a tall free story on clustered shafts,

with the daylight seen through its lancet-windows. This attraction, it may be observed in passing, turned out a snare, and led to inconveniences which it required all our antiquarian zeal to consider as compensated by the remarkable character and great beauty of this building; for a serjeant-major of the national guard of Norrey considered our attentions to his church to be alarming, and declared us his prisoners; and as the mayor of that place was from home, being gone to market to sell his corn, we were, after a delay of an hour and a half, marched under a guard of three sabres and two fowling-pieces to the next village, Bretteville, where the mayor was reasonable enough to decide that antiquaries were not dangerous people, and dismissed us, to the no small indignation of our convoy.

Other Specimens resembling Early English.

After this point we found Early English in considerable abundance, with most of the peculiarities of our examples, and with that uniform goodness of work which distinguishes the style in our country: the details are considerably modified by the materials, but the characters are most clear and decided. Thus, proceeding from Bayeux, we find the little church of Subles, with its west end marked by buttresses and faces with buttress-slopes, inclosing a plain door and window-panel, and surmounted by a two-light

belfry. This church, with its small windows, flat buttresses, and line of corbels along the wall-plate, is as simple an example as can be imagined of Early English (having no aisles, transept, or tower,) and is yet quite characteristic.

Passing St Lo, where the west front of the cathedral offers an Early English portal of doubtful authenticity (for the Flamboyant architects appear to have tampered with it to an unknown extent), we find St Gilles, a village in a slate country, and modified in some respects by this circumstance. Thus the pier-arches are here so thick that there are two shafts in the side of the pier, each of which supports its own chamfered rib. The tower stands over the compartment which divides nave and chancel. The windows are long lancet-windows standing high on a string, in the wall-scutcheons of the rude quadripartite vaulting. The east end has an Early English triplet, and all the shafts have capitals and bases of the same style. There is a portion of a Norman tower (one side only being built) which shews that the two styles were going on nearly at the same time, for the Norman part above rests on Early English work below.

Passing by Coutances, and confining ourselves to country churches, we come to St Sauveur le Lendelm, which has in the side of its piers an attached shaft with round abacus. Perier, which lies a little beyond, has the choir and

the aisles of the nave Flamboyant, and in this instance the shafts in the sides of the piers are free, which is uncommon in France, though so general in England. At Isigny again we have an Early English building, with an English triplet of lancet-windows in the east end. In this case the compound piers have the pier-edges between the shafts cut into angular fillets by deep hollows; this occurs at Norrey, at St Loup at Bayeux, and elsewhere. This church at Isigny, like that at Norrey, has, east of the transept, a narrow aisle, nearly as high as the transept itself, vaulted from the clustered piers of the transept, and producing a very pleasing effect.

Returning towards Bayeux, we find the churches of Formigny and Vaucelles. The choir of the former place is vaulted from triple shafts, but the eastern compartment has an arrangement of the vaulting which, with some modifications, appears to be common in this district. The eastern side of this compartment is vaulted with six-celled vaulting, which appears to have been originally accommodated to a triplet of windows in the east end, though this is now replaced by a window of geometrical tracery. The windows of this choir are of rather a curious form, having a little shoulder on each side the head. They are surrounded (except the bottom) by a roll-moulding.

But perhaps the most elegant and complete example of this style is the chapel of the Seminary at Bayeux; a plain room without aisles, but very beautifully arranged. The details resemble those of the Temple church in London, in the shafts, capitals, vaulting, &c. The windows are in pairs, separated by a shaft quite free from the wall-strip, and connected with it by a flowered impost-moulding. The west end has an Early English triplet inside, and outside a very good combination of faces with buttress-slopes. The arrangement of the east-end interior is remarkable in itself, and still more so when considered as one modification of a very curious and elegant mode of dealing with that part of the building, which occurs in several churches, and which is perhaps seen most remarkably developed when we come to the Decorated choir of Tour en Bessin. The peculiarity of this mode is, that it unites in a considerable degree the effect of the polygonal apse and of the east window, having diverging vaulting, but with eastern lights. In most of the Early English instances, as Formigny above spoken of, and at St Loup, these eastern lights are a common triplet; but in the chapel of the Seminary now described, there are two polygonal recesses separated by a clustered shaft, and again by another, these two clusters being joined by a lancet-head in the direction of the length. The

polygons thus formed have each five of the sides of an octagon, and are cut off by a transverse rib from the end of the choir, beyond which rib they are vaulted in diverging cells, one to each side, the ribs of the vaulting running back till they are stopped by the transverse rib; and the three pannels in the faces of each polygon, which are to the east, to the north and south, and to the intermediate point, have probably been pierced as windows. The shafts of the windows, and among the rest, of the longitudinal opening which separates the two polygons, are of course much higher than those of the vaulting; and as the inner dividing cluster sends a longitudinal rib along the main vaulting as far as the boss, it has on its two sides two capitals of very different heights.

In the district west of Caen almost every church has traces, more or less abundant, of Early English work; and these are generally very well characterised; and in their mouldings, bases, capitals, strings, buttresses, pinnacles, &c. remarkably faithful to the type existing in our own country. In addition to specimens already spoken of, I may mention Vaucelles, near Bayeux, (Vaucelles is a name given to places in the suburbs of several cities, and is said to be a diminutive from *vauz*, valleys: I suppose Vauxhall is originally the same word), the choir and tower of Tilly, the choir of Fontenay, St Auban,

the west-end doors of Cheux; and though the rest of the nave is perhaps too strongly tinged with Norman to be here adduced, yet the bases and capitals are quite clearly characterised.

Transition from the Norman to the Gothic Style.

Cheux.

The transition which has hitherto occupied most generally the attention of antiquaries has been that from the Romanesque to the Gothic; or, as the question has been far too narrowly stated, from the round-arch to the pointed-arch style. This transition appears to assume very different forms in different countries. In England it may perhaps justly be termed a struggle; but here in Normandy it takes place without any appearance of violence, and by the most insensible gradations. The round and the pointed arch, especially a very obscurely pointed arch, are found mixed in the most indiscriminate manner in a great number of churches of Lower Normandy; and when this occurs, the mouldings appear also to be passing from Norman to Gothic forms. Cheux is perhaps one of the most remarkable of these examples. The choir and the semicircular apse are apparently very early Norman, and serve well to contrast with the late or transition Norman of the choir. In this, the pier-arches, chancel-arches, and western doors, are pointed; the latter with well-developed and ex-

cellent Early English mouldings; the former with mouldings tending to Early English, but still preserving something of the architrave-like character of Norman work. At the same time the clerestory has round-headed windows, in the form of recesses on shafts, within, which correspond, outside, to a complete arcade of round-headed arches. The windows themselves, formed by piercing the middle pannel of each triplet of this arcade, are little more than slits, but are clearly pointed, as are also those of the aisles, which are equally round-headed within, but without shafts. St Manvieux, a little nearer Caen, offers a similar mixture, as do Fontenay, the nave of Formigny, and a great number of other churches. When we have the pointed arch with clearly Norman architraves or mouldings, as zig-zags, beak-heads, embattled frets, &c. the transition is less gently conducted. M. de Caumont has collected above fifty such instances. We saw a few, as the north door at Carentan; and indeed they are by no means uncommon, though they always strike the eye as something incongruous.

The Transition as seen in Early French Towers.

The transition from the unmixed Romanesque, which English and French writers generally call Norman, to that style of Early Gothic which we know so well under the name of Early English,

may be traced best perhaps in the towers of churches in Normandy; for, taking it as it occurs in these, it is easy to make out a series of steps such that it is scarcely possible to say that any one of the successive changes can be called an essential alteration, and yet the two extremes of the series are perfectly clear and well characterised examples of the two styles. Thus we may begin with towers such as those of St Stephen at Caen, or St George de Bocherville, or even Jumieges. They consist of several stories, each marked by a number of round-headed openings or pannels, the latter being merely sunk surfaces, the former mere apertures having perhaps an impost-tablet. These features then acquire roll-mouldings, and the windows have a shaft in each side. This would hardly by any one be considered as a deviation from the simplest Norman. The windows being in a thick wall, not one only, but two shafts and two roll-mouldings, are introduced, with square edges between each. From this form we pass to three shafts and three rolls: the windows thus enriched occupy the whole face of the wall, and the outermost shafts of contiguous windows form a close couple. The pannels are treated in the same way. The whole tower thus becomes an aggregate of vertical lines, with the small exception of the heads of the windows, which appear, from the nature of their mouldings, a continuation of the shafts. When the change is thus far ad-

vanced, the substitution of a pointed arch to the windows instead of a round one is scarcely observed as an additional alteration. The main features of these towers are, then, the fine bundles of slender shafts which separate the openings and constitute the substance of the tower. In this form the vertical extension of these clusters, and the consequent comparative elongation of the openings, goes on without giving any character of a new style, but only of additional lightness and grace. In this manner we reach a kind of tower which has all the appearance of the most pure and beautiful Early English.

This series of changes is completely developed in Lower Normandy. Jumieges has only single shafts in the sides of the openings, and the pannels have none. Haute Allemagne, of which the work is rude, has intersecting arches, with zigzag mouldings. These and other enrichments of the mouldings are unessential features, except so far as they connect us with our starting point in the Norman style; they gradually disappear as we proceed. At Basse Allemagne we have the pannels on shafts. At St Michael de Vaucelles, and at Ifs also, near Caen, we have a much finer church with three shafts in the sides of the openings: in this case the openings of the upper story, formed in the same way, have pointed heads. Here also we have those polygonal turrets on slender shafts at the angles of the

square towers which approach so nearly to the lightest imaginable Early English pinnacles; and we have canopied windows also, on slender shafts, projecting from the base of the spire in each face, with triangular pediments; the whole tending to produce a cluster of subordinate spires, out of which the principal one rises with the grace which we admire in our later spires, as St Mary's at Oxford. Coutances offers, in its western towers, fine examples of this grouping; while the members still remain such as they have been described, and those of St Stephen are very little inferior.

But, before we reach this point, we may exemplify some of the intermediate alterations of the tower. St Gilles, near St Lo, has one side of a tower of which the belfry-story is occupied by three windows entirely Norman, but still covering the whole face. Formigny has a tower in which there are two such stories with three shafts in each side, the lower of three, the upper of two windows, and the upper windows again bisected by a shaft. Here the vertical clusters of lines are somewhat interrupted by the want of correspondence between the two stories, though the windows are pointed; and the covering is a pack-saddle roof, a summit of very frequent occurrence in this district. At Tour en Bessin, a little nearer Bayeux, the tower assumes a much more Gothic appearance,

having two tall windows in each face, in the sides of which we may reckon *four* shafts besides the one within the opening, and these recesses are pointed, and are moreover flanked by two narrow pointed pannels; yet here the outermost moulding of the window carries the fillet-moulding. This tower has a spire with corner turrets, and canopied windows, such as have been described, except that the former have beaded slits in their sides instead of resting on shafts, and the latter have their sides formed, not of shafts, but of walls with triple shafts, like the window below. This arrangement gives a decidedly Gothic character to this spire; and probably any one would rank it, as M. de Caumont has done, in the lancet style. Finally, by the elongation of these windows and pannels, we obtain the beautiful tower of Norrey, which, at a distance, appears like an open temple in the air, and invites the traveller to examine the admirable Early English choir, perfect in every way, from which it rises.

It may be observed, that the habit of flanking the windows by pannels of smaller width obtains in the Norman towers also, (see the plate of Vienne in the Mem. Antiq. Norm.) In the course of the change above described the Norman corbel-table becomes a string supported by corbels, like modillions. These towers, even when they become as clearly Early English as

Norrey, have no ostensible buttresses, but they spread to the north and south; and the projection thus given is carried off upwards in shallow buttresses against the outward face, and is cut out internally in the deep arches of the north and south windows of the lower compartment; as at Vaucelles near Caen, Tour, and Formigny.

We may add to the above examples the tower of Tilly, where the edges of the tower are chamfered, and shafts placed near the chamfer; where also the four shafts in each window-side have between them, not square edges, but prismatic fillets with channels, as in the piers at St Loup (Bayeux), at Norrey, &c. and where the pointed belfry-windows have dripstones full of nail-heads, much resembling in effect the Early English toothed ornament.

In this manner we pass on insensibly to such beautiful and complete Gothic towers as those of St John and St Peter at Caen, which differ from those just mentioned only in the details, the shafts here being of the Decorated style, the belfry-windows (at least in the latter church) crocketed and finialed, the pannels in the roof-story having triangular canopies, and the strings and tablets being enriched with foliage. Even the corner-turrets and the canopied windows at the foot of the spire-faces in St Peter are merely translations of those of St Stephen and similar ones, into Decorated language.

On the Formation of the Gothic Style.

The question of the origin of the Gothic style has become both frivolous and insoluble, by being identified with the question of "the origin of the pointed arch." To discover the first building in which such arches were employed, or the name of the architect who was first led, by whatever accidental suggestion or necessity of construction, to adopt such a form, is a task which it might have been supposed no one, at the distance of six or seven hundred years, would expect to succeed in; and even if we could obtain a reasonable probability on this point, such knowledge would not in itself be of more value than that of the first use of the trefoil-headed opening, or a dozen other similar problems. And while the origin of the mere pointed arch is thus a trifling enquiry, the origin of the Gothic style, a style most beautiful and complete in itself, and the antithesis in many respects of that which preceded it, is a question of high interest in the history of art and the philosophy of taste, as well as a remarkable point for antiquarian research. In speaking therefore of the first growth of the Gothic style, it will be advisable to give our chief attention to other points rather than to the mere form of the arch; we shall find the latter fall into its place as we proceed. On this subject the following suggestion is, I think, worth some attention.

A portion of the side of the interior of a Norman church may be considered as consisting of an arch supported on piers, and a window pierced in the wall which this arch sustains. The characteristic circumstances are, that the pier is a column, or a mass of wall not broken into small shafts and vertical parts; that the arch is cut square in the wall, with, perhaps, one sunk face, but with no oblique group of mouldings, nor any correspondence whatever between the parts of the archivolt and of the pier, the former being in fact an architrave: and the window above is a perforation in the wall, with no necessary relation to the members below. In the Gothic style these circumstances are all altered. The pier is, in the most complete examples, a collection of vertical shafts surrounding a pillar, of which the edges are no longer square. The archivolt consists of members corresponding more or less to the members of the pier, and consequently is composed of a collection of rounds and hollows, and loses all trace of its original rectangular section. The piers send up vaulting shafts, which give an independent unity to the compartment which they bound; and the clerestory window and its accompaniment have a necessary relation to the symmetry of this compartment; the triforium, of course, conforms to the same rule. At the same time the workmanship improves much, both in skill and taste,

and carries the predominating character into the details. In this way the Early Gothic acquires bases, capitals, arch-mouldings and many other members, which are as constant in their form as those of the Doric or Ionic orders. Thus, the base consists of a hollow between two rounds with fillets, with a very marked horizontal spread of the lower part; the capital is no longer, as in the Norman, a carved and sculptured mass, with a thick square abacus above, but is a graceful bell with foliage tending upwards, and curling in an extremely free and elegant manner; and, universally in England, often in France, the abacus becomes round with a characteristic profile, and thus loses that appearance of a termination to the vertical members which it had before exhibited. The mouldings of the arch consist of rounds and deep hollows, producing very strong lines of shadow, and have a continuous and carefully marked section. These bases, capitals, mouldings, sections of piers, of window sides, of strings, and other similar features, are quite as constant in their occurrence as the pointed arch, and much more characteristic; and no view of the formation of the Gothic style at all touches the really important part of the subject, which does not take account of these circumstances.

This being understood, it will easily be seen that the transition from Norman, or any other form of Romanesque, to Gothic architecture

may be traced, as to its details, in various ways. Since the two styles differ in so many points, whenever we have some Romanesque and some Gothic features, we have a mixture, and many of these mixtures are such as may be considered natural steps in the transition; while other mixtures may be considered as really confusion and barbarism. Thus, in the arch, for example, one mode in which the change may take place is by gradually altering both the form and the mouldings. Beginning from a semicircular arch with a depressed (rebated) rim, we may form one or two of the edges into rolls, we may then obscurely point the arch, and this is a combination which we very frequently find in Normandy; such arches being mixed, almost indiscriminately, with round ones. As the moulding becomes more multiplied and less rectangular, the arch may become more pointed; it may reach the lancet form; and we may then begin to channel or fashion the remaining square edges so that they lose their squareness. This is done in the same district of which we have spoken, for instance at Norrey and St Loup. Nothing now remains but to give additional grace and finish to the arch-mouldings, and we have the most beautiful examples of Early Gothic arches.

Such may be conceived to be the *natural progression* of the arch. But another kind of combination occurs, which does not grow out of

this progressive developement, and may be considered as a forced mixture. Such combinations involve a tendency of a different nature from that of which we have been speaking. When a style of architecture is complete either in itself or in its reference to the wants and feelings of the people who practise it, an obvious mode of increasing its richness and splendor is to *sculpture the surfaces*, by which means the essential forms remain unchanged, the creative ideas which might tend to alter these being dormant. This style of decoration gave us the beautiful friezes of Grecian art: at a later period, it was employed to a greater extent in other orders, and covered not only the friezes, but many members of the cornice with rich foliage. The Normans applied it especially to the architraves of arches. We find the same tendency to seek splendor in sculpturing and even in inlaying surfaces, in Asia—as in both the styles of Indian architecture, and in Persia; probably it is universal.

The various kinds of decoration with which the Normans enriched their architraves are well known, and have been in some measure classified, or at least named. Probably this distinction has fallen to their lot precisely because it is easier to collect the details of a stationary system, than to trace the varied mixtures and vague gradations of a transition. The latter

task is however more important, and at any rate it is our task at present. This sculpturing of surfaces in Norman work is practised to a most prodigal extent; but perhaps the most gorgeous specimens of it are to be found in other parts of France and in Italy, where its career was not so soon or so decisively interrupted by the intervention of the Gothic.

It will appear from this view of the matter, that this Norman decoration of the archivolt is no part of the progression towards Gothic, but rather goes on the supposition that such a progression is not in operation. When therefore we find the pointed arch which belongs to the later style combined with the zigzag, embattled frets, beak-heads, and other ornamental mouldings, which belong to the richest, and it may be, the latest Norman, this is no longer a *transition* but a *mixt* style. Such examples may be collected as curiosities, and they do in fact shew that, along with the progression, there was also a struggle;—that while some builders perceived the nature and relation of the members of their edifices, and combined such details with a feeling of their harmony, others took forms which they had seen used, and ornaments which they could readily execute, and mixed them in a manner which never could have produced any thing complete or consistent. There are many such specimens in England, and probably a still greater

number in Germany. We may call them pointed Norman, or pointed Romanesque; and as has already been said, it may hereafter deserve to be examined whether this mixture in Italy and parts of France does not appear in such force as to require to be separately considered.

In the other mode of combination of the two styles, the progressive transition, we may notice sometimes instances in which there is a disproportion between the different parts of the architecture, the forms and the details; as, for instance, where we have perfect Gothic mouldings, with arches perfectly semicircular. Here, one part of the change appears to have got the start of the other; but in fact such examples are often adaptations for convenience, as in the Abbey gate of Ardenne above mentioned. Sometimes they may be mere caprice, and then they are in some measure open to the charge of barbarism; perhaps Glastonbury is not quite secure from such a judgment.

But while this way of enriching Romanesque work, by retaining the forms and sculpturing the surfaces, did not naturally lead to a new style, there was another mode of enrichment which did tend to such a change, namely, the practice of multiplying and repeating the members of the architecture, as windows, pannels, doors, shafts, and pillars. Such elements being more and more multiplied, while the original classical principle

of the predominance of horizontal lines was quite lost sight of, the forms of buildings became altogether vague and incoherent, till the predominance of vertical lines was brought into effect.

A leading circumstance then, in the formation of the Gothic style, is the introduction of vertical arrangements and lines of reference, in the place of the horizontal members, which predominate in Grecian and Roman architecture. This appears to be the most general and most exact view which we can take of the change; and this view will be found to include several subordinate principles which have been noticed by various writers.

When the classical forms of architecture began to be frequently used on an extensive and splendid scale for the purposes of Christian worship, the elements of the overthrow of that style of architecture were immediately brought into action. The architects undertook to build high buildings, as towers, and for this purpose placed one story over another, accumulating the number of openings and members to a great amount. How naturally and insensibly such towers passed into the Gothic style we have already seen.

But another circumstance which perhaps still more advanced this change was, that in the Christian temples the worshippers were *within* the temples, and the edifice was hence calculated

for an interior spectator. It is remarkable how necessarily this will be seen, on a little consideration, to change the whole character of the building. A temple, or a series of temples, intended to be seen from *without*, and formed on the Grecian model, would have a line of entablature which would have a natural and congruous reference to the horizontal line on which they stand; and it would not happen, in any common points of view, that this reference would be obscure or interrupted. The temple would be seen as a whole, and the entablature of one or of two sides, supported by well formed pillars, would be simple or beautiful. But for buildings to be seen from within, the case is different. To extend them by an extension of horizontal architraves resting on columns, would produce a space without grace, dignity, convenience, or the possibility of being lighted. When such buildings were made spacious and splendid, the height was increased at least in proportion to the other dimensions, probably more; and windows, one range over another, were inserted in order to light this space. The space was covered with a series of vaults, one to each window or group of windows; hence, naturally, the necessities of such vaulting led to pointed arches, vertical lines, and other Gothic features, as I endeavoured to explain, after seeing the results of such a mode of building exhibited in the Cathedrals and

Churches which border the Rhine. But I now observe further, that even without taking into account the consequences of vaulting, the *interior view* necessarily introduced a style of building which had reference to vertical lines. The interior view of a building occupies the whole of our field of view, and not a small fraction of it only, like a temple seen at a little distance. Hence the horizontal lines are necessarily displaced and overmatched by the perspective; the sides, however long the building is, are reduced to narrow strips on the retina of a person looking along the edifice; and the two vertical lines which bound the end and divide it from the sides, are really the master lines of the whole scene, controlling and regulating all the rest. All the horizontal lines, however strong or long, stop or bend when they come to these vertical boundaries; and the spaces on one side or on the other of them (a side and an end) are occupied by forms and combinations altogether different. The building will therefore then only be reduced to harmony and consistency when the principal lines and members of the architecture submit to be regulated by these irresistible lines. When the series of vertical vaulting-shafts has established this subordination throughout the building, all the rest of the members readily receive a Gothic character from their place and bearing. This predominance of the

vertical angle-lines is associated with the effect of the vaulting in most German, and many French, instances; for the building is terminated by an apse, and the vertical lines which make the angles of the apse, are led up to a vault, from which the vaulting-cells diverge.

The manner in which the establishment of the authority of vertical instead of horizontal lines induces all the features of the Gothic, need not here be insisted on: but it may be observed, that we are led by these considerations to the conviction, that the seeds of destruction were sown in the system of Classical architecture as soon as the arch was introduced. For, what was the arch to do, and where was it to be put? It was placed for a long while between two columns, having its own impost, and leaving the columns to do their own work in supporting the entablature. But why were the arch and entablature to be both there? The entablature was to consist of large blocks, strong enough to support themselves as lintels: the arch was to supersede the necessity of such blocks. Here therefore was no consistency. Again, the arch was in fact the principal line of the opening, notwithstanding that the Romans did not allow it to be attended by any thing more than the architrave: and the columns were the principal supports.—Why then should not the columns support the arch?—This was accordingly soon done, as in Dioclesian's

palace at Spalatro. But when this occurs, there is an end of the supremacy of the horizontal entablature lines. Why should not the arch take all the cornice mouldings, and the entablature disappear altogether? There is no stability in the Roman system; nothing satisfactory, nothing final.

This architecture therefore went on, as on these principles it should have done, breaking up more and more. Arches, columns supporting arches, one order over another, one story over another, tall towers with many windows, coupled pillars, grouped openings, innumerable attempts at variety, repetitions, multiplications and modifications, were introduced. All the forms and rules of classical architecture were cast loose, and there was no longer any fixed model or limit to the caprice or adaptations of the builder.

I have said that it appears to me hopeless and useless to attempt to decide by what accident, by what particular architect, and at what exact period the first pointed arches were constructed. I would not however be understood as if I thought that the formation of the beautiful and perfect style of architecture to which this arch principally belongs had gone on by an imperceptible and inevitable gradation, directed by persons unconscious of what they were doing. There must have been concerned in the production of this style of building, men of great taste and feeling for the beauty of art, of great skill and knowledge in

construction, of great genius and power of seizing the thoughts which large masses of mankind follow and assent to. And it is perhaps made more clear by what has now been said, in what the genius and talent of such men showed itself. Such persons were wanted, in order to give a new principle of unity to that which had lost the old one. The ornaments, openings, windows, pillars, which had formerly been governed by the most imperative rules of horizontal arrangement, had been disbanded, or at least their discipline had become good for nothing. The Gothic architect restored the reign of order, and rallied these vague elements in a vertical line. A new thought, a new idea, was infused into the conception of such members, which at once gave them connexion and fixity. The previous change from classical architecture had been a breaking up of the connexion of parts, multiplicity without fertility, violation of rules without gaining of objects, degradation, barbarism. The change now became one of the formation of connexion; the establishment of arrangements which were fertile in beautiful and convenient combinations; reformation; selection of the good, rejection of the mere customary. We have therefore to suppose that some among the architects of the 11th and 12th century, or they who first seized and used and diffused these new ideas, were most deserving of all our interest, all our honour.

The account which has been given of the original formation of the Gothic style is consistent with all those hypotheses which ascribe the invention of the style to one or other of the necessities of the construction; for instance, to the necessity of having arches of the same height and of different widths for the purpose of vaulting; and to the necessity of having narrower pier-arches at the apse than in the sides; both which objects are effectually provided for by the application of the pointed arch, and each of which has by some been supposed to have caused its introduction. It may be observed in addition to what has been said of the peculiar effect of an *end*, in the interior view of a building, that this effect is somewhat modified by the practice which obtained from the earliest periods in Christian buildings, (as in basilicas, their prototypes,) of making the extremity of the plan semicircular. The division of the sides and the end became by this means less harsh and sudden, but the effect of the vertical dividing line, the supreme control which it exerts over all lines which meet it, the difference of the apparent arrangement of the parts on one side of it and on the other, remain undiminished; while the connexion of the vertical lines which lead up to the roof, with the sloping curves which compose it, is by this means more completely forced upon the eye.

We may suppose therefore, as we have in fact abundant evidence in our round-arch buildings, that the necessity of some contrivance for the purposes just mentioned was felt before the adoption of the pointed arch. Round arches *stilted*, as they have been termed, that is, raised by the addition of a vertical portion in each side, were very frequently used; and by imperfect working and other accidents these became horse-shoe arches, and other forms, which can prove nothing but the insufficiency of the semicircular arch alone for the general purposes of construction. The apsidal end at an earlier period appears to have been constructed without aisles or pier-arches, being formed of two or three stories of smaller windows or pannels; but where the aisle was carried round it, stilted arches were used here also, as at St Mary Capoline in Cologne. While these imperfect and detached contrivances prevailed, the pointed arch was probably sometimes used, among other forms, previous to its general use. But at last, as I have already said, some master-spirit seized the principle which reduced all these broken and discordant elements to harmony. It was perceived that—by treating the pier and the arch as a collection of members of the same kind; by substituting fine bundles of moulding for the edges of a perforation in a wall; by carrying leading lines from the floor to the vault, and by arranging all the

smaller portions with reference to the symmetry of the compartments thus produced; by rejecting or subordinating all horizontal entablatures, square abacuses, flat tops of arches, rectangular surfaces;—there was produced a consistent and satisfactory whole. It was seen that the system thus formed presented a harmony in its lines and divisions to the internal spectator; was capable of being formed into the boldest and loftiest towers; was susceptible of almost inexhaustible modification, without any violence to its constituent members, and of almost unbounded decoration, without obscuring its characteristic features; and thus possessed a principle of vitality and unity which made it a style of architecture, as its utility and convenience made it a mode of building. For mere convenience may lead to and suggest forms and artifices, but can never elevate them into an object of taste. A cotton-mill or an engine-house are constructed with a perfect adaptation to their purposes, and with many very skilful contrivances, but yet they have never given rise to a style of architecture.

The perception of the possibility of making a harmonious and satisfactory style which should provide for all the conditions of internal perspective, cross-vaulting, apsidal aisles, lofty towers, varied plans, profuse ornament, may well be considered as a discovery; yet it was probably not the work of one mind, nor distinctly conceived

as a novelty by those who had the greatest share in its formation; they were perhaps hardly aware that they were creating a new form of works of architecture, any more than the Homeric school, or the founders of Grecian tragedy or of English tragedy, were aware that they were creating a new form of poetical composition.

Of the Intersection Theory.

But though the account which I have given of the formation of the Gothic style is consistent with several of the hypotheses of the origin of the pointed arch which have been advanced, there is one hypothesis on that subject, perhaps the most attractive at first sight, (for it appears to have attracted the greatest number of casual speculators,) to which the above views lend no countenance, and which I believe will not be found to be supported by any critical examination of the subject. I speak of the opinion which supposes the pointed arch to have originated in the intersecting arcades so common in Norman and other Romanesque work.—We have lines of shafts or pilasters, and semicircular arches connecting each of these with the alternate ones. In this manner, between each two contiguous divisions is formed a pointed arch; and by taking these pointed arches and using them for all purposes, arose the Gothic style.—Dr Milner even

pretended to give the date, building and person to which this accidental discovery is to be ascribed. The church of St Cross near Winchester, built in 1126 by Henry of Blois, has intersecting arches in the triforium of the choir, and the pointed-arched intervals of these arcades are perforated as windows, so that the semicircular arches within give pointed openings without. These are the earliest English pointed arches; from these all others are derived.

Observe what this theory takes for granted:—that men's minds were so ready for the formation of a new style, that when this pointed arch was once placed before them, they adopted and repeated it, to the rejection of all the other forms which were produced by accidental combinations, to the rejection of the round arch, which they had been accustomed to for centuries upon centuries:—that they employed this form in situations where intersecting arches never had occurred and never would have occurred; that they modified all the other parts of buildings at the same time that they introduced this feature; and this, though these modifications for the most part do not exhibit the form of the pointed arch, but others quite different, as for instance, mouldings, pinnacles, tracery. Surely these are changes which require some notice in a theory which pretends to account for any thing. There are here many facts quite as difficult to explain as the discovery

of a pointed arch would be, even supposing the discoverer had *not* seen an intersecting arcade. The intersection *offered* the pointed arch; but what induced men to *take* it? How came their minds in this state? so ready to accept a novelty; and not only to follow it out to its consequences, but to invent a system in which it should be one feature amongst many; to associate it in extensive combinations; to invest it with a signification which alone, or otherwise treated, it would by no means possess?

To shew by what accident or necessity such a form might occur, is no more a reasonable explanation of the pointed style, than it is a reasonable explanation of the origin of the alphabet to shew how the form of an A might accidentally or necessarily be produced.

This is the reasoning which the principles of the subject suggest. With regard to the circumstances with which Dr Milner has invested the hypothesis, they offer so many flat contradictions that it is quite wonderful how any system could have for a moment blinded a person to them. For these original pointed arches at St Cross are small arches, occurring, as has been said, in the triforium. Of course, the reader would inevitably imagine that the parts built before these first of pointed arches must all be in round arches. He will therefore be in no small degree surprized when he visits this church, and finds

that the large pier-arches of this very choir, which *must* have been built before this triforium, as they immediately support it, are as good pointed arches as any building of the 13th century can shew; that moreover there are in the lower part of the building several pointed arches with Norman mouldings, and among the rest, all the vaulting of the side-aisles of this very choir; while on the other hand in the upper part, necessarily built after these intersecting semicircles, and open to all the improvements their construction could suggest, the clerestory windows, openings of the same kind and size as those in the triforium, have *not* taken the hint, but are round-headed windows with bands of characteristic ornament outside.

I do not think that any one church can be conceived more adverse to the intersection theory than this is. The theory has, as I have said, something taking about it: if any one wishes to see how entirely it is contradicted by facts, St Cross is as strong an example as stone and mortar can make.

Dr Milner, who thus undertook to penetrate to the origin of Gothic architecture, built a chapel after his own designs at Winchester, and the visitor may from that specimen judge of the degree of critical accuracy which he possessed in respect to such matters. It is no reproach to him that he was no better a Gothic architect

than many professional architects of that day; but it must be allowed that it would have been difficult to shew less accuracy of observation in his imitation than he has done. The whole and the details are as paltry, inconsistent, and unlike our old churches, as any of the so-called Gothic of the last century.

It was not therefore to be expected that Dr Milner should endeavour to prove or try his point by the examination of mouldings and other details. If he had done so, he would still have found the evidence altogether against his theory. The fact manifestly is, that these triforium openings have been cut at some succeeding period, the 15th century as likely as any other, when, in consequence of stopping up the east windows, or from some other cause, additional light was desired. They are really mere perforations, with no external moulding of any kind; and, while the round-headed windows both above and below them are richly ornamented, these celebrated pointed holes have no more ornament than the lights of a barn, and the stones which form their points lie in horizontal courses, the joints having no reference to the head-lines of these holes.

There are various instances which prove that when it was desired to obtain light through these intersecting arcades, the contrivance which immediately suggested itself was *not* that of piercing the pointed space. In the remarkable Norman

church of Graille on the opposite coast of France, we have an evidence of this. There is a group of intersecting arches at the end of the north transept; and in the middle one of the pointed compartments thus produced, is a *round-headed* window, leaving, near the point of intersection, a part of the pointed space not removed. But without going so far, if Dr Milner, turning his eyes for a moment from St Cross, had lifted them to the gable end of the transept of Winchester cathedral, which looks towards St Cross, he would have seen the same combination;—a group of intersecting arches, with a *round-headed* window, originally, as appears by the arch-stones, pierced in one of the compartments. It appears, therefore, that there was a time when the mere sight of a pointed compartment, and the formation of a window in it, did not lead men a single step to the pointed-arch style.

I by no means pretend to say that the hypothesis of intersecting arches is clearly *à priori* impossible. It might have been true, for any thing which we can prove; and it is not difficult to see what the facts must have been to establish our conviction of its truth. Let it be supposed that intersecting round arches and arcades occur frequently, and upon a large scale as well as a small one; that the pointed-arch spaces so produced are often pierced;—that such pointed spaces, preserving the mouldings of the round arches

which gave rise to them, are used in the situations in which round-headed openings were used before;—that the mouldings in some cases, begin to have a reference to the pointed arch, instead of the original circle;—that this reference appears in different degrees of prominence, ending in that where the reference to the original circle vanishes: let it be supposed, moreover, that while this change of the moulded line takes place, there is a corresponding series of gradations in the mouldings themselves, beginning with pure Norman in the intersecting circles, and tending towards Gothic in the pointed spaces, as the Norman lines and ornaments fade away:—let such a collection of instances be produced, and we will allow the intersection theory to be indeed highly plausible.

But how much of this is the fact? Scarcely a single point. There are hardly any *large* intersecting arcades; there are none of these pierced with pointed arches; they never occur at all in those situations where the pointed arch first occurs, in the pier-arches; the cases of intersecting arcades are exactly the situations in which the round-headed arch remains, when the rest of the building has the arches pointed, as in small windows and pannels. The cases in which pointed arches first occur have never any trace of the circles which must intersect to produce them. In the few cases in which small

pointed openings are produced by intersecting circles, there is no reference of the mouldings to the pointed part. There is no where any mixed reference of the mouldings partly to the pointed space and partly to the circle; and there is no trace of an approach to Gothic mouldings in any case where the intersecting arches occur. Every fact which can be imagined to point out a gradation of adaptations, a transition in forms, an alteration in style, is altogether wanting. Wherever we find intersecting arches, they have the most rigid and unmingled Norman character; and the few cases in which the pointed spaces are pierced are either the performances of succeeding times, as at St Cross, or the caprices of Norman work, which sometimes clothed in its peculiar suit of ornaments a pointed arch, however produced, and seems to have so dealt with pointed arches arising from intersection, in one or two examples. I think there is one at Canterbury; but if there be, it exhibits no more tendency to Gothic than the door of St George of Bocherville.

I have probably said as much about the origin of the Gothic style, and about the intersection theory in particular, as is at all needful at present, so I will now quit the subject.

Comparison of French and English Decorated.

Having found our Early English style so completely exhibited in Normandy, we were very desirous of discovering also some specimens precisely exhibiting that style which Mr Rickman has called the Decorated. This is, as the reader knows, characterized with us by its window-tracery, geometrical in the early instances, flowing in the later; but also, and perhaps better, by its triangular canopies, crocketed and finialled, its niched buttresses with triangular heads, its peculiar mouldings, no longer a collection of equal rounds with hollows like the Early English, but an assemblage of various members, some broad and some narrow, beautifully grouped and proportioned. Among these mouldings, one is often found consisting of a roll with an edge which separates it into two parts, the roll on one side the edge being part of a thinner cylinder, and withdrawn a little within the other. A capital of crumpled leaves, a peculiar base and pedestal also, belong to this style. We wished much to compare the French specimens of such a style (that of the first half of the 14th century) with our English ones, as we had compared the styles which preceded and those which succeeded this in the two countries. The agreement was perhaps too much to expect, for with us this is much the most scarce of the styles of our architecture, and was

practised, it would seem, for the shortest time. The Early English prevailed probably before 1200 and after 1300; the Perpendicular reigned from soon after 1360 to the revival of Italian art, and was very well executed in 1500. The Decorated, on the other hand, in its purity belongs to the interval of a half-century thus left; and it is perhaps hardly likely that this period should be sufficient for developing it in the two countries, with its national distinctions. We had however found some clear instances of it; and if we could have added one good building in this style, we should have made our comparison with considerable confidence. We were led to expect that Caudebec was such a specimen; but this church turned out to be a highly florid Flamboyant building, exhibiting the features of that style with very considerable exaggeration; and with a west front and a spire far more elaborate than any of the buildings hitherto mentioned. We were therefore left to ground our comparison on such buildings as we had previously seen.

St Ouen, at Rouen, which belongs to our Decorated date (1320), also exhibits many of the features of our style at that period; not only in its tracery, which, as we have already said, appears in France along with the preceding style, but also in many more decisive features; thus the bases with their polygonal pedestals, the capitals of crumpled leaves, run through all the original

parts of this building. The mouldings also are in many parts good Decorated mouldings; but this specimen wants many of the good features of our Decorated work, as the enrichments of the buttresses, and the canopies of the windows; and is on the whole too plain, except in some particular portions, to be a good example. The choir of the church at Jumieges is a more characteristic specimen, and the section of its piers is as good as possible, but the bases of the piers are almost all that remain of this part of the building. The abbey of Ardenne, near Caen, approaches near to this style; its mouldings are very good, but still it does not exemplify all the characters. The old church of St Germain at Pont-audemer has, in its south aisle, work of this kind, but the windows are nearly all that remain. The best example, of a small church, is that of Tour en Bessin, near Bayeux, of which the choir, when complete, must have been a most admirable exhibition of this kind of architecture; and here we have a wall-arcade of triangular canopies crocketed and finialed, excellent windows, and a singularly skilful and elegant arrangement of vaulting. With these examples we can have no doubt that this style did prevail in France nearly in the same form, and about the same time, as in England; but we still want some large and rich building to make us acquainted with the manner in which its details were worked, and to enable

us to institute such a parallel with our English work as in the case of the Early Gothic of the two countries, and in that of the Tudor architecture of England compared with the Flamboyant architecture of France, we have now no difficulty in making.

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Plate II.

Fig. 9. Mentz.

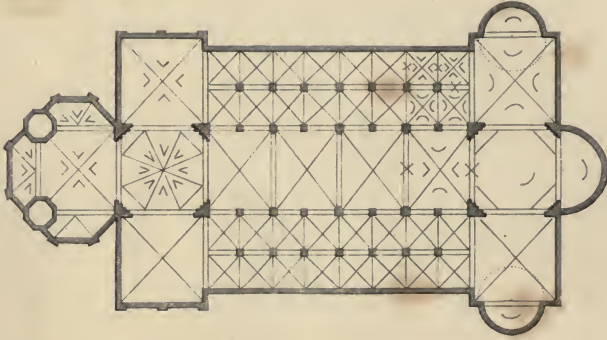


Fig. 10. S^t. Aposteln.

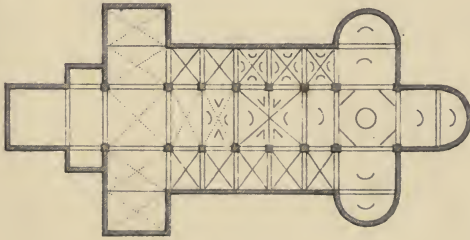


Fig. 11. Luach.

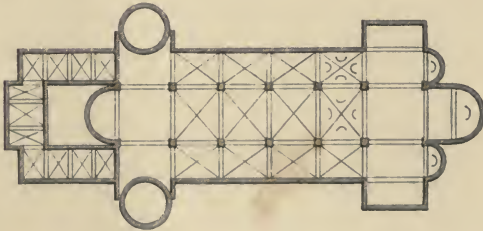




Fig 6.

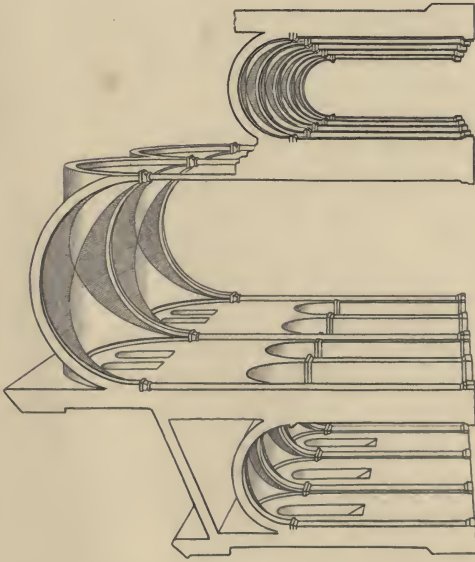


Fig 12. Sincay.

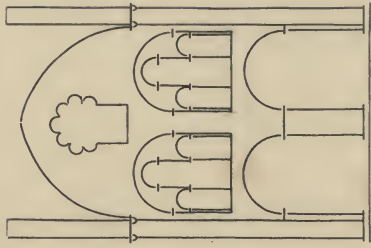


Fig. 15

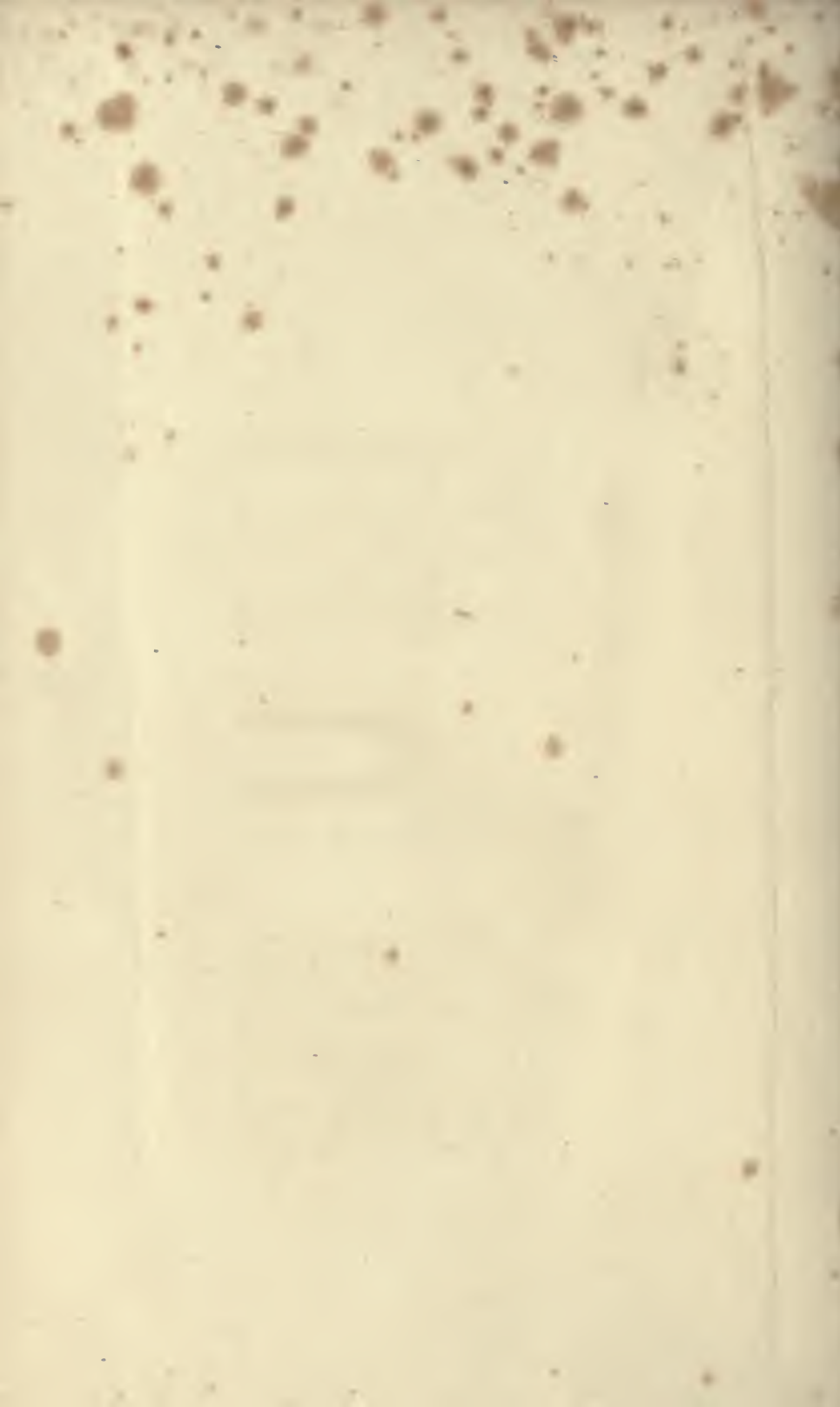


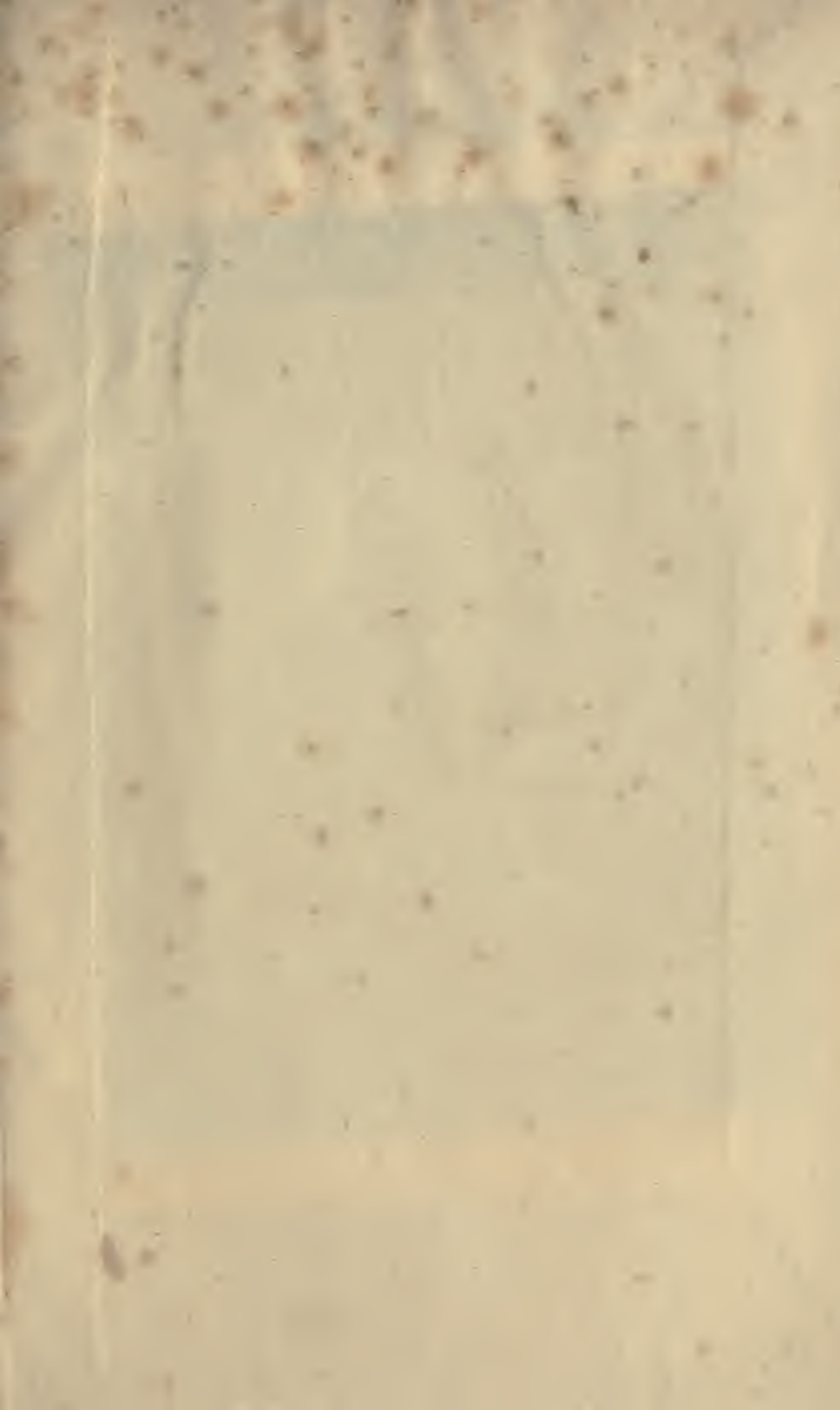
Fig 14.



Fig 13.







RETURN TO the circulation desk of any
University of California Library

or to the

NORTHERN REGIONAL LIBRARY FACILITY
Bldg. 400, Richmond Field Station
University of California
Richmond, CA 94804-4698

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS

- 2-month loans may be renewed by calling
(510)642-6753
- 1-year loans may be recharged by bringing
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