PLATE I.

To face page 185.

FOUNTAINS, NAVE AND SOUTH AISLE, FROM EAST.

THE ARCHITECTURE OF THE CISTERCIANS, WITH SPECIAL REFERENCE TO SOME OF THEIR EARLIER CHURCHES IN ENGLAND.[1]

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Introduction.

Few periods in the history of English mediaeval architecture are more interesting than the second half of the twelfth century. English architectural writers have generally agreed to call this *the* Transitional period—the period *par excellence* of the transition from Romanesque to Gothic. It is true that this nomenclature has generally been based on the fact that the simultaneous use of semi-circular and pointed arches is characteristic of the period in question, and on the mistaken idea that the pointed arch is the essential factor in the evolution of Gothic architecture. The introduction of the pointed arch was, however, of quite secondary importance to the discovery of the ribbed vault, and if this latter be taken as the characteristic of the Transition, the beginning of the Transition in England must be put back to the last decade of the eleventh century. Nevertheless the introduction of the ribbed vault did not at once change the character of the structure. Progress was at first but slow, and it was not until the second half of the twelfth century that architecture definitely entered on the period of transformation, and gradually but rapidly lost its Romanesque character to become what we have agreed to call Gothic.

This alone would suffice to make the second half of the twelfth century a period of the greatest interest to the student of mediaeval architecture. But there is more. From the time of the conquest, Normandy and England formed a single architectural province, with an exceptionally vigorous architectural manner, which, by the beginning

[1] Part of this paper was written for the Thoresby Society, and has been printed, under the title of *The Architecture of Kirkstall Abbey Church*, in vol. xvi of their publications. Certain parts referring specially to Kirkstall have been omitted here, and other parts have been rewritten on more general lines.

of the twelfth century, had advanced further on the road towards Gothic than any other Romanesque school. It was only during the second quarter of the twelfth century that the school of the Ile-de-France, hitherto of little account, began that marvellously rapid advance which could not but influence the neighbouring school of upper Normandy, and a little later and in somewhat less degree that of England. This French influence, exercised most generally, I believe, through Normandy, appears in England shortly after the middle of the twelfth century, and continues to affect English architecture until the end of the thirteenth century. It is not a question of the importation of a foreign style, but rather of continuous influence on a less advanced school working on parallel lines. The influence is none the less important on that account, and it seems idle to attempt, as some English writers have done, to minimise its effect.

But before the first appearance of this French influence in England, we have to recognize another influence from the continent, arising from the introduction of the Cistercian order in 1128. This Cistercian influence, Burgundian in its origin,[1] but assuming a very definite character of its own, is a factor of no small importance in the history of English architecture in the twelfth century.

The object of the study which I propose to attempt in this paper is to define the nature and extent of this Cistercian influence, as exhibited in some of the more important English Cistercian churches of the first generation which have survived. I need scarcely say that no pretence is made here to present an exhaustive analysis of the architecture of the Cistercians. The general subject will only be studied so far as it has some bearing on the special question of Cistercian influence in England. I

[1] For a general analysis of Cistercian architecture, see the chapter *Die Kirchen des Cisterzienserordens* in Dehio and von Bezold's *Die Kirchliche Baukunst des Abendlandes* (Stuttgart, 1884), i, 517–537, and C. Enlart, *Origines françaises de l'architecture gothique en Italie* (Paris, 1894), pp. 223 et seq. The latter quotes some judicious observations on the subject by M. Anthyme Saint-Paul (pp. 224–228), as well as an excellent summary of the characteristics of Burgundian Romanesque by M. le Comte Robert de Lasteyrie (p. 233, note 1). I have made free use of both these works in this paper. See also E. Sharpe, *The Architecture of the Cistercians* (London, 1874 and 1876), of which only Part i, *General Plan*, was published in two numbers. It contains a sheet of twenty-one small-scale plans of Cistercian abbeys.

propose first to show how the rise of the order led to the adoption of a Cistercian manner of building; then to attempt an analysis of the Cistercian church plan; and finally to notice specially Cistercian characteristics in the architecture of some of the earlier churches of the order in England. My subject will be confined to the architecture of the churches, and no attempt will be made to deal with the planning of the monastic buildings, which has been so excellently elucidated in Mr. Hope's admirable monographs.

For the purpose of such a study, the best material in England is afforded by Fountains,[1] Kirkstall,[2] and Buildwas.[3] Fountains, as the earliest of the three, is one of the most important, and of the original church the transept and nave are still standing. The church of its daughter-house of Kirkstall is unusually complete, and, except for the loss of its roofs and some quite minor alterations, remains very much as its first builders left it. Kirkstall, therefore, will naturally be noticed in greater detail than the other churches. Much of the church of Buildwas, of slightly later date, has survived, and affords interesting material for comparison. The remarkable architectural development which followed will be illustrated by comparisons drawn from the churches of Roche, Furness, Byland, and Dore.

At the outset it will be well to guard ourselves against the misconception that there was ever any specially Cistercian *style*.[4] None of the monastic orders developed any distinctive and peculiar style of architecture, independent of that of the country in which their churches were built. It is true that Viollet-le-Duc had much to say of the 'Cluniac school,'[5] and his theories on this subject have been too often accepted as true. M. Anthyme Saint-Paul has, however, clearly proved that this so-called

[1] For a full description of Fountains, see Mr. W. H. St. John Hope's admirable paper in the *Yorkshire Archaeological Journal*, xv, 269–402. The buildings are very completely illustrated in *A Monograph on the Abbey of S. Mary of Fountains*, by J. Arthur Reeve (London, 1892).

[2] Kirkstall is fully described by Mr. W. H. St. John Hope in his paper, *Kirkstall Abbey*, in vol. xvi of the *Publications of the Thoresby Society*.

[3] Buildwas is illustrated in full detail in *Remains of Ancient Monastic Architecture in England*, by Joseph Potter (London, 1847).

[4] C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 224.

[5] In his *Dictionnaire raisonné de l'architecture française* (i, 130, and elsewhere).

'Cluniac school' had no real existence, and that many of the most important Cluniac churches which were built either at the same time as, or very soon after, the reconstruction of the great mother church[1] differed profoundly from it, both in design and structure.[2] The most that can be said is that the Cluniacs were the means of spreading certain characteristics of plan in countries beyond the home of the order. The churches of the Cistercians, especially those built during the third quarter of the twelfth century, approach much more nearly to a distinctive architectural manner. "A great number of them show such a strong family likeness—similarity of plan and of their principal arrangements, a puritan simplicity strictly enjoined by the regulations of the order, a budding Gothic style applied in a particular manner—that it is very easy to class them apart, and to distinguish them from all other churches of the country in which they were built."[3] Nevertheless, their style was not special to the Cistercian order, but sprang entirely from ancient monastic tradition and from the architectural school of Burgundy.[4]

In order to understand the orgin of this Cistercian manner of building, and the cause of its widespread influence, it is necessary to notice some salient facts in the history of the rise of the order, and especially that aspect of its ideal of the monastic life which was the motive of the characteristic architectural expression which its buildings assumed.[5]

The foundation of Citeaux in 1098 was one of several attempts made in the latter part of the eleventh century

[1] Begun in 1089.

[2] Anthyme Saint-Paul, *Viollet-le-Duc, ses ravaux de l'art et son systeme archéologique* Paris, 1881), 172 et seq, and in other works there cited. See also M. de Lasteyrie in C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 233, note 1.

[3] Anthyme Saint-Paul, *A travers les monuments historiques*, in the *Bulletin Monumental* for 1877, 148 (quoted in C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 224).

[4] C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 224.

[5] For the general history of the rise of the order and its constitution, see Canon J. T. Fowler's introduction to *Cistercian Statutes*, in the *Yorkshire Archaeological Journal*, ix, 223; the late J. T. Micklethwaite's paper on *The Cistercian Order*, in the *Yorkshire Archaeological Journal*, xv, 245; and Miss Alice M. Cooke's paper, *The Settlement of the Cistercians in England*, in the *English Historical Review*, viii (1893), 625. See also the *Life of St. Stephen Harding*, by J. B. Dalgairns, new edition with notes by Herbert Thurston (1898) *The Life and Times of St. Bernard*, by James Cotter Morison (London, 1889); and *Vie de Saint Bernard*, by E. Vacandard, 3rd edition (Paris, 1902).

to reform the Benedictine order. That the Cistercian reform became the most powerful of them all was due in the first instance to the administrative and organising ability of the Englishman, Stephen Harding, the third abbot of Citeaux,[1] but the marvellous expansion of the order must be attributed principally to the influence of St. Bernard of Clairvaux, who during the second quarter of the twelfth century was virtually the ruler of western Christendom. During the first fifteen years from its foundation, the history of Citeaux is that of the struggle of a single monastery. Its expansion into an *order* begins with the foundation of its first four daughter houses, La Ferté in 1113, Pontigny in 1114, Clairvaux (with St. Bernard as its first abbot) and Morimond in 1115; these, with Citeaux, became the principal houses of the order. When the first Cistercians arrived in England in 1128, the number of abbeys of the order had passed thirty.[2] In 1152, when the general chapter ordered that no more new abbeys should be founded,[3] the number had reached the extraordinary total of three hundred and thirty-nine,[4] of which fifty were in England and Wales. Nevertheless the movement went on, and at the close of the twelfth century, the number had increased to five hundred and twenty-five.[5]

The story of the rise of the order is told by the founders themselves in the *Exordium Cisterciensis Coenobii*,[6] issued

[1] Stephen was abbot from 1109 to 1133, and died in 1134.

[2] P. Leopold Janauschek, in *Originum Cisterciensium Tom. i* (Vienna, 1877), pp. 16 and 286, gives Waverley, the first English house, as thirty-sixth in chronological order, with the date of foundation as 28 Oct, 1129. On this date see also *Eng. Hist. Review*, viii, 640.

[3] *Instituta Generalis Capituli*, lxxxvi (*Nomasticon Cisterciense*, 231).

[4] *Orig. Cist.* i, 294. In Janauschek's list, Fountains is no. 89, with the date of its filiation to Clairvaux as 1 Oct, 1135; Kirkstall is no. 231, with the date of foundation as 19 May, 1147 (the Barnoldswick settlement); and Buildwas, which was originally of the order of Savigny, absorbed in the Cistercian order in 1147, is no. 257.

[5] *Ibid.* i, 299. These numbers do not include nunneries.

[6] The *Exordium*, the *Carta Caritatis*, and the *Consuetudines*, including the first collection of *Instituta Generalis Capituli*, have been printed from early texts by Ph. Guignard in *Les Monuments primitifs de la Regle Cistercienne* (Dijon, 1878), and also in the new edition of the *Nomasticon Cisterciense* (a revision of the original edition of 1664), ed. by H. Sejalon (Solesmes, 1892). The latter also contains those Statutes of the General Chapters of the Order from 1157 to 1194 which were either omitted or printed incorrectly by Martene and Durand in *Thesaurus Novus Anecdotorum*, vol. iv (Paris, 1717), and those from 1194 to 1221 in full. It also contains the collection of *Instituta* of 1240 and 1256, which were printed from another text, once belonging to the abbey of Fontenay and now in the British Museum, by Canon J. T. Fowler in the *Yorkshire Archaeological Journal*, vols. ix and x. The references to the *Nomasticon* in the foot-notes below are all to the new edition.

by Stephen Harding in 1120.[1] The essence of the Cistercian reform was a strict observance of the Benedictine rule in its original simplicity and severity, as it was understood by the founders of Citeaux. Their first series of regulations,[2] drawn up probably about 1101, defines the method of its observance as regards clothing, food, renunciation of property in churches and tithes, and so on—the renunciation of the riches of this world to be practised by these "new soldiers of Christ, poor with the poor Christ."[3] These regulations deal also with the employment of *conversi* or lay brethren, and paid labourers, for the cultivation of their lands, "because according to the Rule the habitation of monks ought to be in their own cloister." And, emulating the example of St. Benedict, it was determined that their monasteries should be built, not in cities nor in castles nor in villages, but in places remote from the concourse of people, and that twelve monks with an abbot should be sent out to new foundations.[4]

The second series of regulations[5] appears to have been drawn up by Stephen Harding immediately after he became abbot in 1109. By these they determined that they would not have in the house of God, wherein they desired to serve God devoutly by day and night, anything which savoured of pride or superfluity, or which might ever corrupt the poverty which they had chosen of their own free will, as the custodian of the virtues.[6] So their crosses were not to be of gold or silver, but of painted

[1] Guignard (*op. cit.* preface, p. xxx) thinks that the *Exordium* was drawn up by Stephen to be presented to Pope Calixtus II when he was asked to confirm the *Carta Caritatis* in 1119, and that Stephen afterwards added the prologue and the paragraph xviii, *De Abbatiis*, at the end, and issued it for the guidance of the order.

[2] *Exordium*, xv. *Instituta monachorum Cisterciensium de Molismo venientium.* "Dehinc Abbas ille" (*i.e.* Albericus) "et fratres ejus, non immemores sponsionis suae, Regulam beati Benedicti in loco illo ordinare, et unanimiter statuerunt tenere; rejicientes a se quidquid Regulae refragabatur." (*Nom. Cist.* 62). Cf. *Instituta Generalis Capituli*, ii (*Nom. Cist.* 212).

[3] "Novi milites Christi cum paupere Christo pauperes." *Exordium*, xv. (*Nom. Cist.* 63).

[4] "Quia etiam beatum Benedictum non in civitatibus, nec in castellis aut in villis, sed in locis a frequentia populi semotis coenobia construxisse sancti viri illi sciebant, idem se aemulari promittebant. Et sicut ille monasteria constructa per duodenos monachos adjuncto patre abbate disponebat, sic se acturos confirmabant." *Exordium*, xv (*Nom. Cist.* 63). Cf. *Instituta Generalis Capituli*, i and xii (*Nom. Cist.* 212, 215).

[5] *Exordium*, xvii. *De morte primi Abbatis et promotione secundi, et de institutis et laetitia eorum.* (*Nom. Cist.* 63).

[6] "Deinde ne quid in domo Dei, in qua die ac nocte Deo devote servire cupiebant, remaneret, quod superbiam aut superfluitatem redoleret, aut paupertatem custodem virtutum quam sponte elegerant, aliquando corrumperet." *Exordium*, xvii *Nom. Cist.* 64).

wood; their single candlestick was to be of iron, and the censers only of copper or iron. Silk was forbidden, except for stoles and fanons; gold and silver were also forbidden, except that the chalice and pipe were to be of silver.[1] We know, too, from other sources that their first buildings were of the utmost simplicity, entirely destitute of any adornment.

The *Carta Caritatis*, the real constitution of the Cistercian order, which was probably drawn up between 1115 and 1118,[2] and received papal confirmation in 1119,[3] insists strongly on uniformity in the observance of the rule of St. Benedict as it is observed in the New Monastery (Citeaux). No other sense is to be read into it, but "as the monks of the New Monastery have understood it and held it, and as we to-day understand it and hold it, so let them too understand it and hold it."[4] The provisions of this constitution for a system of regular visitation of all the monasteries of the order by the abbot of their mother-house, including the visitation of Citeaux itself by the abbots of La Ferté, Pontigny, Clairvaux and Morimond, and the institution of the annual general chapter of the order, were admirably designed to secure the desired uniformity of observance. To the same causes must be attributed the remarkable uniformity in the planning of Cistercian monasteries, and in some of their architectural dispositions, which, with the severe simplicity of their design, gives them so strongly marked an individuality.

The first collection of the Statutes of the General Chapters, compiled by Raynard, fifth (sometimes called fourth) abbot of Citeaux, is generally attributed to the year 1134,[5] but it was not completed until 1152.[6] The first ten statutes are based on the *Carta Caritatis* and on the *Instituta* contained in the *Exordium*,[7] which have been noticed above. Of the remainder, only very few

[1] See this passage at length in the *Exordium*, xvii (*Nom. Cist.* 64), and in Mr. Micklethwaite's translation in the *Yorkshire Archaeological Journal*, xv, 255.

[2] Guignard, *Les Monuments primitifs*, preface, p. lxiii.

[3] Bull of Calixtus II, 23 Dec., 1119 (*Nom. Cist.* 73).

[4] *Carta Caritatis*, i (*Nom. Cist.* 69).

[5] Guignard, *Les Monuments primitifs*, preface, p. xv.

[6] This first collection includes ninety-two statutes. The fifty-eighth was, according to the author of the *Magnum Exordium*, enacted by the general chapter of 1137 (*Nom. Cist.* p. xiii). The eighty-sixth is the statute of 1152 which ordered that no more new abbeys were to be founded.

[7] See the comparison in parallel columns in Guignard, *Les Monuments primitifs*, preface, pp. xxxvi–xli.

have any bearing on their buildings, and both these and similar statutes in the later collections are of the nature of prohibitions of things which were considered to be inconsistent with the simplicity and uniformity enjoined in the earliest regulations. Of the two statutes which are most important in this connection, one forbids sculptures or pictures "in our churches or in any of the monastic buildings, because while attention is paid to such things, the profit of godly meditation or the discipline of religious gravity is often neglected." Still painted crosses were permitted, provided they were of wood.[1] The other orders that letters shall be of one colour and not painted,[2] and that glazing shall be white, without crosses or pictures.[3] Similar prohibitions are found in later statutes. In 1182 it was ordered that painted windows should be reformed within two years.[4] In 1213 the prohibition of sculptures and pictures (except the image of the Redeemer) is repeated, with the additional prohibition of elaborate pavements,[5] and this latter is repeated in 1218.[6] The curious permission to paint the doors of the churches white must be regarded as a significant relaxation of the absolute prohibition of painting.[7] The oft-quoted prohibition of stone bell-towers

[1] *Instituta Generalis Capituli*, xx. "Sculpturae vel picturae in ecclesiis nostris seu in officinis aliquibus monasterii ne fiant interdicimus, quia dum talibus intenditur, utilitas bonae meditationis vel disciplina religiosae gravitatis saepe negligitur. Cruces tamen pictas quae sint ligneae habemus." (*Nom. Cist.* 217).

[2] The Bible executed under the direction of Stephen Harding, and completed in 1109, is a richly ornamented work, and in no way conforms to the standard of simplicity inculcated by this later statute. See Father Thurston's note in Dalgairns' *Life of St. Stephen Harding*, 150–155; Vacandard, *Vie de Saint Bernard*, i, 54; and Arthur Haseloff in *Histoire de l'Art*, ed. by Andre Michel, ii, 298.

[3] *Instituta Generalis Capituli*, lxxx. "Litterae unius coloris fiant, et non depictae. Vitreae albae fiant, et sine crucibus et picturis." (*Nom. Cist.* 230). The account of the visit of the queen of Sicily to Clairvaux in 1517 notes that the windows of the church were glazed with white glass (Didron's *Annales archeologiques*, i, 226). For the white glazing of the Cistercian churches of Bonlieu (Creuse), Pontigny (Yonne), and Obasine (Correze), see Viollet-le-Duc, *Dictionnaire*, ix, 459–460, and *Annales archeologiques*, x, 81 et seq.

[4] *Statuta Gen. Cap.* Anno 1182. "Vitreae depictae infra terminum duorum annorum emendentur; alioquin ex tunc Abbas et prior, et cellararius omni sexta feria jejunent in pane et aqua, donec sint emendatae." (*Nom. Cist.* 261).

[5] *Ibid.* Anno 1213. "Inhibetur ne de cetero fiant in Ordine picturae, praeter imaginem Redemptoris, nec sculpturae, nec varietates pavimentorum, nec superfluitates aedificiorum et victualium." (*Nom. Cist.* 279).

[6] *Ibid.* Anno 1218. "Praecipitur ut omnes varietates pavimentorum de ecclesiis nostris infra sequens Capitulum amoveantur. Ab eo autem tempore, Abbas in cujus domo id non fuerit emendatum, ad Capitulum generale veniat super hoc veniam petiturus." (*Nom. Cist.* 282).

[7] *Ibid.* Anno 1157. "Portas vel ostia ecclesiae suae albo colore qui voluerit poterit colorare." (Martène and Durand, *Thesaurus Novus Anecdotorum*, iv, 1247).

occurs first in 1157,[1] when it was also ordered that bells should not exceed five hundred pounds in weight, so that one person might ring them, and two should never be rung together.[2] All these are merely negative proscriptions[3] of things which "savoured of pride or superfluity," and, although they had an important effect on the physiognomy of their buildings, they were in themselves hardly sufficient to constitute a separate architectural type.

The extreme asceticism of the first Cistercians was a standing protest against the comparative laxity of the other Benedictines. The great order of Cluny, itself originally a return to the primitive simplicity of the Benedictine Rule, had been the most powerful agent in the monastic reform of the eleventh century, but, in becoming a great political and territorial power, it was in the twelfth century losing its religious influence, which was passing to the new reformed orders. The inevitable rivalry between Cistercians and Cluniacs culminated in the controversy between St. Bernard and Peter the Venerable, abbot of Cluny, himself a reformer. St. Bernard's *Apologia*, which was written about the year 1124,[4] is mainly a defence of the Cistercian manner of observing the Rule, and a denunciation of laxity and luxury, but it contains the following striking passage, which excellently illustrates the extreme Cistercian view of art :

"But these are small matters. I pass on to greater ones, which seem less only because they are more common. I will not speak of the immense height of the churches, of their immoderate length, of their superfluous breadth,[5] costly polishing, and strange designs, which, while they attract the eyes of the worshipper, hinder the soul's devotion, and somehow remind me of the old Jewish ritual. However, let all this pass; we will suppose it is done, as we are told, for the glory of God. But, a monk myself, I

[1] *Ibid.* Anno 1157. "Turres lapideae ad campanas non fiant." (*Ibid*, iv, 1247).

[2] *Ibid.* Anno 1157. "Campanae nostri Ordinis non excedant pondus quingentarum librarum : ita ut unus pulset, et numquam simul pulsentur duae." (*Nom. Cist.* 260).

[3] It is unnecessary to quote the thirteenth-century collection of statutes, for they are easily accessible in Canon J. T. Fowler's edition mentioned above.

[4] Vacandard, *Vie de Saint Bernard*, preface, p. xx, and i, 108–132.

[5] The abbey church of Cluny, begun in 1089 and consecrated in 1131, was the largest church of its time; it had double aisles, double transept, and ambulatory with radiating chapels. For its plan see J. Virey, *Architecture romane dans le diocese de Mâcon;* Viollet-le-Duc, *Dictionnaire*, i, 258; Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, pl. 120 (1); and C. Enlart, *Manuel d'archeologie française*, i, 236.

do ask other monks (the question and reproach were addressed by a pagan to pagans),[1] 'Tell me, O ye professors of poverty, what does gold do in a holy place?' The case of bishops and monks is not the same. We know that they, as debtors to the wise and foolish, when they cannot rouse the sense of religion in the carnal multitude by spiritual means, must do so by ornaments that appeal to the senses. But among us, who have gone out from among the people; among us, who have forsaken whatever things are fair and costly for Christ's sake; who have regarded all things beautiful to the eye, soft to the ear, agreeable to the smell, sweet to the taste, pleasant to the touch—all things, in a word, which can gratify the body—as dross and dung, that we might gain Christ, of whom among us, I ask, can devotion be excited by such means?

"Or, to speak plainly, is it not avarice—that is, the worship of idols—which does all this? from which we do not expect spiritual fruit, but worldly benefit. . . . So carefully is the money laid out, that it returns multiplied many times. It is spent that it may be increased, and plenty is born of profusion. By the sight of wonderful and costly vanities men are prompted to give rather than to pray. Some beautiful picture of a saint is exhibited—and the brighter the colours the greater the holiness attributed to it; men run, eager to kiss; they are invited to give, and the beautiful is more admired than the sacred is revered. In the churches are suspended, not *coronae*, but wheels studded with gems, and surrounded by lights, which are scarcely brighter than the precious stones which are near them. Instead of candlesticks, we behold great trees of brass, fashioned with wonderful skill, and glittering as much through their jewels as their lights.[2] What do you suppose is the object of all this? The repentance of the contrite, or the admiration of the gazers? Oh, vanity of vanities! but not more vain than foolish. The church's walls are resplendent, but the poor are not there. . . . . The curious find wherewith to amuse themselves; the wretched find no stay for them in their misery. Why, at least, do we not reverence the images of the saints, with which the very pavement we walk on is covered. Often an angel's mouth is spit into, and the face of some saint trodden on by the passers by. . . . . But if we cannot do without images, why can we not spare the brilliant colours? What has all this to do with monks, with professors of poverty, with men of spiritual minds?

"Again, in the cloisters, what is the meaning of those ridiculous monsters, of that deformed beauty, that beautiful deformity, before the very eyes of the brethren when reading? What are disgusting monkeys there for, or ferocious lions, or monstrous centaurs, or spotted tigers, or fighting soldiers, or huntsmen sounding the bugle? You may see there one head with many bodies, or one body with numerous heads. Here is a quadruped with a serpent's tail; there is a fish with a beast's head; there a creature, in front a horse, behind a goat; another has horns at one end, and a horse's tail at the other. In fact, such an endless variety of forms appears everywhere, that it is more pleasant to read in the stonework than in books, and to spend the day in admiring these oddities than in meditating on the law

[1] "Dicite, Pontifices, in sancto quid facit aurum?" Pers. *Sat.* ii, v, 69.

[2] The great *candelabrum* before the high altar of Cluny was the gift of Queen Matilda, wife of Henry I. (Vacandard *Vie de Saint Bernard*, i, 118).

of God. Good God! if we are not ashamed of these absurdities, why do we not grieve at the cost of them?"[1]

It is possible that, as is frequently the case in polemical writing, there was a touch of exaggeration in St. Bernard's denunciation of art,[2] though it seems to be true enough that the earlier generation of Cistercians did succeed in banishing the decorative arts almost entirely from their churches. But, so far as the mother art of architecture was concerned, this negative attitude towards art was overmastered by the creative impulse of the twelfth century.[3] By the prohibition of sculpture and superfluous decoration, the Cistercian builders were thrown back on the logical expression of practical and structural essentials, the fundamental basis of all true architecture. The result was that the design of their buildings was forcible and direct, remarkably pure, and, although severe, it was admirably expressive of the needs which inspired it. The construction was well thought out, and generally executed with great care.[4] The simplicity of detail is in striking contrast with the excess of ornament to which the later Romanesque builders were addicted, and, although the absolute rejection of all ornament weakened gradually as time went on, it was always sober and restrained. The internal aspect of their churches must have differed profoundly from that of other great contemporary churches in one respect which we have some difficulty in realizing now—the entire absence of colour. No painted walls, only white glass in the windows, the general absence of rich materials and colour in decorative accessories—these must indeed have contrasted strongly with the glowing beauty of which too often but faint traces remain for our admiration.

[1] The translation is from J. Cotter Morison, *The Life and Times of Saint Bernard*, 130–132.

[2] His attitude is indicated by a story told of his visit to the Cistercian abbey of Hautecombe (Savoie): "On dit que saint Bernard l'ayant vue en fut scandalize, et que d'un esprit prophetique il dit: *Tu es trop belle, Haute-combe ma mignone, tu ne pourras pas subsister*" (*Voyage litteraire de deux religieux Benedictins de la Congregation de Saint-Maur* (Paris, 1717), vol. i, part i, p. 240).

[3] "The task of the Cistercians was the translation of their motto, Renunciation and Work, into the language of architecture, and they created the truest and most real monk-style known in the history of art." Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, i, 519.

[4] Mr. Micklethwaite went so far as to say, "a badly-built Cistercian wall is a thing unknown" (*Yorkshire Archaeological Journal*, vii, 241).

We have already seen that the peculiar constitution of the Cistercian order must have acted as a powerful influence in promoting uniformity in the character of their buildings. The constant association of the rulers of the order in the annual general chapter, and in the visitations of monasteries by the abbots of their mother houses, must have tended to produce this result. In some cases we have evidence that other influences played their part in this direction. Experienced monks were sent out from the chief houses of the order to direct the operations of new foundations. Geoffrey of Ainai,[1] an old monk of Clairvaux, was sent by St. Bernard to Fountains, to instruct the brethren in the first principles of the rule, and their earliest buildings were erected according to his counsel. He had been similarly employed by St. Bernard on other new foundations.[2] Achard, master of the novices at Clairvaux, was also sent by St. Bernard to many French and German monasteries to direct their building operations.[3] Monks and *conversi* worked, with the assistance of hired workmen, on the rebuilding of Clairvaux (begun 1133 or 1135).[4] In the building of Walkenried twenty-one lay brethren were employed as masons, wallers, and carpenters, under the direction of two monks.[5] Among the first occupants of Victring, in Carinthia, who came from Villers in Lorraine, were *conversi barbati diversis artibus periti.*[6] Dehio and von Bezold think that these examples, considered in connection with the practice of excluding seculars as far as possible from their monasteries, suggest the probability that in the majority of cases the Cistercians executed their buildings by means of their own resources.[7]

[1] Vacandard, *Vie de Saint Bernard*, ii, 403 and 404, n. 1.

[2] *Memorials of the abbey of St. Mary of Fountains* (*Surtees Soc.* 42), i, 46–47.

[3] Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, i, 520.

[4] *S. Bernardi Vita Prima*, lib. ii *auctore Ernaldo*, cap. v, no. 31 (in Migne, *Patr. Lat.* vol. 185, col. 285).

[5] Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, i, 520.

[6] *Ibid.* i, 521.

[7] *Ibid.* i, 521. They quote, conversely, the statute of 1157 (No. 47): "Monachos vel conversos artifices ad operandum saecularibus concedi non licet" (*Thes. Nov. Anecd.* iv, 1250). At San Galgano, six masters of the work from 1218 to 1278 were monks; Ugolino di Maffeo (1276–1294) is described in the chartulary as *conversus*, *magister operis lapidum*, and in 1282 a *conversus*, *frater Matheus*, is called *magister operis lignaminis*. On the other hand, three *conversi* of San Galgano were masters of the work at Siena cathedral between 1259 and 1284 (C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 13, 17; and *L'abbaye de San Galgano pres Sienne au xiii^e Siecle*, in the *Melanges de l'Ecole de Rome*, 1891). In 1517 the master-mason or master of the works at Clairvaux was a *conversus* (*Annales archeologiques*, iii, 236, 239).

This characteristic uniformity in Cistercian building has an important bearing on the general history of architecture of the twelfth century. The constructive system of Cistercian churches outside Burgundy sometimes follows local methods, but frequently the system is an importation from Burgundy, differing only in its simplicity from the methods of that province. The pointed arch, which was in general use in earlier Burgundian architecture, was adopted throughout for the arches of construction. From about the middle of the twelfth century, the Burgundian school developed a type of construction which was already essentially Gothic, related to, perhaps inspired from, but not precisely the same as, the early Gothic of France proper. The ribbed vault was used systematically over a continuous series of oblong bays,[1] usually without flying-buttresses or triforium. The importation of this type by the Cistercians into countries where the native Romanesque was still all-powerful was the first introduction of Gothic architecture into these countries. The Cistercians have been called the missionaries of French art in Germany, and this is even more true of Italy.[2] In England, as we shall see, the case was different. Some of the leading features of the Burgundian architecture of the Cistercians were no novelties to the Anglo-Norman builders, whose first attempts in the development of the ribbed vault were much earlier than those of the Burgundian school. So far as structure is concerned, the chief contribution of the Cistercians to English architecture was the introduction of the systematic use of the pointed arch.

We may now pass from these general considerations to the more detailed study of the earlier Cistercian church architecture, considering in turn plan, structure, and details. Before dealing with the general history of Cistercian church-plan in the twelfth century, it may be well to clear the ground by a few words as to the approximate chronology of the English Cistercian churches to which attention will be more particularly directed.

According to the statutes, a new monastery could only

[1] The sexpartite vault over double bays was then general in the Ile-de-France, afterwards to be superseded by the oblong-bay plan.

[2] C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 223, etc.

be formed when certain buildings were ready to receive the monks.[1] At Citeaux itself the first buildings constructed by the founders of the order, with the assistance of duke Odo of Burgundy (1098), were of wood.[2] Following the example of the chief house of the order, the first settlement of a new foundation must generally have occupied buildings of a purely temporary character, to be succeeded by the erection of permanent buildings as their means permitted. We know that this was the case at Fountains,[3] whose early history seems to reproduce the struggles of the first years of Citeaux. The building of its permanent church cannot have been begun before 1135 at the earliest,[4] and it was in hand some considerable time. It is difficult to say how much had been built at the time of the fire in 1147, but the details of the west doorway indicate that the nave was not finished when the nave of Kirkstall was commenced.

The documentary evidence with regard to Kirkstall is limited to the statement[5] that the church, the cloister, and the buildings surrounding it were erected between 1152, when the convent removed here from Barnoldswick, and 1182, when the first abbot, Alexander, died.[6] Here, too, the first buildings must have been of a temporary character. Unlike its mother-house of Fountains, however, Kirkstall was fortunate in having from the first a powerful and benevolent patron in Henry de Lacy. The monks were therefore in a position to proceed at once with the erection of permanent buildings. They began as usual with the church, which was built gradually from east to west, but as a continuous work apparently without any

[1] *Instituta Generalis Capituli*, xii (first collection). "*Quomodo novella ecclesia Abbate et monachis et ceteris necessariis ordinetur.* Duodecim monachi cum Abbate tertiodecimo ad coenobia nova transmittantur: nec tamen illuc destinentur donec locus libris, domibus et necessariis aptetur, libris dumtaxat missali, Regula, libro Usuum, psalterio, hymnario, collectaneo, lectionario, antiphonario, gradali; domibusque, oratorio, refectorio, dormitorio, cella hospitum et portarii, necessariis etiam temporalibus: ut et vivere, et Regulam ibidem statim valeant observare." (*Nom. Cist.* 215).

[2] *Exordium*, iii. ". . . monasterium ligneum quod inceperunt de suis totum consummavit." (*Nom. Cist.* 55).

[3] *Memorials of the abbey of St. Mary of Fountains* (*Surtees Soc.* 42), i, 47.

[4] W. H. St. John Hope, *Fountains Abbey*, in the *Yorkshire Archaeological Journal*, xv, 274.

[5] In the *Fundacio Abbathie de Kyrkestall*, printed from an early fifteenth-century MS. in *Thoresby Society's Miscellanea*, iv, 169, with translation by Mr. E. Kitson Clark, F.S.A.

[6] W. H. St. John Hope, *Kirkstall Abbey*, in the *Publications of the Thoresby Society*, xvi, 4, and note 1.

definite pause, such breaks as are to be seen in the masonry being merely breaks between the succeeding stages of what was really one continuous build. The range of buildings on the east side of the cloister seems to have been a continuation of the south transept work, and from the character of their details the chapter-house and parlour appear to be practically contemporary with the lower part of the west front of the church. The western range (*cellarium*) seems to be a continuation of the work of the south aisle of the church, but it was carried up before the west front of the church was built. The last parts of the church to be built were the north clearstory of the nave and the upper part of the west front. Judging from the fragments of the cloister arcades which have survived, it would appear that, after the buildings around the cloister and the church itself had been finished, the alleys of the cloister were roofed in, as the last work of the original buildings; and, from the character of the details of the cloister arcades, this work was probably executed within the decade preceding the death of abbot Alexander in 1182.[1] We may therefore, I think, safely conclude that the building of the church was begun immediately after the settlement of the convent at Kirkstall in 1152, and that it was finished in some fifteen, or at most twenty, years from that date.[2]

Buildwas, founded in 1135, was originally of the order of Savigny, but the existing church is purely Cistercian, and cannot have been begun until after the absorption of Savigny in 1147. No documentary evidence of its building appears to be available, but its architectural character indicates that the church was begun a little later than the church at Kirkstall, and that it was finished somewhat later than the completion of Kirkstall.

The third quarter of the twelfth century was, then, the period of the completion of the church at Fountains, and of the erection of the churches of Kirkstall and Buildwas. The commencement of the churches of Roche and Byland, and of the Cistercian building at Furness[3]

[1] For some reasons for these conclusions, see *Publications of the Thoresby Society*, xvi, 84, note 1.

[2] I am inclined to think that the lesser limit is the more likely to be correct.

[3] For an analysis of the earlier and later works, see W. H. St. John Hope, *The Abbey of St. Mary-in-Furness*, in the *Cumberland and Westmorland Antiquarian and Archaeological Society's Transactions*, vol. xvi.

must also be assigned to dates within the limit of this period. From their architectural character, the eastern parts of Roche[1] seem to be a few years earlier than the Cistercian work in the transept at Furness, and this latter is almost contemporary with, or more probably slightly earlier than, the eastern parts of Byland. The monks removed to Byland in 1177, and the eastern parts of the church have been attributed to before this date.[2] The transept of Dore would appear to be nearly contemporary with the transept of Furness.

Plan.

The uniformity of observance and practice so earnestly inculcated by the founders of the Cistercian order finds striking expression in the planning of its buildings. This is true, not only of its church-plan, but also of the planning of its monastic buildings—a subject beyond the scope of this paper. I shall confine myself here to an attempt to trace the origin and development of the typical Cistercian church-plan.

It is doubtful whether any remains have survived of any Cistercian church built during the first thirty years following the foundation of the order. The slight evidence available as to the earliest permanent churches seems to indicate that they were very small and simple buildings, presenting no very special characteristics of plan. The first stone church at Citeaux, said to have been consecrated in 1106, was still in existence in 1708, when it was visited by the learned Benedictines of St. Maur; they describe it as a small vaulted building some 15 feet in width, and of proportionate length, the choir being about 30 feet long; there were three windows in the sanctuary, and two in

[1] I suggest a date somewhere near 1165 as probable for the commencement of the church at Roche.

[2] Mr. Sharpe suggested 1170 as the probable date of the commencement of the church (*Arch. Cist.* 54). The language of the Chronicle (*Mon. Angl.* v, 353) is ambiguous on this point, but it seems probable that permanent building had been begun at Byland before the monks removed there from Stocking in 1177.

the nave.[1] The church of the *monasterium vetus* at Clairvaux seems to have been a square building with three altars—the high altar dedicated to the Virgin, and two others behind, against the east wall.[2] The first stone church at Pontigny was probably a simple oblong building.[3] Evidently what we know as the normal plan of a Cistercian church had not been evolved when these earliest churches were built.

The establishment of a definite type of plan would be a natural consequence of the rapid increase in the number of new foundations. Up to the end of 1119, only twelve monasteries of the order had been founded; during the ten years 1120–1129, the number of new foundations was twenty-five; and during the ten years 1130–1139, one hundred and five.[4] It is in the course of this last decade that we find certain proof that the characteristic Cistercian plan had been definitely adopted for the new churches of the order.

Severely practical as was the Cistercian reform in all things, their church plan was designed to meet the strictly practical necessities of their worship, which for them was the *opus Dei*, the *opus divinum*. They required a sanctuary for the high altar, a choir for the monks and novices, a

[1] "Un des plus venerables endroits de Citeaux, c'est l'ancien monastere, qui fut habite par les premiers religieux de ce saint lieu, et ou saint Bernard fut reçû. L'eglise en fut consacree l'an 1106, par Gautier évêque de Chalon. Elle est assez petite, et je ne crois pas qu'elle ait plus de quinze pieds de largeur; la longueur est proportionnee; le chœur peut avoir trente pieds. Elle est voutee et fort jolie. Il y a dans le sanctuaire trois fenetres et deux dans la nef; et c'est assurement ce que l'on entend par cet endroit de la vie de saint Bernard, où il est dit, qu'il etoit si mortifie, qu'il ne sçavoit pas qu'il n'y avoit dans l'eglise que trois fenetres, ce qui doit s'entendre du sanctuaire. Ce fut la que saint Etienne et saint Alberic furent enterrez. On l'appelle aujourd'hui la chapelle de saint Edme, par la devotion particuliere que quelque abbé aura eu a ce grand Saint" (*Voyage litteraire*, vol. i, part i, pp. 223, 224).

[2] For a description of the *monasterium vetus*, see Vacandard, *Vie de Saint Bernard*, i, 67–69, and the authorities there cited.

[3] *Voyage litteraire*, vol. i, part i, p. 58: "On voit derriere cette eglise les mazures de l'ancienne, c'est-a-dire, de la premiere eglise de Pontigny. Elle etoit petite, mais assez belle pour le temps." Viollet-le-Duc's plan of Pontigny (*Dictionnaire*, i, 272, at B on fig. 8) shows this first church, to the south-east of the later church, as an oblong building terminating eastward in an apse, and this plan is apparently copied from a plan in *L'abbaye de Pontigny* by Baron Chaillou des Barres (Paris, 1844), "d'apres un dessin leve en 1760." Henry's *Histoire de l'abbaye de Pontigny* (Auxerre, 1839) contains a plan "leve en 1760," evidently the same plan, but here, however, the first church is shown as a small rectangular building without an apse.

[4] These numbers are from Janauschek's list, *Orig. Cist.* i, 286–289. In the following decades the numbers were: 1140–1149, one hundred and fifty-seven (including twenty-eight of the order of Savigny, which was merged in the Cistercian order in 1147); 1150–1159, sixty-three; after which the number of new foundations gradually declined.

choir for the *conversi*, and a sufficient number of chapels where such of the monks as were priests could celebrate mass. No plan could be designed to meet these requirements with greater simplicity and directness than the typical plan of which Kirkstall affords such an excellent example. A cruciform church, with a short presbytery or sanctuary to the east of the crossing; westward of the crossing a long nave, the eastern part of which formed the choir of the monks,[1] and the western part the choir of the *conversi;* chapels on the east side of each arm of the transept; and an aisle on each side of the nave to facilitate communication between the different parts of the church; such was the plan almost universally adopted in the golden age of the order.[2]

In searching for the origin of this plan, we must remember that it was not possible for the Cistercians, any more than for other innovators in architecture, to ignore the building traditions of their time. Dehio and von Bezold suggest that the plan of the eastern part, its most characteristic feature, must be interpreted as a reversion to the 'old Cluniac' plan,[3] at a time when Cluny itself had rebuilt its great church with an ambulatory and radiating chapels. However this may be, the Cistercian plan

[1] Most frequently the monks' stalls extended into the crossing.

[2] Except for nuns' churches, which were often not cruciform, no chapels being required.

[3] *Die Kirchliche Baukunst des Abendlandes*, i, 527. Dehio and von Bezold see the influence of the 'old Cluniac' plan in the church of Vaux-de-Cernay (Seine-et-Oise), which had two apsidal chapels *en échelon* on the east side of each arm of the transept, flanking a rectangular presbytery, and they attribute its plan to c. 1130, which I venture to think is too early. Vaux-de-Cernay belonged to the order of Savigny, and only became Cistercian with the other abbeys of that order in 1147. In his *Etude archeologique sur l'abbaye de Notre-Dame des Vaux-de-Cernay* (*Societe archeologique de Rambouillet*, vol. xviii, Tours, 1889), M. L. Morize expresses the opinion that the church was only begun after 1147 (p. 71). However, the discovery at Furness—which had also belonged to the order of Savigny—of the foundations of identical apsidal chapels *en echelon* to the transept, dating almost certainly from before 1147 (W. H. St. John Hope, *The Abbey of St. Mary-in-Furness*, in the Cumberland and Westmorland Antiquarian and Archaeological Society's *Transactions*, vol. xvi) indicates the strong probability that the plan is not Cistercian at all, but dates in both cases from the Savigny period, as was suggested by Mr. Harold Brakspear in his paper *On the first church at Furness* (in the *Transactions of the Lancashire and Cheshire Antiquarian Society*, vol. xviii). After an examination of what remains of the church of Vaux-de-Cernay, I think that its plan was probably laid down, and some of its eastern parts built, before 1147, but that the works only proceeded slowly, and that the church was not finished before the end of the twelfth century. The rectangular presbytery is, I believe, original. The curious construction of arches under the eaves between the two chapels and between the inner chapel and the presbytery, in order that the chapels might be covered with a continuous lean-to roof, is doubtless Cistercian. For plan of the church, see M. Morize's *Étude*, pl. ii, and Viollet-le-Duc, *Dictionnaire*, i, 274.

resembles, in its general arrangement, a plan, common enough at the end of the eleventh and beginning of the twelfth century, which had an aisleless apsidal eastern arm, and apsidal chapels on the east side of the transept—a plan of which we have an important example in our own country in the late eleventh-century church of St. Mary's Abbey, York.[1] The Cistercians may have arrived at their plan by substituting square ends for the apses of the presbytery and transept chapels in such a plan. They certainly adopted the simplest features known to them. The rural churches of Burgundy (as of north-western France and England) most commonly had square ends, which were not unknown in larger churches. An example of a short rectangular presbytery in a cruciform church with aisles to the nave is to be found in the church of Saint-Savinien, Sens, which dates from about the middle of the eleventh century. With the knowledge of such simple plans, the Cistercians rejected the apsidal termination of the eastern arm in favour of the rectangular plan, which was easier to build, to vault, and to roof. So too, for the apsidal chapels opening from the east side of the transept, they substituted a row of rectangular chapels which could be covered by a continuous lean-to roof, so avoiding all complications of roofing and roof-drainage. For them, everything must be simple and serviceable.

It is not necessary to attempt any elaborate classification of the plans of Cistercian churches. Almost all the plans that are characteristically Cistercian either follow the typical plan adopted at Kirkstall, or show an extension of the eastern arm in order to provide a greater number of chapels, contrived with an ambulatory, either rectangular or semicircular on plan. Variants of the typical plan are for the most part simply modifications of the rectangular form of the presbytery or transept chapels caused by following local methods.[2]

[1] *Archaeological Journal*, lxiii, 114. *Yorkshire Archaeological Society, York programme* of July 24, 1903.

[2] In his *Étude sur les eglises de l'ordre de Citeaux*, which forms the introduction to M. Morize's work on Vaux-de-Cernay (cited above, p. 202, note 3), M. le Comte A. de Dion gives a classification which loses much of its value because it takes no account of chronological development. Dehio and von Bezold (*Die Kirchliche Baukunst des Abendlandes*, i, 527) give a classification in five divisions, of which the first, represented by Vaux-de-Cernay, is not, I believe, Cistercian at all; it is very unlikely, too, that this was the plan of the first Citeaux, as they suggest. Their fourth division is simply the normal plan with an apse substituted for the square end of the presbytery. There is a good classification, with diagrams, in A. Holtmeyer, *Cisterzienserkirchen Thüringens* (Jena, 1906), p. 70.

For the purpose of comparison, the plans of fourteen Cistercian churches, drawn to the same scale, are illustrated on plate xxvi.[1] The eight upper plans show the normal type, while the six below are examples of eastern extension.

From the descriptions quoted above, it would appear to be probable that the first stone churches of Citeaux and Pontigny were small single-naved buildings without aisles. The necessity of providing chapels, however, involved the adoption of a cruciform plan, which in its simplest form is represented by the plan of which Mr. Harold Brakspear has discovered the foundations at Waverley, the first Cistercian foundation in England. This small and most interesting plan[2] (plate xxvi) represents the first permanent church of Waverley, which must have been built not long after the foundation of the abbey in 1128. Mr. Brakspear has also found evidence which proves that the first permanent church of the sister-house of Tintern (founded 1131) had a similar aisleless plan.[3] The church of Lysa, the first Cistercian foundation in Norway, has a very similar plan[4] (plate xxvi), the only essential difference being that at Lysa the main walls are continued across the transept, which does not form a complete crossing, as at Waverley. Lysa, founded in 1146, was a daughter-house of Fountains, and its first abbot was one of the monks who had left St. Mary's, York, in 1132, to share the hardships of the first settlement at Fountains.[5]

As a rule, however, each arm of the transept had more than one chapel, and the nave was provided with aisles to serve as passage-ways between the several parts of the church. Among the earliest surviving examples of this plan are Clairvaux (of which more presently), Fountains, and Fontenay. The church of Fountains (plate xxvi)[6] was doubtless planned under the direction of Geoffrey of Ainai, the veteran monk of Clairvaux,[7] and Mr. Hope

[1] The authorities for the plans in plate xxvi are given in the foot-notes below. The light dotted shading on some of the plans shows walls which either have been altogether destroyed, or are now represented only by foundations or by walls below window-level. The cross-hatching shows later extensions.

[2] From the plan by Mr. Harold Brakspear, *Waverley Abbey* (*Surrey Archaeological Society*, 1905), p. 9.

[3] *Archaeological Journal*, lxi, 213, with plan.

[4] From N. Nicolaysen, *Om Lysekloster og dets ruiner* (Christiania, 1890), pl. 1.

[5] *Memorials of the abbey of St. Mary of Fountains* (*Surtees Soc.* 42), i, 89.

[6] From the plan by Mr. Harold Brakspear, F.S.A, in the *Yorkshire Archaeological Journal*, xv, 402.

[7] P. 196, and note 2, *supra*.

suggests 1135 as the possible date of its commencement.[1] Although a large church, it was laid out on a somewhat smaller scale than the contemporary Clairvaux, but both had naves of eleven bays in length, and three chapels on the east side of each arm of the transept. At Fountains, however, the planning of the transept chapels is exceptional in that the inner chapels, flanking the presbytery on either side, projected further to the east than the others.[2] Probably we may see here a survival of the not uncommon plan of apsidal chapels *en échelon* on the east side of the transept,[3] the rectangular termination being substituted for the apse. This exceptional treatment seems to indicate that the typical Cistercian church-plan was scarcely yet definitely established. Fontenay,[4] which is probably the oldest surviving Cistercian church in France, is also one of the most interesting on account of its intimate connection with St. Bernard. The abbey, founded in 1119, was the second daughter of Clairvaux; its first abbot was Godfrey, St. Bernard's cousin; and its principal benefactor was Raynard of Montbard, maternal uncle of St. Bernard.[5] The existing church, which was built at the cost of Everard, bishop of Norwich,[6] and is said to have been begun in 1139,[7] was consecrated in 1147 by pope Eugenius III in the presence of Saint Bernard,[8] though it is possible that it was not then finished. Its plan (plate xxvi)[9] is an excellent example of the normal Cistercian type in its primitive simplicity, and affords an interesting parallel to the plan of Kirkstall. At Kirkstall (plate xxvi) the presbytery is longer, and each arm of the

[1] *Yorkshire Archaeological Journal*, xv, 274.

[2] For Mr. Hope's suggestion in explanation of this peculiarity, see *Yorkshire Archaeological Journal*, xv, 301.

[3] Represented in the plans of Saint-Vorles, Chatillon-sur-Seine (Cote-d'Or); Saint-Genes, Chateaumeillant (Cher); Saint-Sever (Landes); and in England at St. Albans, and St. Mary's, York.

[4] Situated in an ideal Cistercian valley near Montbard (Cote-d'Or).

[5] Vacandard, *Vie de Saint Bernard*, i, 85.

[6] The architecture of the church, which is severely simple, is purely Burgundian, and owes nothing to Everard's influence.

[7] J. H. Druery, in the *Proceedings of the Norfolk and Norwich Archaeological Society*, v, 41–48. Abbe J. B. Corbolin, *L'abbaye de Fontenay* (Citeaux, 1882), 22, 26, 136.

[8] *Gallia Christiana*, iv, 492. Vacandard, *Vie de Saint Bernard*, ii, 316.

[9] There is a small and not quite accurate plan of Fontenay in Viollet-le-Duc, *Dict.* i, 274 (plan of the church reproduced in Dehio and von Bezold, *op. cit.* pl. 191). There is a better plan in E. Sharpe, *The Architecture of the Cistercians*, pl. ii. There are some notes on the abbey (with illustrations, but without a plan of the church) by A. de Caumont in the *Bulletin Monumental* for 1852, pp. 245–251. The plan of the church on plate xxvi is from my own measurements. Fontenay still awaits the monograph it deserves.

transept has three chapels, instead of the two at Fontenay; in both, however, the nave is eight bays in length, and there is a remarkable similarity in the general dimensions of the two plans,[1] although their structural system is entirely different.[2]

Of the remaining churches of the simplest type, the plans of which are illustrated in plate xxvi, Buildwas[3] (Shropshire), though a smaller church, presents much interesting material for comparison with Kirkstall. The still later church of Roche[4] (Yorkshire) affords an early example of a modification in the construction of the transept chapels, which became general in Cistercian architecture towards the end of the twelfth century. In the earlier Cistercian churches, these chapels are always separated by solid walls. At Roche these walls no longer appear, but the chapels form a continuous aisle, divided only by low screen walls. In the contemporary church of Dore (plate xxvi), the two chapels of the north transept are separated by a solid wall, while the two chapels of the south transept, which are a trifle later, are open to each other.[5]

During the golden age of the order, the Fontenay-Kirkstall plan was that followed in by far the greater number of churches, in all countries where the influence of the order penetrated. Besides those already mentioned, I will name here some of the better-known examples.[6]

[1] Compare the following dimensions:

	Fontenay.	Kirkstall.
Nave, clear width	28 ft. 4 in.	29 ft. 0 in.
Nave and aisles, clear width	62 ft. 9 in.	62 ft. 6 in.
Length from centre of transept to inside of west wall	164 ft. 5 in.	163 ft. 3 in.

[2] Another point of similarity between Fontenay and Kirkstall is the planning of the *cellarium* with its east wall in line with the west wall of the church, with a "lane" between the *cellarium* and the cloister. Compare this point in the plans of Buildwas, Dore, Citeaux, and Clairvaux (plate xxvi).

[3] Plan in Joseph Potter, *Remains of Ancient Monastic Architecture in England* (London, 1847), pl. 1, and plan by Mr. Roland W. Paul in *The Builder*, lxxix, 292 (Oct. 6, 1900).

[4] Plan in E. Sharpe, *Architectural Parallels* (London, 1848); in J. H. Aveling, *The History of Roche Abbey* (Worksop, 1870), pl. 2; and in the excursion programmes of the Yorkshire Archaeological Society of July 27, 1887, and Sept. 6, 1900.

[5] At Fontenay, the chapels of the transept were originally separated by solid walls. Towards the end of the twelfth century, the lower parts of these walls were removed, and segmental arches were constructed over the openings formed between the chapels. Recesses were then made in the wall and pier respectively beneath the springings of the segmental arch, for the piscina and *ministerium* (these are now visible in the north transept only, as the opening in the south transept has been walled up again).

[6] This list is not, of course, intended to be exhaustive. It includes, for the most part, churches of which published plans are accessible.

In France :—Noirlac[1] (Cher), Silvacane[2] (Bouches-du Rhône), Silvanès[3] (Aveyron), La Bussière[4] (Côte-d'Or), Clermont (Mayenne), La Ferté[5] (Saône-et-Loire), Acey[6] (Jura), and Mont-Sainte-Marie[7] (Doubs).

In England and Wales :—Furness[8] (Lancashire), Louth Park[9] (Lincolnshire), Bindon[10] (Dorset), Dore[11] (Herefordshire) before its eastward extension, Valle Crucis[12] (Denbighshire), and Strata Florida[13] (Cardiganshire).

In Ireland :—Boyle[14] (Co. Roscommon).

In Switzerland —Hauterive,[15] Cappel,[16] and Wettingen[17] before its eastward extension.

In Germany :—Maulbronn[18] (Würtemburg), Eberbach[19] (Nassau), and Pforta[20] (Thuringia) before the addition of an apse to its presbytery.

In Italy :—Fossanova,[21] SS. Vincenzo ed Anastasio alle Tre Fontane,[22] near Rome, S. Maria d'Arbona,[23]

[1] E. Lefevre-Pontalis, *L'abbaye de Noirlac*, in the volume of the *Congres archeologique de France tenu a Bourges*, 1898, p. 223, with plan. Begun about 1170.

[2] H. Revoil, *Architecture romane du Midi de la France*, ii, pl. xvii (plan). Plan also in Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, pl. 118. Building in 1182.

[3] *Archives de la Commission des Monuments Historiques*, v, pl. 88. A. Angles, *L'abbaye de Silvanes*, in the *Bulletin Monumental*, lxxii, 41.

[4] J. Marion, *Notice sur l'abbaye de la Bussiere* (1843).

[5] Plan by Stürzer in *Cistercienser-Chronik*, 1895, p. 225, reproduced in A. Holtmeyer, *Cisterzienserkirchen Thuringens* (Jena, 1906), 44. Church said to have been begun in 1210.

[6] Plan by Jules Gauthier in *L'abbaye d'Acey* (Besançon, n.d.), pl. i.

[7] Plan of 1773 of the destroyed church in Canon Sachet and Jules Gauthier, *L'abbaye de Mont-Sainte-Marie et ses monuments*, in the *Bulletin de l'Academie de Besançon* (1884), pl. i.

[8] W. H. St. John Hope, *The Abbey of St. Mary-in-Furness*, in the *Cumberland and Westmorland Antiquarian and Archaeological Society's Transactions*, vol. xvi.

[9] E. Trollope, *The Architectural Remains of Louth Park Abbey*, in the *Associated Architectural Societies Reports*, xii (1873), 22 and pl. 1.

[10] Gordon M. Hills in the *Journal of the British Archaeological Association*, xxviii, 299 and pl. 20.

[11] See plate xxvi.

[12] Plan by Mr. Roland W. Paul in *The Builder*, lxxvii, 13 (July 1, 1899).

[13] Stephen W. Williams, *The Cistercian Abbey of Strata Florida* (London, 1889), plan, p. 182.

[14] *Transactions of the Royal Institute of British Architects*, 1862-63, p. 205 and pl. xiv.

[15] J. Rudolf Rahn, *Die Mittelalterlichen Kirchen des Cisterciensерordens in der Schweiz* in *Mittheilungen der antiquarischen Gesellschaft in Zurich*, Band xviii, Heft 2 (Zürich, 1872). Plan also in Dehio and von Bezold, *op. cit.* pl. 118 and 193, and in A. de Dion, *op. cit.* pl. F.

[16] J. R. Rahn, *op. cit.*

[17] J. R. Rahn, *op. cit.* Plan also in Dehio and von Bezold, *op. cit.* pl. 193.

[18] E. Paulus, *Die Cisterzienser-Abtei Maulbronn* (Stuttgart, 1889), with an excellent plan. Small plan in E. Sharpe, *The Architecture of the Cistercians*, pl. ii.

[19] Plan in Dehio and von Bezold, *op. cit.* pl. 194.

[20] Plan in A. Holtmeyer, *Cisterzienserkirchen Thuringens*, 214, fig. 62, and 276, fig. 104; and in Dehio and von Bezold, *op. cit.* pl. 194.

[21] C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 26.

[22] Plan in Dehio and von Bezold, *op. cit.* pl. 192.

[23] *Ibid.* pl. 192. C. Enlart, *op. cit.* 45.

Chiaravalle,[1] near Milan, and Chiaravalle di Castagnola,[2] near Ancona.

In Spain :—Santas Creus[3] (Catalonia).

In Denmark :—Soro.[4] In Sweden, Alvastra[5] (Ostergotland), and Roma[6] (Gottland).

We have seen that the General Chapters of the order were constantly forbidding innovations which "savoured of pride or superfluity," and passing statutes to prohibit things considered to be inconsistent with the simplicity and uniformity which were the essential characteristics of the order. Considering the strength of local building traditions in the twelfth century, it is a remarkable testimony to the discipline of the order that their church plans so generally conform to the standard type. It is, however, natural enough that some plans should show modifications of this type, due to the influence of the local manner of building. These modifications most generally consist in the substitution of the apse for the rectangular termination of either presbytery or transept chapels.

We find examples of the apsidal termination to the presbytery in France at Obasine[7] (Corrèze), Fontfroide[8] (Aude), Senanque[9] (Vaucluse), Thoronet[10] (Var), and Loc-Dieu[11] (Aveyron)[12]; in Switzerland at Bonmont[13]; in

[1] *Ibid.* pl. 192. *Ibid* 68.

[2] *Ibid.* pl. 192. *Ibid* 71.

[3] *Album pintoresch-monumental di Catalunya : Santas Creus* (*Associació Catalanista d'Excursions Científicas*, Barcelona, 1883), with plan. C. Enlart, *Les origines de l'architecture gothique en Espagne et en Portugal*, in the *Bulletin archeologique*, 1894.

[4] J. B. Loffler, *Udsigt over Danmarks Kirkebygninger fra den tidligere Middelalder* (Copenhagen, 1883), 188 (plan).

[5] Hans Hildebrand, *Sveriges Medeltid* (Stockholm, 1898-1903), iii, 956 (plan). C. Enlart, *Notes archeologiques sur les abbayes cisterciennes de Scandinavie*, in the *Bulletin archeologique*, 1893 (with plan).

[6] H. Hildebrand, *op. cit.* iii, 964 (with plan). The transept chapels are not square ended, but have apses of flat segmental curve.

[7] Plan in Viollet-le-Duc, *Dictionnaire*, ix, 225; Dehio and von Bezold, *op. cit.* pl. 191; and A. de Dion, *op. cit.* pl. C. The presbytery, transept and its chapels, and nave are covered with pointed barrel-vaults, the aisles with unribbed groined vaults, and the crossing with a dome on pendentives. The crossing is surmounted by a fine octagonal tower (Viollet-le-Duc, *Dictionnaire*, iii, 309, figs. 21 and 22). The chapel of the north transept bears an inscription recording the dedication of an altar in 1176.

[8] Plan in the volume of the *Congrès archeologique de France tenu à Carcassonne*, 1906, p. 62. Small plan in E. Sharpe, *Arch. Cist.* pl. ii.

[9] Plan in Dehio and von Bezold, *op. cit.* pl. 118.

[10] Plan in H. Revoil, *op. cit.* ii, pl. xiv, and in A. de Dion, *op. cit.* pl. C.

[11] Plan in *Archives de la Commission des Monuments Historiques*, v, 84.

[12] Also in the fourteenth-century church of the College des Bernardins, Paris, now destroyed (see Lenoir's *Statistique Monumentale de Paris*).

[13] Plan in J. R. Rahn, *op. cit.*

Germany at Bronnbach[1] (Baden), and Pforta[2] (Thuringia); in Italy at San Martino[3] near Viterbo, and S. Maria di Falleri, near Civitâ Castellana; in Spain at Las Huelgas,[4] near Burgos; and in Belgium at Villers.[5]

Apsidal terminations to the chapels of the transept are more rare. S. Maria di Falleri (Italy) has two apsidal chapels on the east side of each arm of the transept.[6] Thoronet (Var), Senanque (Vaucluse), and Loccum[7] (Hanover) have chapels ending in apses internally, though their walls externally are straight. Fontfroide (Aude) has two chapels on the east side of each arm of the transept; the inner chapel on each side of the presbytery is square, but the outer chapel on each side terminates in a semi-octagonal apse, as does the presbytery itself.[8] Georgenthal (Gotha) seems to have had two apsidal chapels *en échelon* to each arm of its transept.[9]

So far as our present knowledge extends, no Cistercian church in England, of the simpler type of plan, had apses to the presbytery or to the transept chapels.

In churches of the normal plan, the number of chapels on the east side of *each* arm of the transept varied, from one at Waverley and Lysa to four at La Ferté. Plans with two chapels to each arm are most numerous, but many have three.[10]

[1] Plan in Dehio and von Bezold, *op. cit.* pl. 194; in A. Holtmeyer, *op. cit.* 253, fig. 83; and in E. Sharpe, *Arch. Cist.* pl. ii.

[2] Plan in Dehio and von Bezold, *op. cit.* pl. 194, and in A. Holtmeyer, *op. cit.* 276, fig. 104. Presbytery extended with polygonal apse, 1251–1300.

[3] C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 57, plan, fig. 15.

[4] Plan in G. E. Street, *Some Account of Gothic Architecture in Spain* (London, 1865), pl. i, and in Dehio and von Bezold, *op. cit.* pl. 192.

[5] Plan in G. Boulmont, *Les ruines de l'Abbaye de Villers*. The church dates from the first half of the thirteenth century.

[6] A painted inscription records the consecration of an altar in the north transept in 1186 (C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 80, n. 3).

[7] Plan in Dehio and von Bezold, *op. cit.* pl. 194, and in A. Holtmeyer, *op. cit.* 258, fig. 88.

[8] See note 8, p. 208, *supra*. The plan in Dehio and von Bezold, *op. cit.* pl. 118, is inaccurate, and entirely omits the outer chapels.

[9] A. Holtmeyer, *op. cit.* 226, 228, 231, 241, 268 (figs. 66, 67, 69, 73 and 96). Cf. the Savignian plan of Furness, and probably Savignian plan of Vaux-de-Cernay (*supra*).

[10] Of the churches mentioned above, the following have two chapels on the east side of each arm of the transept:—Fontenay, Noirlac, Silvacane, Silvanes, Clermont, Fontfroide, Senanque, Loc-Dieu, Thoronet, Buildwas, Roche, Bindon, Dore (originally), Valle Crucis, Boyle, Hauterive, Cappel, Wettingen, Bonmont, Pforta, Bronnbach, Loccum, Georgenthal, Fossanova, S. Maria d'Arbona, San Martino, S. Maria di Falleri, Santas Creus, Las Huelgas, Soro, Alvastra, and Roma. The following have three chapels on each side: Obasine, Fountains, Kirkstall, Furness, Louth Park, Strata Florida, Maulbronn, Eberbach, Chiaravalle near Milan, and Chiaravalle di Castagnola.

In the largest monasteries, the number of chapels provided in the simple type of plan which we have been considering was not sufficient for the number of monks who were priests. If, as Mr. Micklethwaite says, there was no rule that monks who were priests must celebrate daily,[1] still, on the other hand, we learn from the Benedictines who visited Clairvaux in the early part of the eighteenth century of an ancient custom which did not allow masses to be said at the same altar on the same day.[2] If this custom obtained in the golden age of the order, it might have something to do with the tendency to increase the number of chapels, which is such a marked characteristic in the development of Cistercian church-plan; though perhaps the large numbers of monks in the more flourishing abbeys, and the consequent increase in the number of monks of one abbey who were priests, may in itself have been a sufficient reason for providing more altars. However this may be, we find an early indication of this tendency in a plan which is not only one of the oldest of which we have any knowledge, but also one of the most important—that of Clairvaux itself.

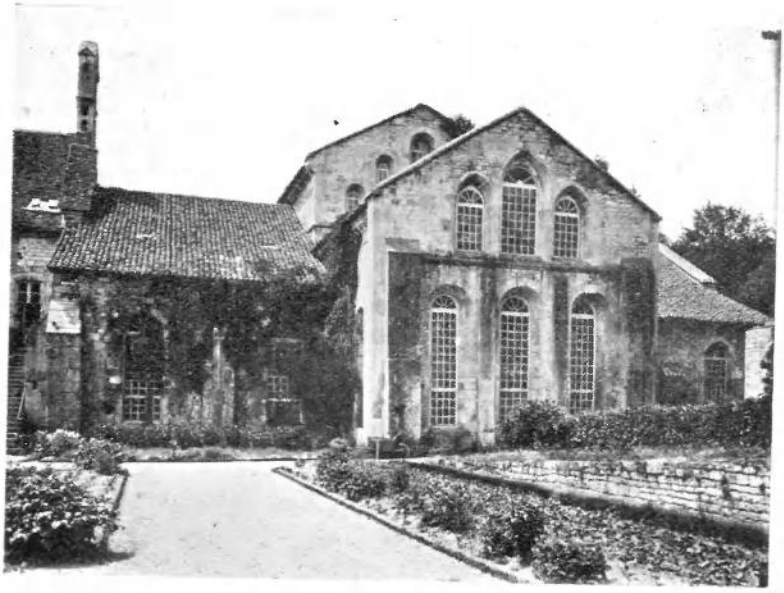
The church of Clairvaux and the greater part of the monastic buildings were unfortunately destroyed nearly a century ago.[3] Our knowledge of them is therefore based almost entirely on old descriptions[4] and drawings, and especially on Dom Milley's drawings of 1708, one

[1] *Yorkshire Archaeological Journal*, xv, 261. Mr. Micklethwaite gives as his authority cap. lxvi. of the *Consuetudines* (*Ecclesiastica Officia*), in which the passage in question reads, "Sacerdotes tamen qui per septimanam cantant, si die dominico non cantant, in eorum sit potestate communicare vel non" (*Nom. Cist.* 141).

[2] "Nous remarquames encore dans Clervaux une pratique singuliere; tous les religieux pretres ont leur autel assigne pour dire la sainte Messe, et aucun ne la celebre sur l'autel d'un autre; c'est un reste de l'ancienne discipline, qui ne permettoit pas de dire en un meme jour deux messes sur un meme autel." (*Voyage litteraire*, vol. i, part i, p. 186).

[3] For description and illustrations of what still remains, see Canon J. T. Fowler's papers in the *Yorkshire Archaeological Journal*, xix, 1, and xx, 1.

[4] For a description of Clairvaux in 1517, see *Un grand monastere au xvie siecle*, in Didron's *Annales archeologiques*, iii, 223 (Paris, 1845); in 1667, see Meglinger's *Iter Cisterciense*, in Migne, *Patr. Lat.* vol. 185, col. 1598 et seq; in 1708, see *Voyage litteraire*, vol. i, part i, pp. 99 and 185. See also Ph. Guignard, in Migne, *Patr. Lat*, vol. 185, col. 1661 et seq. and Vacandard, *Vie de Saint Bernard*, i, 411–421, and the authorities there cited.



[*Ph. des Forts, phot.*

NO. I. FONTENAY, EAST END OF CHURCH.

[*Ph. des Forts, phot.*

NO. 2. FONTENAY, WEST END OF CHURCH.

of which is an excellent plan of the whole monastery.[1] When the rapid increase in the number of novices forced St. Bernard, much against his will in the first instance, to undertake the erection of a new monastery in 1133 or 1135,[2] the buildings were carried out with great rapidity. The church rose as if it were animated by a living soul,[3] and was dedicated before 1145, Vacandard suggests probably in 1138.[4] There was another dedication of the church in 1174.[5] From a study of the plan (plate xxvi), we may, I think, safely conclude that the nave and transept as far as the east side of the transept chapels, represents St. Bernard's building, begun in 1133 or 1135, and that the dedication of 1174 referred simply to the enlargement of the eastern arm, in order to provide a greater number of chapels.[6] In the plan (plate xxvi) I have therefore shown in black those parts which I believe are to be

[1] Dom Milley's three drawings, engraved by C. Lucas, were printed at Clairvaux in 1708 (see Guignard, in Migne, *Patr. Lat.* vol. 185, cols. 1763–4, for particulars of their publication). No. 1 is a ground plan of the monastery, no. 2 is a view from the west, and no. 3 is a view from the south, all with very complete references. No. 1 is reproduced in Vacandard, *Vie de Saint Bernard*, i, 419. The plans in Viollet-le-Duc, *Dictionnaire*, i, 266–7, figs. 5 and 6, in Dehio and von Bezold, *op. cit.* pl. 191 (both without scale), and in E. Sharpe, *Arch. Cist.* pl. ii (to small scale), are all based on Dom Milley's plan, as also is the block-plan illustrating Canon Fowler's paper (*Yorkshire Archaeological Journal*, xix, 16). The plan no. 1 is drawn to a scale of fathoms (*toises*) of 6 feet, and my plan of the church in plate xxvi is drawn from this plan, on the basis of 1 *toise*=1^{m},949. The original plan does not show the projection of the vaults, but I have added the transverse arches, etc, in order to make the plan clearer. The difference of shading is not, of course, on the original plan, but simply represents my own inferences. The plan does not show any windows. The crosses on the plan mark the positions of altars shown on Dom Milley's plan.

[2] 1135 is the date generally accepted for the beginning of the new monastery, but see Vacandard, *Vie de Saint Bernard*, i, 411, note 2, for the evidence in favour of 1133.

[3] "Surrexit domus, et quasi animam viventem et motabilem haberet nuper nata ecclesia, in brevi profecit et crevit." *S. Bernardi Vita Prima*, liber ii, *auctore Ernaldo*, cap. v, No. 31 (Migne, *Patr. Lat.* vol. 185, col. 285).

[4] *Op. cit.* i, 421, and note 3. Meglinger says that the new monastery was completed about 1148 (Migne, *Patr. Lat.* vol. 185, col. 1607).

[5] *Chronicon Claravallense*, in Migne *Patr. Lat.* vol. 185, col. 1248.

[6] E. Sharpe (*Arch. Cist.* 43) attributed the whole church to the later date, but I think there can be no doubt that Vacandard's opinion (*op. cit.* i, 414), which I have followed above, is the true one. The arrangement of the buildings around the cloister proves that they were planned with the nave and transept of the church, and the *cellarium* which still survives (*Yorks. Archaeol. Journal*, xix, 3) cannot, I think, be dated later than the middle of the twelfth century. I am indebted to the Rev. Canon J. T. Fowler for prints of his photographs of the *cellarium*. It is interesting to note that the treatment of the external face of the walls of the *cellarium* at Clairvaux with a series of blind arcades is reproduced in the *cellarium* at Kirkstall.

identified with St. Bernard's building, while the presumably later work is distinguished by hatching. If we imagine the later eastern extension to be suppressed, and if we substitute what was doubtless the original form of the presbytery, aisleless and square-ended, we have a plan of the usual simple Cistercian type, but laid out on a larger scale than any other contemporary Cistercian church of which we have any knowledge. A large church was an absolute necessity for a community which numbered (including *conversi*) nearly seven hundred souls, the novices alone numbering from ninety to one hundred.[1] The practical considerations which controlled the planning of the church are indicated by an old note of the number of the stalls. There were 144 in the monks' choir, 33 in the choir of the infirm, 351 in the choir of the *conversi*, and 287 elsewhere, making a total of 815.[2] Except in point of size, the plan of St. Bernard's church differed from Cistercian churches of the normal type only in the number of its chapels. In addition to the three on the east side of each arm of the transept, there were two on the west side of each arm, and the planning of those on the west side of the south transept in relation to the cloister proves that the western chapels formed part of the original plan, and were not subsequent additions, as those on the west side of the north transept at Citeaux must have been (see plate xxvi). The church of Clairvaux was therefore planned, in 1133 or 1135, with ten chapels, instead of the six of Fountains and Kirkstall.

The plan (plate xxvi) of La Cour-Dieu[3] (Loiret) shows, on a smaller scale, what Clairvaux was like before its eastern extension. The thirteenth-century church of Villers (Belgium) has the same number of chapels east and west of the transept, but here forming open aisles

[1] Vacandard, *Vie de Saint Bernard*, ii, 392.

[2] Migne, *Patr. Lat.* vol. 185, col. 1775. Similar numbers are given in some of the descriptions cited above (p. 210, note 4). When the Benedictines visited Clairvaux in 1708, they noted that most of the stalls of the *conversi*, which were in three rows on each side of the nave, had been removed a few years before, leaving only a few at the west end, which are shown on Dom. Milley's plan (*Voyage litteraire*, vol. i, part i, p. 99). At Cluny, there were 220 stalls in the monks' choir (*Ibid.* p. 228).

[3] Plan from A. de Dion, *op. cit.* pl. D, reproduced, with the projections of the vaults added, from the plan in L. Jarry, *Histoire de l'abbaye de La Cour-Dieu* (Orleans, 1864). The church was begun in 1170, five altars were consecrated in 1182, and three others before 1198; and at the dedication of the church in 1216 seven other altars were consecrated.

with low screen walls dividing the chapels (as at Roche). In Italy, Casamari[1] and San Galgano[2] follow the same plan, but with only two eastern chapels, and one western, to each arm of the transept. San Martino, near Viterbo, has one western chapel to the south transept only.

A further development of the chapel plan is to be seen at Pontigny (Yonne), the only church of the five principal houses of the order which has survived. This stately church, which is the more interesting to us because it is contemporary with Kirkstall, was begun about 1150, and is quite complete with the exception of the pair of inner chapels flanking the presbytery, and the presbytery itself, which disappeared in the great eastward extension of the end of the twelfth century. In the plan (plate xxvi),[3] I have shown the earlier building in black, while the later extension is distinguished by hatching. It is certain that the earlier presbytery was aisleless,[4] and there can be no doubt that it was of normal square-ended type. Each arm of the transept had three rectangular chapels on its eastern side, and two on its western side—so far the plan is precisely that of Clairvaux[5]—but Pontigny has in addition two rectangular chapels against the gable ends of the transept.[6] Pontigny therefore had fourteen chapels, against the ten of Clairvaux and La Cour-Dieu. Chapels at the ends of the transept occur also at Chiaravalle della

[1] C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 27, 40, and plan, fig. 2.

[2] A. Canestrelli, *L'Abbazia di S. Galgano* (Florence, 1896), 82, plan, fig. 21. See also C. Enlart, *op. cit.* 48.

[3] There are plans in Henry, *Histoire de l'abbaye de Pontigny* (Auxerre, 1839), and in Chaillou des Barres, *L'abbaye de Pontigny* (Paris, 1844). From the latter work are taken the plans in Viollet-le-Duc, *Dictionnaire*, i, 272, and Dehio and von Bezold, *op. cit.* pl. 191. The plan in plate xxvi is copied from the excellent plan of the church by M. Andre Philippe in the volume of the *Congres archeologique de France tenu a Avallon*, 1907, p. 200 (see also p. 202 for a restitution of the *plan primitif*). I have to thank M. Philippe for very kindly lending me his original plan. I am responsible for the two shadings on the reproduction in plate xxvi.

[4] Dehio and von Bezold (*op. cit.* i, 528, 531) and, following them, A. Holtmeyer (*Cisterzienserkirchen Thuringens*, 48) think that the church begun about 1150 had the rectangular ambulatory plan of Citeaux. This is certainly a mistake. In the south wall of what is now the south aisle of the presbytery, near its western end, the presence of a double piscina and aumbry in a precisely similar position to those in the adjoining chapels of the transept proves that this western end of the south aisle was originally a chapel like the others.

[5] At Pontigny the chapels on the west side of the transept communicate by doorways at the west end of their side walls. Dom Milley's plan of Clairvaux shows precisely the same arrangement.

[6] The chapel in the south-west angle of the south transept, now much altered by 'restoration,' was a later addition. It was dedicated to St. Thomas of Canterbury, who took refuge at Pontigny during his quarrel with Henry II.

Colomba[1] (Italy). Ourscamp[2] (Oise) had two rectangular chapels at the end of the north transept, besides four on its eastern side, and three on the east side of the south transept.

This development of the transept-chapel plan did not, however, provide a sufficient number of altars in the larger churches. The simple aisleless presbytery of the earlier plans gave way, therefore, to a presbytery surrounded by an ambulatory which gave access to further chapels. The ambulatory plan had hitherto been rejected by the Cistercians, but when chapels were planned to the east of the presbytery, the ambulatory became a necessity, to provide not only access to the chapels, but also a passage-way for processions. The ambulatory plan of the Cistercians was, however, usually contrived in characteristically simple fashion, in one of two ways, (1) with a rectangular ambulatory, and (2) with an apsidal ambulatory. We will consider these in turn.

Of the rectangular ambulatory plan we find two varieties, (a) with a row of eastern chapels only, and (b) with chapels surrounding the ambulatory on three sides. To the first of these two classes belong the known English examples,[3] plans of two of which, Byland and Dore, are given in plate xxvi.

Byland[4] (Yorkshire), one of the largest English Cistercian churches, was a completely new church, erected on a new site during the last thirty years of the twelfth century. Like Clairvaux, it has chapels (here open aisles) on both sides of the transept. The rectangular presbytery, of three bays, has north and south aisles, returned across the east gable, where the eastern 'aisle' formed five chapels. The eastern ambulatory, or procession path, was therefore *within* the east gable of the presbytery, the high altar being placed one bay westward of the east

[1] C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 70.

[2] Restored plan by M. Eugene Lefevre-Pontalis in the volume of the *Congres archeologique de France tenu à Beauvais*, 1905, p. 166. Church begun about the middle of the twelfth century.

[3] The rectangular ambulatory plan was no novelty in England when the Cistercians adopted it, for it is found in the Benedictine nunnery-church of Romsey (Hampshire), in the first quarter of the twelfth century.

[4] Plan in E. Sharpe, *Architectural Parallels*, and by Mr. Roland W. Paul in *The Builder*, lxxi, 270 (Oct. 3, 1896), with description by Mr. W. H. St. John Hope. See also E. Sharpe, *Arch. Cist.* pl. ii. and p. 53.

gable. The thirteenth-century rebuilding of Waverley[1] (Surrey) had five eastern chapels planned in the same manner, with the ambulatory within the east gable; the presbytery was five bays in length, and each arm of the transept had three chapels on its east side, instead of two as at Byland.

The eastern part of Dore[2] (Herefordshire) was an extension of the end of the twelfth and beginning of the thirteenth century, of an earlier church of the normal type. Like Byland, it has five eastern chapels, but here the returned eastern 'aisle' is of two bays in depth, thus providing an ambulatory in front of the chapels, but external to the east gable of the presbytery.[3] The north and south aisles of the presbytery, and the eastern ambulatory and its chapels, are covered with continuous lean-to roofs, a method which continues the Cistercian tradition of simplicity of construction. The plan of a Cistercian church sketched in the Album of Villard de Honnecourt,[4] is of the same type as Dore, with four eastern chapels and ambulatory; its transept plan is the same as Byland; indeed, if we substitute an ambulatory for the easternmost bay of the presbytery of Byland, the two plans would be precisely the same, except that Villard's plan has only four eastern chapels instead of five.

The rectangular ambulatory plan reaches its most complete development in the plan of Citeaux[5] (plate xxvi),

[1] Harold Brakspear, *Waverley Abbey*, 24; plan, p. 22, and large plan at end. The church was begun in 1203.

[2] Plan and description by Mr. Roland W. Paul in the *Transactions of the Bristol and Gloucestershire Archaeological Society*, xxvii, 117–126; in *The Builder*, lxx, 298 (April 4, 1896); and in Roland W. Paul, *Dore Abbey, Herefordshire* (1898). The later extension is distinguished by hatching in the plan in my plate xxvi.

[3] Mr. Harold Brakspear has shown that the church of Hayles (Gloucestershire), built after the foundation of the abbey in 1246, had the same plan of eastern ambulatory and chapels (*Archaeological Journal*, lviii, 350, with plan).

[4] *Album de Villard de Honnecourt, architecte du xiii^e. siecle*, reproductions in facsimile (Bibliotheque Nationale, Department des Manuscrits, Paris, 1907), pl. xxviii. The legend below the sketch reads: *Vesci une glize d'esquarie, ki fu esgardee a faire en l'ordene de Cistiaus.* Also in Dehio and von Bezold, *op. cit.* pl. 191.

[5] The plan on plate xxvi is drawn from a plan of the abbey, entitled *Plan Geometral de Citeaux*, signed by Etienne Prinstet, and dated 1718, which forms one of a series of drawings of Citeaux on parchment, now preserved in the *Archives departementales de la Cote-d'Or*, at Dijon. The original plan has two scales, *toises de* 6 *pieds* and *toises de* 7 *pieds et demy*. My plan of the church is drawn from the former scale, on the basis of 1 *toise* = 1^m,949. The original plan does not show the projection of the vaults, but I have added the transverse arches, etc. in order to make the plan easier to read. The plan does not show any windows. The crosses on my plan show the positions of altars marked on the original plan. Etienne Prinstet's plan shows various *projets* for alterations,

which represents the church consecrated in 1193.[1] Was this a completely new church, or was it simply a question of an eastward extension of an earlier church of the normal type, as at Clairvaux and Pontigny? It is certain that the small church of 1106 cannot have sufficed for the mother-house of the order until 1193, and we must conclude that it was superseded by a larger church, probably during the second quarter of the century. It is possible, and even probable, that the plan as we have it represents such a church, with its eastern part rebuilt and extended immediately before the consecration of 1193, but no definite evidence seems to be available,[2] and the church itself, after undergoing much alteration in the eighteenth century, has been completely destroyed. The planning of the south transept in relation to the cloister proves that, whenever the church was built, it was not intended to have chapels on the west side of the transept, and that the chapels on the west side of the north transept are an addition, or at any rate an afterthought.[3] The manner

which are distinguished by a yellow tint; their nature is indicated by references on each side of the drawing. One of these *projets* was a large sacristy, abutting against the east wall of the chapels on the east side of the south transept, and intercepting two of the chapels on the south side of the south ambulatory of the presbytery. This proposed sacristry, however, was never built, as is proved by an engraving entitled *Plan des Batiments de Cîteaux commencé en* 1760, by Lenoir le Romain, a copy of which is in the Bibliotheque Nationale (Estampes), Paris. The latter plan, which is without scale, shows the northern and southern chapels of the ambulatory as complete, though the eastern chapels are superseded by a new east end, and the nave is shown as shortened by the destruction of its three western bays; this plan distinguishes old and new buildings by different hatchings. I have to thank Mr. J. Willis Clark, of Cambridge, for very kindly lending me a photograph of Etienne Prinstet's plan. I owe especial thanks also to M. le Vicomte Pierre de Truchis, who not only made for me a tracing of the plan of the church from the original drawing, but also most kindly made an enlargement of it to a metric scale. M. de Truchis has also most obligingly placed at my disposal his intimate knowledge of Burgundian architecture.

[1] Guignard, *Les Monuments primitifs*, xxv, lvi.

[2] A. Holtmeyer (*Cisterzienserkirchen Thüringens*, 37) speaks of the consecration of the church of Citeaux by Pope Eugenius III in 1148. I think that this is a mistake, for what the Pope consecrated was a cemetery, and there is no question of a church in the record quoted by Guignard (*Les Monuments primitifs*, lviii and 75). Vacandard (*Vie de Saint Bernard*, ii, 315 and note 4) corrects the date to 1147.

[3] It is worthy of remark that the plan of eastern and western aisles (for chapels) to the north transept, and an eastern aisle only to the south transept, was adopted, doubtless in imitation of Citeaux, in the churches of two Cistercian royal foundations, Beaulieu (Hampshire), founded by King John, and Royaumont (Seine-et-Oise), founded by St. Louis. The monks entered the new church of Beaulieu in 1227, and the church of Royaumont was consecrated in 1235. Both were completely new churches of new foundations, and the plans of the two abbeys show many interesting points of comparison. For Beaulieu, see W. H. St. John Hope and Harold Brakspear in the *Archaeological Journal*, lxiii, 129; and for Royaumont, see Philippe Lauer, *L'abbaye de Royaumont*, in the *Bulletin Monumental*, lxxii, 215.

in which the ambulatory chapels join the transept chapels rather suggests two different dates. However, what is more material for our present purpose is the certainty that the date given by the consecration of 1193 applies to the plan of the presbytery and its ambulatory and chapels. The ambulatory is surrounded by chapels on its north, south and east sides, and the total number of chapels provided, including those of the transept, is twenty-one.[1] Whether Citeaux was the prototype of the rectangular ambulatory plans of the Cistercians is doubtful. Unless its eastern part was a very long time in hand before the consecration of 1193, it cannot have been the prototype of Byland. Citeaux, however, was no doubt the prototype of the Cistercian plans with chapels on the three sides of the ambulatory, of which some monasteries in Germany afford examples.

The plan of Ebrach (Bavaria) reproduced in plate xxvi[2] is evidently a copy of that of Citeaux, but whatever may have been the case at Citeaux, Ebrach was an entirely new church, begun in 1200, finished in 1282, and consecrated in 1285.[3] The arrangement of the presbytery and its ambulatory and chapels is precisely that of Citeaux, but Ebrach has only two chapels on the east side of each arm of the transept, and no western chapels. There are therefore sixteen chapels in all.[4] The plan of the eastern part of the church of Riddagshausen[5] (Brunswick) is

[1] For descriptions of Citeaux, see Meglinger's *Iter Cisterciense* of 1667, in Migne, *Patr. Lat.* vol. 185, col. 1593 et seq. and *Voyage litteraire*, vol. i, part i, 198–224. For views of the monastery, see the engraving by P. Brissart, 1674, a south view, with full references; and the engraving by B. Fariat, also a south view (second half of the eighteenth century), both in the Bibliotheque Nationale (Estampes), Paris. The sketch in Viollet-le-Duc, *Dictionnaire*, i, 271, fig. 7, is apparently from Brissart's engraving, and both show the nave of seven bays, instead of nine. Fariat's engraving shows the nave of nine bays.

[2] From the plan in Dr. Joannes Jaeger, *Die Klosterkirche zu Ebrach* (Wurzburg, 1903), p. 45. Plan (pl. ii) and view of east end (pl. vi) in E. Sharpe, *Arch. Cist.* and plan of church to larger scale, views, and details in E. Sharpe, *The Ornamentation of the Transitional Period in Germany* (London, 1876), pl. i–viii.

[3] The altars in the chapels of the north transept were consecrated in 1211 and 1218.

[4] The altars shown on Dr. Jaeger's plan are marked by crosses on the plan in plate xxvi. The church had 23 altars in the fourteenth century. St. Michael's chapel, at the end of the north transept, was begun with the church, as a burial-chapel for benefactors of the Imperial family, and was consecrated in 1207. Cf. the chape in a corresponding position in the plan of Clairvaux.

[5] E. Sharpe, *Arch. Cist.* plan, pl. ii; external and internal views, pl. vii and viii. Plan also in Dehio and von Bezold, *op. cit.* pl. 195; A. Holtmeyer, *op. cit.* fig. 93, p. 264, and J. Jaeger, *op. cit.* fig. 26, p. 46. See also Dr. R. Dohme, *Die Kirchen des Cistercienserordens in Deutschland* (Leipzig, 1869), pp. 102–3.

practically the same, but there are no chapels to the transept. The thirteenth-century extension of the church of Georgenthal[1] (Gotha) shows twelve chapels arranged around the three sides of a rectangular ambulatory in similar fashion.[2]

A point in the treatment of the elevation of these ambulatory plans is worth attention. At Byland and Dore a single lean-to roof was continued around the three sides of the presbytery, and the elevation was thus of two stories only. At Citeaux,[3] Ebrach,[4] and Riddagshausen,[5] the elevation is of three stories; the chapels are covered by a lean-to roof, above which rises the wall of the ambulatory, containing a range of clearstory windows, and above this again is the lean-to roof of the ambulatory itself, under the high windows of the presbytery. These continuous lean-to roofs, hipped at the angles, cannot be considered satisfactory in appearance, though they certainly conform to the Cistercian standard of simplicity.

The plan of the presbytery and 'nine altars' of Fountains,[6] as built in the first half of the thirteenth century, must be connected with the rectangular ambulatory plan, but the extension is designed on very original lines, and bears but little resemblance to the plans already noticed. The nine chapels are placed in a great eastern transept rising to the full height of the church—a design of much more ambitious architectural character, and less consonant with Cistercian simplicity than those of the Citeaux type. Of Fountains we are expressly told that the reason of the extension was that the number of the monks had so increased that the choir was not large enough to contain them, and there were too few altars for them to celebrate at.[7]

Of the apsidal ambulatory plan, the earliest example is the extension of Clairvaux (plate xxvi) consecrated in 1174.

[1] Plan in A. Holtmeyer, *op. cit.* fig. 96, p. 268.

[2] Cf. also the plans of Arnsburg (Hesse) and Lilienfeld (Lower Austria), in Dehio and von Bezold, *op. cit.* pl. 195; and the plan of Vitskol (Denmark) in J. B. Loffler, *Ruinerne af Vitskol Kloster-kirke* (Copenhagen, 1900), pl. 1. The latter plan has a rectangular ambulatory with recessed apses forming chapels on its three sides.

[3] Shown in Brissart's and Fariat's engravings, and in Viollet-le-Duc's drawing.

[4] J. Jaeger, *op. cit.* figs. 36, 37, 39.

[5] E. Sharpe, and R. Dohme, *op. cit.*

[6] Shown by dotted lines on the plan in plate xxvi.

[7] *Memorials of Fountains*, i, 128, and W. H. St. John Hope, *Fountains Abbey*, in the *Yorkshire Archaeological Journal*, xv, 277.

The eastern bay of the (presumably) rectangular presbytery of St. Bernard's church was converted into an apse, without any extension of its length; the east walls of the inner chapel on each side were removed, and around the apse was constructed an ambulatory, to give access to the nine chapels which surrounded it.[1] This plan, although its motive was of course the same as that of the contemporary *chevet* plan of the great French cathedrals, was essentially different in that the chapels, instead of being separate with separate roofs, were included within one continuous wall and formed a continuous range under a single lean-to roof. In fact, it was simply the application to the apsidal form of the same simple methods of plan and construction which we have already noticed in the transept chapels of the earlier Cistercian churches. At Clairvaux, the elevation was of three stories, with separate lean-to roofs over the chapels and ambulatory, and with a clearstory to the ambulatory[2]—an arrangement adopted later at Citeaux and the churches copied from it.

We have seen how the church of Pontigny, begun c. 1150, followed with some expansion the plan of St. Bernard's Clairvaux, begun in 1133 or 1135. So also, in its eastward extension of c. 1180–1200, Pontigny followed the ambulatory plan of Clairvaux of 1174, but in more ambitious fashion (plate xxvi). This beautiful work has a presbytery of three straight bays and an apse, surrounded by an ambulatory and eleven chapels, two on each side of the straight part, and seven around the apse. These latter, instead of being divided simply by straight walls, as at Clairvaux, assume a polygonal form internally. The chapels and ambulatory are each covered with lean-to roofs, but only a narrow strip of walling shows between them, and there is no clearstory to the ambulatory. Pontigny, as completed by this extension, had twenty-three chapels, as against seventeen at Clairvaux.[3]

The apsidal ambulatory plan of Clairvaux was followed,

[1] Dom Milley's plan shows altars in eight of these chapels, but the first chapel on the south side had been converted into a passage to the little cloister.

[2] This cannot be seen in Dom Milley's south view, but it is distinctly shown in Israel Silvestre's engraving, *Veue de L'Eglise de l'Abaye de Clervaux en Bourgougne* (Bibliotheque Nationale, Estampes).

[3] Not counting the chapel to the north-east of the north transept, or the additional chapel to the north-west of this transept. The description of Clairvaux in 1517 says that there were thirty altars in the church (*Annales archeologiques*, iii, 227).

in France, at Savigny[1] (Manche), Breuil-Benoît[2] (Eure), Bonport[3] (Eure), and Cherlieu[4] (Haute-Saône); in England, at Beaulieu[5] (Hampshire); in Sweden, at Varnhem[6] (Vestergotland); and in Portugal, at Alcobaça.[7] In Germany, Heisterbach[8] (Rhenish Prussia) has a very similar plan, but here the ambulatory is surrounded by nine chapels in apsidal recesses in the outer wall, which is semicircular externally.[9] Chaalis[10] (Oise), which has an aisleless apsidal presbytery, is an exceptional example of the application of the Clairvaux plan to the transept ends, without an ambulatory, since the transept itself served that purpose. Quincy (Yonne) seems to have had a similar plan.[11]

The churches of the Cistercian order frequently had a narthex at the west end of the nave, in conformity with Burgundian traditions. In the plans illustrated in plate xxvi the narthex existed at Fontenay, Fountains, Byland, Citeaux, Clairvaux, and Pontigny.

Many of the later Cistercian churches do not present the specially Cistercian characteristics described above, but their plans conform to the types usual in the larger churches of their time and country. The ordinary English plan of an eastern arm with a high east gable, and with north and south aisles,[12] was adopted by the Cistercians

[1] Plan in A. de Dion, *op. cit.* pl. A. The church, built between 1175 and 1200, has nine chapels around the ambulatory, making, with the four transept chapels, a total of thirteen.

[2] Plan in A. de Dion, *op. cit.* pl. B, and in E. Chevallier (work cited in the following note), p. 105. The church, begun probably c. 1190, and consecrated in 1224, has five chapels around the ambulatory.

[3] Abbe Emile Chevallier, *Notre-Dame de Bonport* (Mesnil-sur-l'Estree, 1904), plan, fig. 1. The church, which was built c. 1200–1225, has seven chapels around the ambulatory.

[4] Abbe Chatelet, *Les monuments de l'abbaye de Cherlieu* (Besançon, 1885). Seven chapels around the ambulatory.

[5] W. H. St. John Hope and Harold Brakspear, *The Cistercian Abbey of Beaulieu*, in the *Archaeological Journal*, lxii, 129, with plan by Mr. Brakspear.

[6] H. Hildebrand, *Sveriges Medeltid*, iii, 960.

[7] Plan in W. Crum Watson, *Portuguese Architecture* (London, 1908), 58, and in Dehio and von Bezold, *op. cit.* pl. 528a.

[8] Plan in R. Dohme, *op. cit.* p. 116, and in Dehio and von Bezold, *op. cit.* pl. 195.

[9] Cf. the very similar plan of the Premonstratensian church of Dommartin (Pas-de-Calais), in C. Enlart, *Monuments religieux de l'architecture romane et de transition dans la région picarde* (Amiens and Paris, 1895), fig. 71, p. 107.

[10] E. Lefevre-Pontalis, *L'eglise abbatiale de Chaalis*, in the *Bulletin monumental* (1902), lxvi, 449; plan, p. 456. Church commenced before 1202, and consecrated in 1219. The plan shows a nave of twelve bays in length, as at Byland.

[11] *Voyage litteraire*, vol. i, part i, p. 107.

[12] This plan is not, as is often supposed of exclusively English origin, for it is the plan of Saint-Hildevert, Gournay (Seine-Inferieure), of the beginning of the twelfth century, if not of the end of the eleventh. See L. Regnier in the volume of the *Congres archeologique de France tenu a Beauvais en* 1905, p. 74, with plan.

at Jervaulx[1] (Yorkshire) in the last quarter of the twelfth century, and was followed at Rievaulx[2] (Yorkshire), Tintern[3] (Monmouthshire), and Netley[4] (Hampshire) in the thirteenth century. The ordinary French *chevet* plan, with apse and ambulatory, surrounded by separate apsidal chapels, was adopted in France in the church of Mortemer[5] (Seine-Inférieure), consecrated in 1209, in the church of Longpont (Aisne), consecrated in 1227, in the church of Royaumont[6] (Seine-et-Oise), consecrated in 1235, and in the rebuilding of Ourscamp[7] (Oise) in the last quarter of the thirteenth century; in England, at Croxden[8] (Staffordshire), and in the extension of 1270–7 at Hayles[9] (Gloucestershire); in Germany, at Altenberg[10] (Rhenish Prussia); and in Spain at Moreruela,[11] Veruela,[12] and Poblet.[13] These examples show that, even as early as the end of the twelfth century, and still more in the thirteenth century, the uniformity of Cistercian church-plan, which had so strikingly expressed the uniformity of observance inculcated by the founders of the order, was giving way to conformity with the architectural standards of the time.

In later times, chapels were formed to provide additional altars in parts of the church which had not been designed for this use. At Citeaux, in the seventeenth century, there were thirty altars in the church,[14] although this number is considerably in excess of the number of chapels

[1] Plan in E. Sharpe, *Architectural Parallels*, and *Arch. Cist.* pl. ii. Plan by W. H. St. John Hope in the Yorkshire Archaeological Society's Excursion programme of July 29, 1891.

[2] Plan in E. Sharpe, *Architectural Parallels*, and *Arch. Cist.* pl. ii; and in *The Builder*, lxvii, 10 (July 7, 1894).

[3] Plan in E. Sharpe, *Architectural Parallels*, and *Arch. Cist.* pl. ii; plan by Mr. Roland W. Paul in *The Builder*, lxxv, 9 (July 2, 1898), and in the *Archaeological Journal*, lxi, 213.

[4] Plan in E. Sharpe, *Architectural Parallels*, and *Arch. Cist.* pl. ii; and by Mr. Roland W. Paul in *The Builder*, lxvii, 262 (April 6, 1895).

[5] L. Regnier, in the *Mémoires de la Société historique et archeologique de Pontoise et du Vexin*, xxviii, 79, 81.

[6] Philippe Lauer, *L'abbaye de Royaumont*, in the *Bulletin Monumental*, lxxii, 215, with plan.

[7] E. Lefevre-Pontalis in the volume of the *Congrès archéologique de France tenu a Beauvais en* 1905, p. 167, with plan.

[8] Plan in E. Sharpe, *Arch. Cist.* pl. ii, and in Gordon M. Hills, *Croxden Abbey and its chronicles*, in the *Journal of the British Archaeological Association*, xxi, 294, and pl. 14.

[9] Plan by Mr. Harold Brakspear in the *Archaeological Journal*, lviii, 356.

[10] Plan in E. Sharpe, *Arch. Cist.* pl. ii.

[11] Plan in *Boletin de la Sociedad Espanola de Excursiones* (1906), p. 100. The ambulatory of Moreruela has a clearstory.

[12] Plan in G. E. Street, *op. cit.* pl. xxiii; in Dehio and von Bezold, *op. cit.* pl. 192; and in E. Sharpe, *Arch. Cist.* pl. ii.

[13] Plan in *Album de Poblet* (*Associacio Catalanista d'Excursions Cientificas*).

[14] Meglinger's *Iter Cisterciense*, in Migne, *Patr. Lat.* vol. 185, col. 1593.

structurally designed as such, and we learn from a later description that there were altars against all the pillars of the nave.[1] So also at Fountains[2] and Kirkstall[3] there were altars against some of the nave pillars,[4] and chapels were also formed in the nave aisles, which were originally designed to be simple passage-ways. Such arrangements are, however, usually of comparatively late date, and have no real connection with the architecture of the buildings.

From this analysis of Cistercian church-plan, therefore, we see how the simple standard plan, of which Kirkstall is a typical example, controlled the church architecture of the Cistercians wherever the order spread, and how it was the root-idea of all subsequent development so long as Cistercian characteristics continued to differentiate the architecture of their churches from that of the other great churches of the time.

General Design and Structure.

In endeavouring to ascertain how much the architecture of the earlier Cistercian churches in England owes to Cistercian influence, and how far it simply follows the Anglo-Norman manner of its time, we must know what characteristics were specially Cistercian in the churches of the order built during the second quarter of the twelfth century. Our knowledge on this subject would have been much more complete if the church at Clairvaux, begun by St. Bernard in 1133 or 1135, had not been entirely destroyed. What little we can now know of its architecture must be gathered from Dom Milley's plan, and from his and other general views. Of the Cistercian churches in Burgundy which have survived, the most valuable for the purpose of comparison are Fontenay (plates ii and iii), begun c. 1139, and probably nearly finished at the time that Kirkstall was commenced, and Pontigny, begun c.1150.

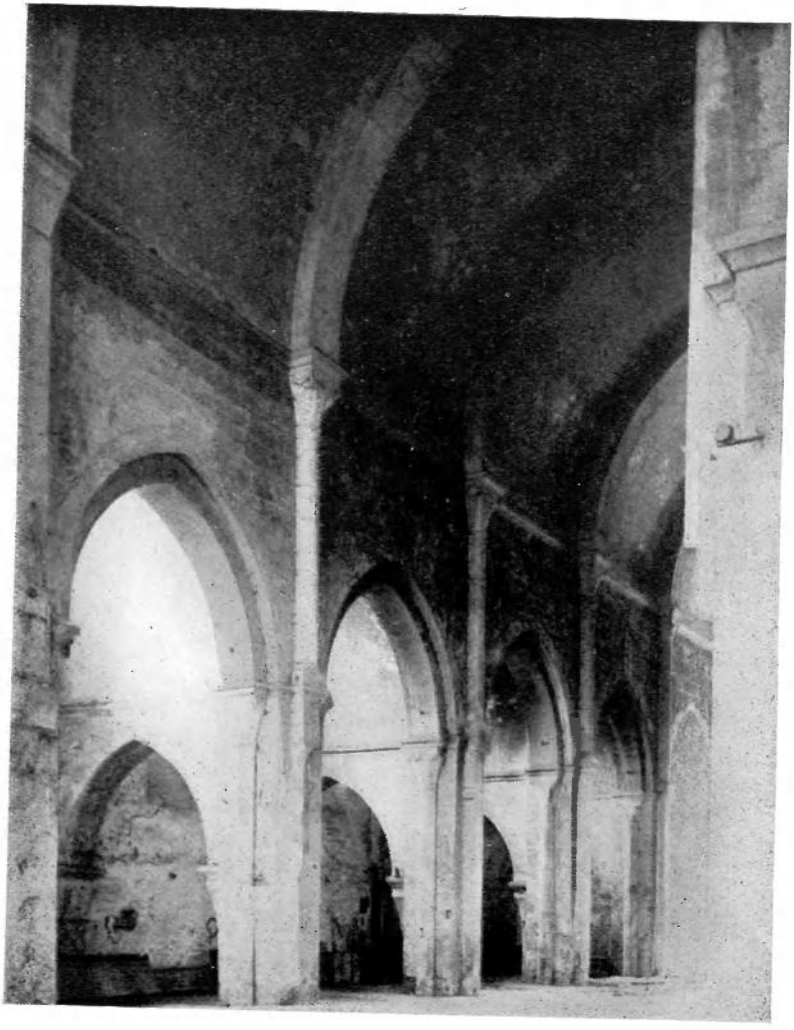
[1] *Voyage litteraire*, vol. i, part i, p. 198.

[2] See Mr. Brakspear's plan, and Mr. Hope's description, *Yorkshire Archaeological Journal*, xv, 306.

[3] W. H. St. John Hope, *Kirkstall Abbey*, 21, and historical plan.

[4] The plan of Ebrach shows altars against all the pillars of the nave except the westernmost pair (see crosses on plan in plate xxvi).

To face page 223.



FONTENAY, INTERIOR OF CHURCH FROM S.W. [*Ph. des Forts, phot.*

The most important factor in the design of a mediaeval church is the method employed for covering the various spans—the ceiling or vault. The Romanesque school of Burgundy, which produced so many remarkable and original churches, was one of the first to succeed in covering them with stone vaults. It employed various systems simultaneously, one of which was adopted by the Cistercians at Fontenay (plate iii). In spite of the great similarity between the plans of Fontenay and Kirkstall, their structural system is very different; nevertheless, certain features of the Burgundian system represented by Fontenay were imported by the Cistercians to Fountains and Kirkstall. The church at Fontenay is entirely covered with pointed barrel vaults. Of these the vault of the nave is at the highest level, and is continued through to the east side of the transept, without any real crossing, so far as the vaults are concerned. The vaults of the presbytery[1] and transept arms are at a lower level, and the arches into the latter rise only slightly above the impost of the nave vault. The transept chapels are each covered with a barrel vault, at right angles to the vault of the transept itself. The aisles of the nave are similarly covered with transverse barrel vaults, on pointed arches across the aisles, the aisle vaults thus acting as abutments to the vault of the nave itself.[2] The Cistercians adopted this system of transverse barrel vaults covering the aisles abutting a longitudinal barrel vault over the nave in many of their churches, e.g. Bonmont[3] and Hauterive[4] in Switzerland, and they carried it as far north as Alvastra in Sweden, and as far south as Girgenti[5] in Sicily. They imported it, in part, to Fountains, where the aisles of the nave are covered with pointed transverse barrel vaults[6] (plate i), as at Fontenay, but here the transverse arches are semicircular,

[1] Five windows, stepped above the presbytery roof, open into the east end of the nave under its vault.

[2] Viollet-le-Duc, *Dictionnaire*, i, 179, fig. 14. See also, for other examples, C. Enlart, *Manuel d'archeologie française* (Paris, 1902), i, 271–2, note 2, and fig. 104 (Chatillon-sur-Seine); and *Histoire de l'Art*, ed. by Andre Michel (Paris, 1905), i, 475–6, and fig. 236.

[3] J. R. Rahn, *op. cit.* p. 79, fig. 3 (sectional view). Dehio and von Bezold *op. cit.* pl. 99, 6 (section).

[4] J. R. Rahn, *op. cit.* p. 74, fig. 2 (section through transept). Dehio and von Bezold, *op. cit.* pl. 99, 4 (section of nave). A de Dion, *op. cit.* pl. G (internal view).

[5] C. Enlart, *Origines françaises de l'architecture gothique en Italie*, p. 74 and figs. 22 and 23.

[6] *Yorkshire Archaeological Journal*, xv, 289, fig. 4.

and the details for the most part are Anglo-Norman. The necessity of securing clearstory lighting, however, prevented the adoption of the complete system at Fountains, and the longitudinal barrel vault over the nave, of which the transverse barrels were the logical accompaniment, was apparently not even contemplated, and certainly never constructed. The pointed barrel vaults over the transept chapels at Fountains, repeated later at Kirkstall, belong to the same system, and must be regarded as an importation from Burgundy.

The barrel vault, as a means of covering the principal spans of clearstoried churches was, however, entirely alien to the ideas of the Anglo-Norman builders. Unless it were kept low down, the difficulties of abutment were serious, and, if it were kept low, high lighting was impossible. The problem—how to vault the main spans so as to surmount these difficulties—which was *the* problem of Romanesque times, could only be successfully solved with the groined vault, and the builders of the Anglo-Norman school never attempted to solve it in any other way. So long as the simple groined vault alone was at their disposal, they generally vaulted only the aisles, and the comparatively short eastern arms of their churches, where the difficulties of abutment were much less serious than in the long naves.[1] Even after the introduction of the groin-rib had made the complete solution of the problem possible, the main spans of nave and transept were still covered with wood ceilings, very frequently in England, though perhaps less frequently in Normandy. It is therefore quite in accordance with the English tendencies of the time that, at Kirkstall, only the presbytery, the transept chapels, and the aisles of the nave should be vaulted, while the transept and nave were covered with wood ceilings, as also were the transept and nave at Fountains and Buildwas. We will return to the system of the vaults of the presbytery and aisles of the nave at Kirkstall, when we have completed our examination of the general design of these churches.

From the first, the Cistercians used the pointed arch in their churches for the main arches of construction.

[1] They were more cautious than the Burgundian builders at Vezelay, for example, where the nave was covered with groined vaults early in the twelfth century.

In the church at Kirkstall, for instance, the arches of the crossing, of the transept chapels, and of the nave arcades, and the transverse ribs in the vaults of the presbytery and of the aisles of the nave, are pointed, while the arches of doorways, windows, and other minor openings remain semicircular. The simultaneous use of the pointed arch for the arches of construction with the semicircular arch for doorways, windows, etc. is equally characteristic of Fontenay, Fountains, Buildwas, and other early Cistercian churches.[1] This characteristic is not indeed specially Cistercian, and it is found everywhere in churches built during the period of the 'Transition.' Nevertheless, so far as England is concerned, there can be no doubt that Cistercian influence counted for much in popularizing the systematic use of the pointed arch. When the Cistercians began, in the second quarter of the twelfth century, to develop their own particular manner of building, the pointed arch had for some time been definitely established as part of the Burgundian system of construction, and it was used by the Cistercians almost without exception for the principal arches of construction in their churches. It would not indeed be difficult to quote examples of its use in England before the earliest surviving Cistercian work, and it was employed for the transverse ribs of the nave vault of Durham cathedral, built between 1128 and 1133. But at the time when the church at Fountains, or even when that at Kirkstall, was built, the use of the pointed arch was not so uniform in other English churches as it was in those of the Cistercians, and the influence of their building certainly hastened a change which, apart from them, was nevertheless inevitable.

The earlier Cistercian churches are marked by great simplicity of treatment, and by an almost entire absence of the rich decoration which is so characteristic of the later Romanesque. This is especially noticeable in the side walls of the unaisled presbyteries; externally flat pilaster buttresses divide the bays, but internally there is no vertical subdivision, for the vaults spring from corbel-supports.[2]

[1] In the earlier parts of the church at Pontigny, the arches of the lower windows of the transept are semicircular, but the arches of the clearstory windows of the transept, and of both aisle and clearstory windows in the nave, are pointed. The pointed arch is, of course, used everywhere for the main arches of construction.

[2] Kirkstall and Buildwas.

The plain wall-surfaces are unrelieved by the usual decorative wall-arcades,[1] or by wall-passages.[2] Nevertheless some details, even of the earlier churches, such as the capitals of the piers at Fountains and Kirkstall, and the archivolts of the north and west doorways at Kirkstall, show more elaboration than is usual in Cistercian churches abroad. At Kirkstall and Buildwas, the treatment in some respects becomes rather less simple towards the west than it is in the eastern (and earlier) parts of these churches, and this relaxation of the primitive simplicity is carried still further in the later churches.

In the transept at Buildwas, the openings to the chapels on its eastern side are reduced to the simplest terms of expression. The piers are square recessed, and surmounted by a simple impost moulding, and the arch orders are unmoulded.[3] At Fountains, the corresponding openings[4] are almost as simply treated, but, while the inner order of pier and arch is square-edged, the outer order is chamfered.[5] At Kirkstall, however, the two orders of the pier have engaged shafts with scalloped or sculptured capitals (plate xviii, no. 2), and the section of the moulded arch orders repeats that of the piers (fig. 11, iii), not an uncommon feature in work of this period. The transepts of these three churches were not vaulted, but in the vaulted transepts of Roche (plates v, xvi and xvii) and Dore, shafts are carried up the face of the pier to receive the vault; at Roche, a single shaft receives the transverse rib, with a corbel-shaft on either side for the diagonal ribs; at Dore, five shafts rise from the floor to receive the transverse, diagonal and wall ribs. In the transepts of Byland and Furness, where the chapels have become an open aisle, the piers (fig. 2) are of the same clustered type as in the naves.

The internal bay-designs of five churches are illustrated in plate v. The nave bays at Fountains and Kirkstall

[1] The only approach to anything of the kind at Kirkstall is the little arcade of interesting semicircular arches within the gable over the west doorway (plate x).

[2] The wall-passage in the gable wall of the south transept at Kirkstall is exceptional.

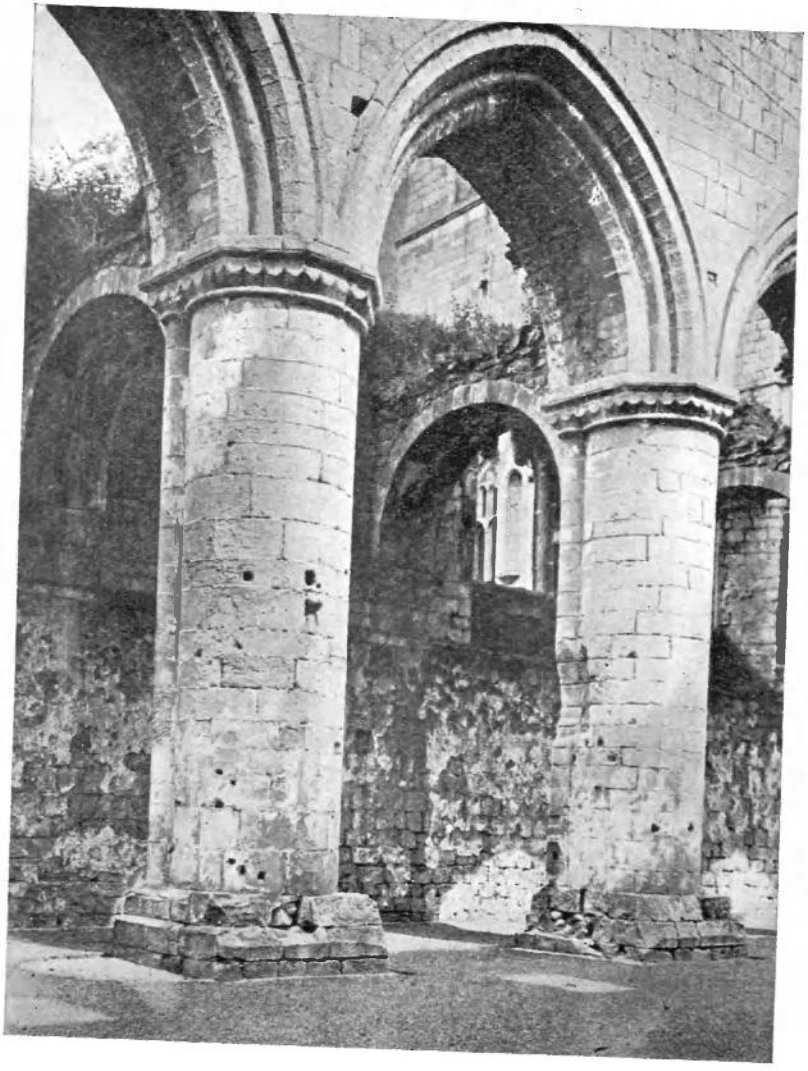
[3] The arches of the crossing at Buildwas are also unmoulded. The crossing arches at Fountains are moulded.

[4] J. A. Reeve, *op. cit.* pl. 10, reproduced in *Yorkshire Archaeological Journal*, xv, 285, fig. 2.

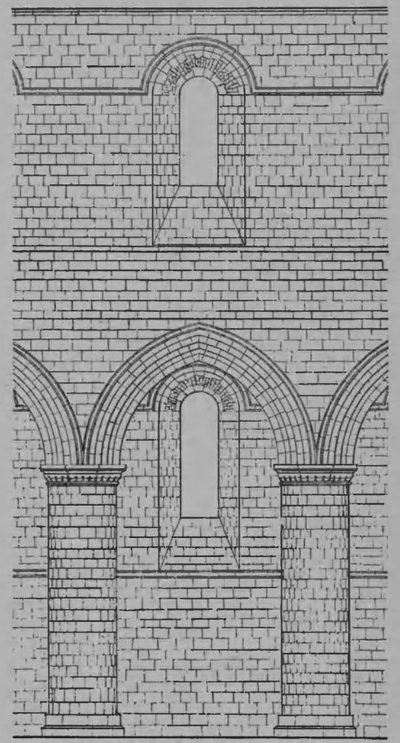
[5] The chamfered pier is not usual in the Norman Romanesque. It occurs at Fontenay in the pilasters which receive the transverse arches of the barrel vault of the transept, and in those under the transverse arches of the nave aisles.

PLATE IV.

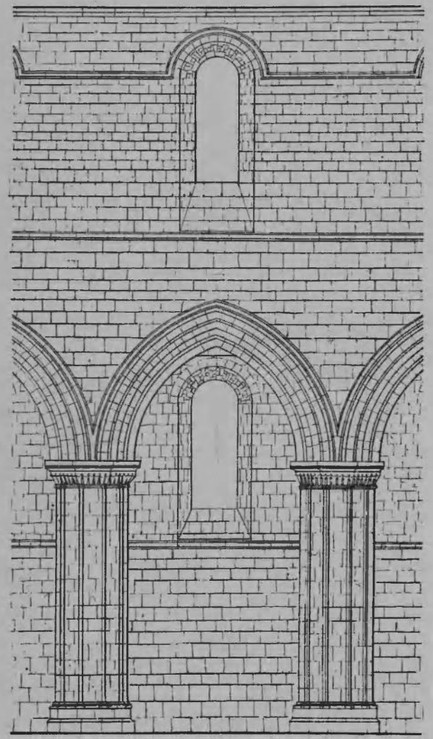
To face page 227.



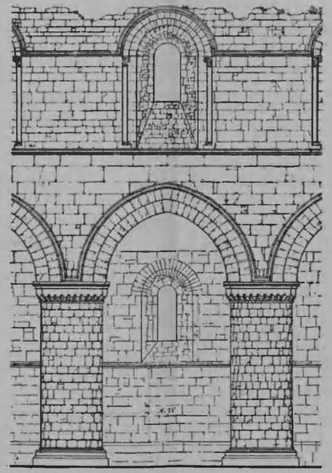
FOUNTAINS, NAVE ARCADE. [*T. W. Thornton, phot.*



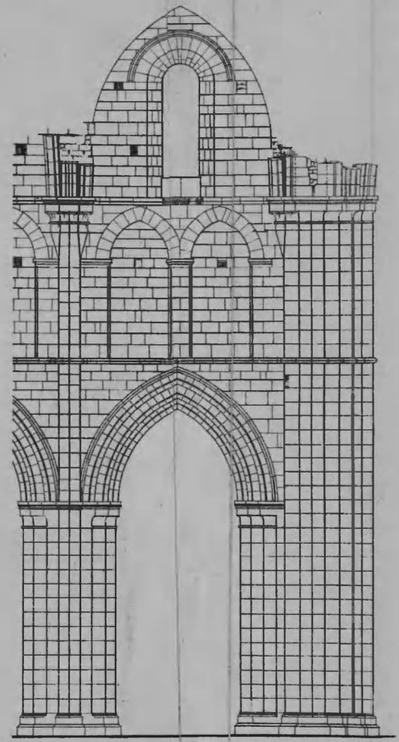
FOUNTAINS, NAVE.
(Sharpe's Parallels).



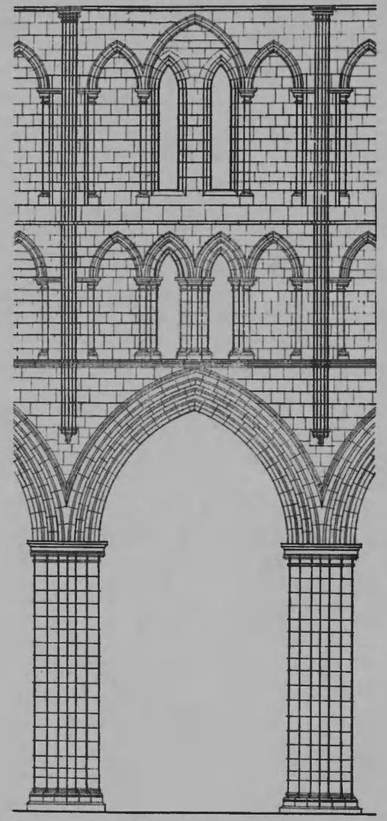
KIRKSTALL, NAVE.
Sharpe's Parallels).



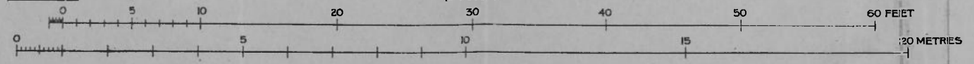
BUILDWAS, NAVE.
(Potter).



ROCHE, NORTH TRANSEPT, EAST SIDE.
(J. Bilson).



BYLAND, NAVE.
(Sharpe's Parallels).



COMPARATIVE ELEVATIONS OF BAYS OF CISTERCIAN CHURCHES

are very similar, both in design and dimensions, and the nave of Buildwas, though of smaller dimensions and lower proportion, has the same general motive. In all three, the elevation of the nave, as of the side walls of the transept, is of two stories only, without a triforium stage. The triforium, frequently absent in Burgundian churches of the twelfth century,[1] was omitted by the Cistercians in accordance with their desire for simplicity. M. Anthyme Saint-Paul says that it is never found in French Cistercian churches before the thirteenth century,[2] though it occurs in the last quarter of the twelfth century at Mortemer[3] (Seine-Inferieure). However, in this respect, as in others, the English Cistercians modified their strict practice sooner than was the case on the continent, and the later twelfth-century churches at Roche,[4] Furness[5] and Byland all have a triforium stage.[6]

The piers of the nave arcades at Fountains, Kirkstall, Buildwas, and Dore follow English precedent as illustrated in the great cylindrical piers of the naves of Gloucester, Tewkesbury, and Southwell. At Kirkstall (fig. 1), although the cylindrical motive is apparent, the treatment becomes more ornate, and the piers of the western bays show the cluster of attached shafts which soon became general in later churches. The abaci of the capitals at Kirkstall are octagonal on plan, like those on the nave side of the piers at Fountains. At Buildwas the abaci are subordinated to receive the arch orders, which are square-edged without mouldings. In the nave arcades at Fountains and Kirkstall, however, the arches have three moulded or chamfered orders on the side next the nave, and the arch mouldings become much more refined at Roche, and more elaborate at Furness and Byland.

The clearstory usually had a single semicircular arched window in each bay, without either the wall-passage or

[1] C. Enlart, *Origines*, 260.

[2] *A travers les monuments historiques*, quoted in C. Enlart, *Origines*, 225.

[3] L. Regnier, in the *Memoires de la Societe historique et archeologique de Pontoise et du Vexin*, xxviii, 80, and plate.

[4] Presbytery and transept, doubtless also n the nave (destroyed).

[5] In the north transept, but not in the south transept.

[6] Saint-Jean d'Aupt (Haute-Savoie) which seems to date from the beginning of the thirteenth century, has a triforium. The bay-design of its ruined nave presents a close resemblance to that of the transept of Roche.

wall-arcade which were characteristic of the greater churches of the Norman Romanesque. By the time that Byland was built, this extreme simplicity had been abandoned, and the clearstory there had both the wall-passage, and wall-arcades externally and internally (plate v).

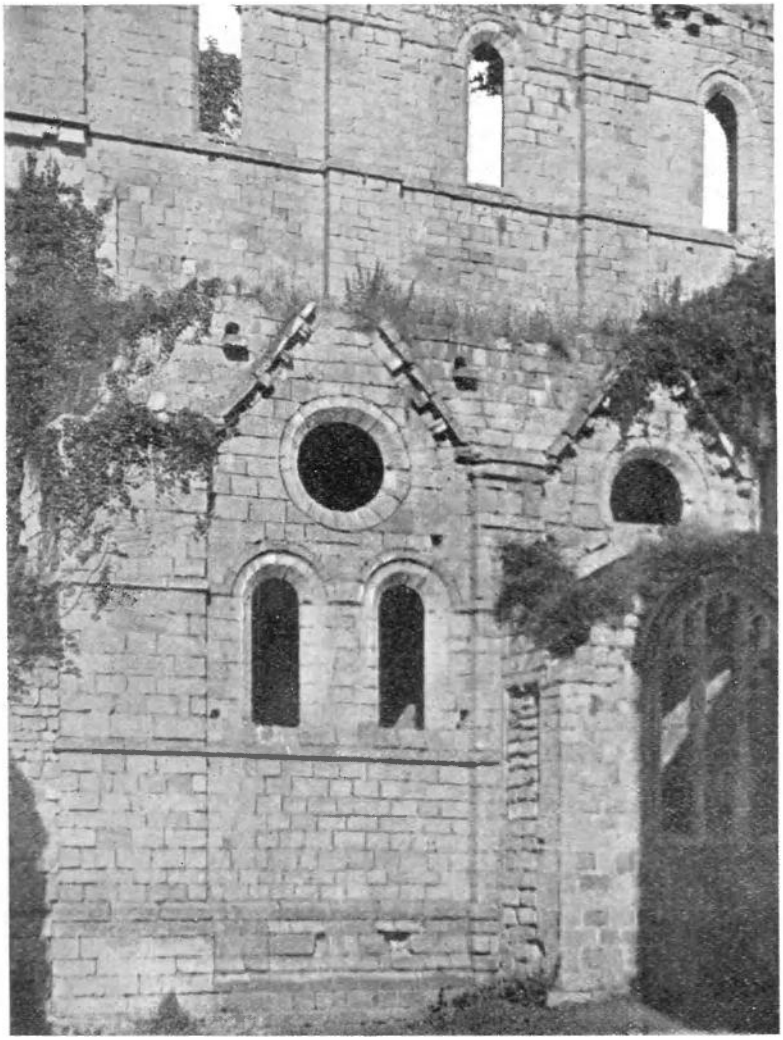
Where their naves were not vaulted, the Norman Romanesque builders frequently divided the bays by wall-shafts, repeating the motive of the vaulted eastern arm. The Cistercian builders were more logical, and in the nave and transept at Fountains, Kirkstall, and Buildwas, which were covered with wood ceilings, the bays are not divided by shafts. In the later nave of Byland, where the main span was wood-ceiled, the wall-shafts, corbelled out over the arcade piers (plate v) show a return to a motive which became a characteristic inconsequence of many later English churches.

A point in the planning of the nave and aisles may be remarked here. The Romanesque builders frequently (though by no means invariably) divided the total internal width of their churches into four equal parts, giving two to the nave and one to each of the aisles, the lines of division fixing the centre lines of the arcade piers.[1] In many Cistercian churches, e.g. Fountains, Kirkstall, Buildwas, Roche, Byland and Dore, the aisles are narrower in proportion to the central span, and the bays of the aisles are decidedly oblong from east to west. Probably the reason was the severely practical one—as the aisles were merely passages, they needed only to be narrow. One effect of this was to reduce the height required for the slope of the aisle roof, and, with a low pitch to this roof, and deep inner splay to the sill of the clearstory window, the band of plain walling above the arcade arches, usually occupied by the triforium, was reduced to modest dimensions of height.

Externally the walls are strengthened by flat pilaster buttresses, between the heads of which are ranges of corbels supporting projecting eaves-tables, all in the usual Anglo-Norman manner.[2] At Kirkstall it is curious to

[1] As, for example, at Durham.

[2] At Byland the buttresses of the aisles have a double pilaster projection, of which the inner only is continued up to the corbel-table. In the eastern parts, the outer projection is weathered back in two sets-off at the top; in the eight western bays of the north aisle of the nave, it is finished with a single hipped weathering (see drawing of exterior bays of nave in Sharpe's *Architectural Parallels*).



[*T. W. Thornton, phot.*

FOUNTAINS: CHAPELS OF SOUTH TRANSEPT.

find that, although the presbytery is vaulted in two bays, its sides are divided externally by pilaster buttresses into three bays. The position of the westernmost buttress on each side appears to have been determined by the east wall of the transept chapels, from the top of which it rises, and the wall between the chapel and the buttress at the angle of the presbytery is divided equally by the other buttress. The great thickness of the side walls of the presbytery indicates, however, that this part of the church was intended to be vaulted from the first.

The angles of the gable ends are generally reinforced by broad pilaster buttresses of double projection in the usual manner, to receive the angle turrets at the springings of the gables. The gable ends themselves were frequently divided into three by two narrow pilaster buttresses, as in the north transept ends at Norwich and Peterborough, and as also in many Cistercian churches in all countries.[1]

The gabled ends of the transept chapels at Fountains (plate vi)[2] show a very characteristic Cistercian arrangement of the windows—two windows with semicircular arches, surmounted by a large circular window. Circular windows are found in the works of all schools, and they were frequently used in Anglo-Norman architecture, e.g. in the nave clearstory at Southwell, and in the central tower of Norwich. But they are much more characteristic of the architecture of Burgundy in the twelfth century,[3] and the Cistercians carried the motive into all parts. The west end of Clairvaux had a large circular window over two narrow windows, and also a circular window in the south transept gable,[4] and there is a foiled circle in each gable end of the transept at Pontigny (plate xi, no. 1). The gable of the south transept at Fountains has a circular window (now blocked) on each side of the central buttress projection which contains the staircase.[5] The original arrangement of the east end of the presbytery at Kirkstall[6] —a large circle over three long windows with semicircular

[1] As, for example, in the east end of the presbytery at Fontenay (plate ii, no. 1). Cf. the plans in plate xxvi.

[2] J. A. Reeve, *op. cit.* pl. 10 and 11, reproduced in *Yorkshire Archaeological Journal*, xv, 285, fig. 2, and 317, fig. 12.

[3] For examples, see C. Enlart, *Origines*, pp. 258–9.

[4] Shown in Dom Milley's engraved views.

[5] J. A. Reeve, *op. cit.* pl. 5, reproduced in *Yorkshire Archaeological Journal*, xv, 283, fig. 1.

[6] See Mr. Hope's drawing of this front in its original condition, in the *Publications of the Thoresby Society*, xvi, 26 (fig. 18).

arches—was probably that of the west front of Fountains,[1] and it is still to be seen in the east ends of the presbyteries of Noirlac,[2] Preuilly[3] (Seine-et-Marne), and Fossanova,[4] and in the west front of Silvacane.[5] The east end of the presbytery at San Galgano has two tiers of three narrow windows, surmounted by a circular window.[6] The west front of Vaux-de-Cernay (end of twelfth century) shows (plate vii, no. 1), over its west doorway, a beautiful example of a large circular window, which retains its original simple tracery[7]—four large circles, with a small circle in the centre, and one small circle between two tiny circles in each of the four spandrels. Below, and on each side of this window, are two smaller circular openings, which recall the circular panels in the east end of Kirkstall.[8] The great circular window in the west front at Byland (plate vii, no. 2) is a well-known example, nearly contemporary with that at Vaux-de-Cernay.

The gable end of the north transept at Kirkstall (plate viii) has two tiers of three semicircular-arched windows, designed in the Anglo-Norman manner of which the north transept ends of Norwich and Peterborough show more elaborate examples. The east end of the presbytery of Buildwas[9] (plate xi, no. 2) was similarly designed, with two tiers of three windows.[10] At Kirkstall the three lower windows are of much the same size as the adjoining windows in the west wall of the transept, but they are placed higher in the wall, the level being governed by the string beneath the sills internally, which continues the line of the abaci of the piers to the transept chapels on the east, the string being stepped down in the western angle to the lower level of the windows

[1] See the west elevations, external and internal, in E. Sharpe, *Architectural Parallels*.

[2] E. Lefèvre Pontalis, *op. cit.* section of transept.

[3] End of twelfth century.

[4] C. Enlart, *Origines*, figs. 3 and 86. Cf. also Casamari, figs. 4 and 87, and pl. iv; Santa Maria d'Arbona, figs. 6 and 88; and San Martino, near Viterbo, pl. viii (transept).

[5] H. Revoil, *op. cit.* ii, pl. xvii.

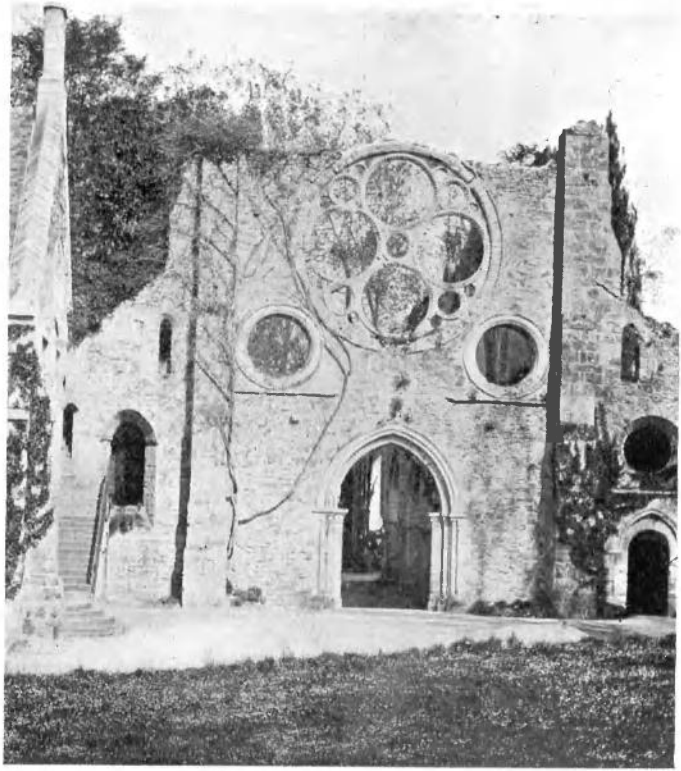
[6] A. Canestrelli, *op. cit.* and C. Enlart, *Origines*, 51, 259.

[7] L. Morize, *op. cit.* pl. v. and vi.

[8] See p. 229 *supra*, note 6.

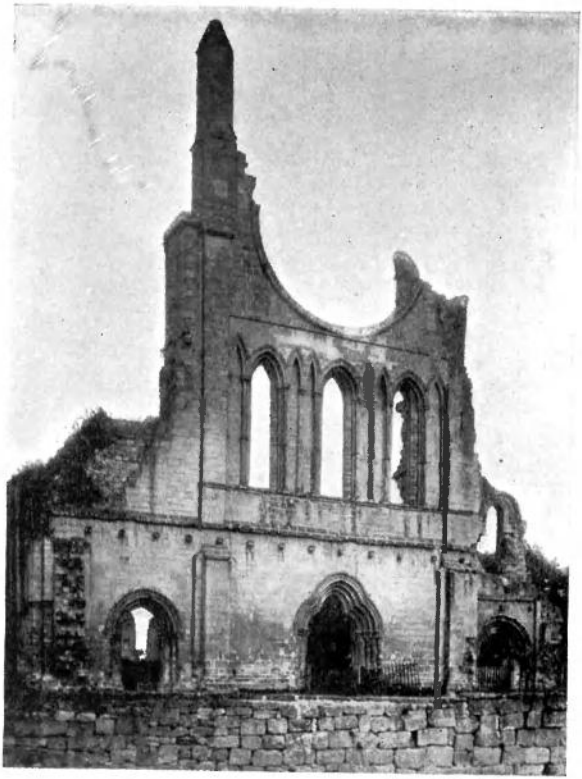
[9] The gable itself has been destroyed (see J. Potter, *op. cit.* pl. vi).

[10] The east end of the presbytery of Fontenay (plate ii, no. 1) has also two tiers of three windows, but the treatment, which is simple even to bareness, is different. The narrow pilaster buttresses between the three tall semicircular arched lower windows stop below the string under the sills of the three upper windows in the gable, which have pointed arches, and are set closer together than the windows below, the central window being higher than the window on each side.



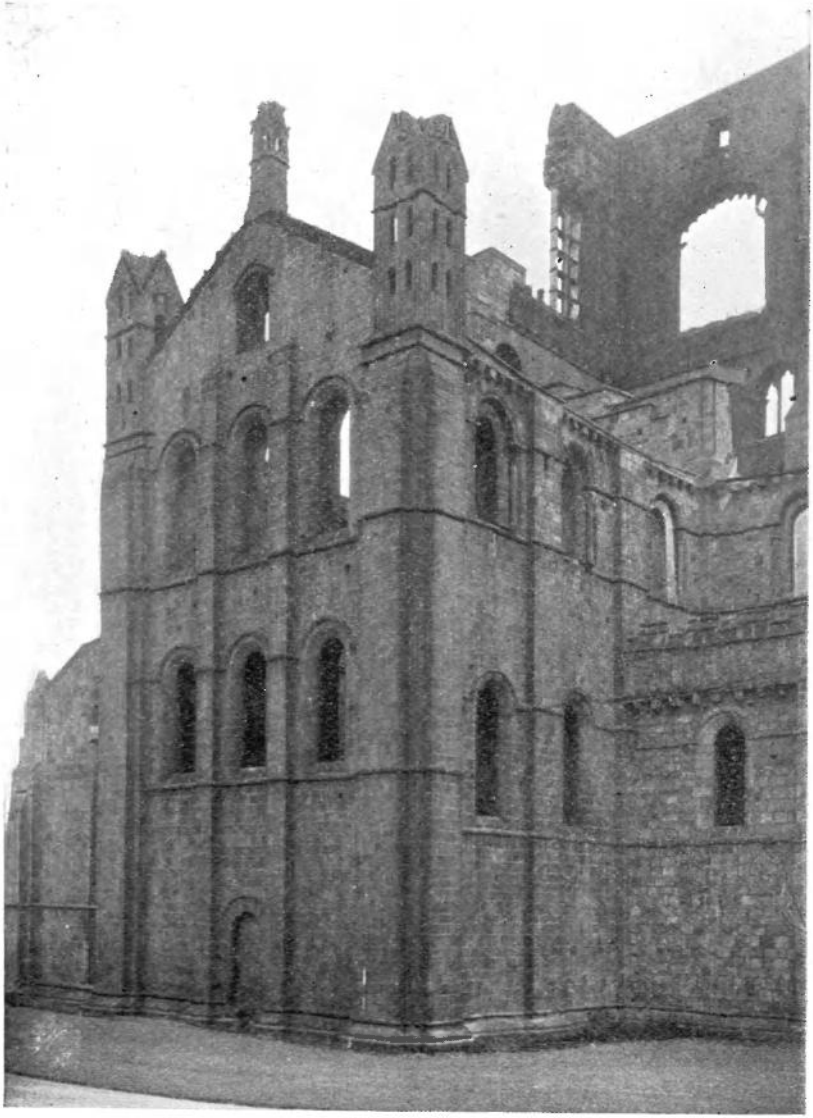
NO. I. VAUX-DE-CERNAY, WEST FRONT.

To face page 230.



[*C. C. Hodges, phot.*

NO. 2. BYLAND, WEST FRONT.



[*Godfrey Bingley, phot.*

KIRKSTALL, NORTH TRANSEPT.

in the west wall. The three upper windows are of equal height, and range with the clearstory. The narrow pilaster buttresses between the windows finish with weatherings above the level of the arches of the upper windows. The gable has been altered, but it apparently had a large pointed oval window.

The gable end of the south transept at Kirkstall (plate ix), above the roof of the range of buildings on the east side of the cloister, has three semicircular-arched windows of equal height ranging with the clearstory, and separated by narrow pilaster buttresses. The treatment of the gable is, however, quite different from that of the north transept. At some distance above the windows, the narrow buttresses are banded together by relieving arches, those on each side being semicircular, and that in the centre pointed, rising much higher than the side arches, and enclosing originally a pointed oval window in the gable. This relieving-arch motive, although not exclusively Burgundian, is very common in Burgundian architecture,[1] and is frequently found in Cistercian building. The external faces of the side walls of the *cellarium* at Clairvaux, which was part of St. Bernard's rebuilding, have pilaster buttresses banded with semicircular arches, precisely as in the *cellarium* and upper part of the eastern range at Kirkstall (plate ix). The same motive is found in the *cellarium* at Vauclair[2] (Aisne), the *cellarium* at Longpont (Aisne), the *cellarium* and clearstory of the church at Villers (Belgium), the infirmary at Ourscamp (Oise), the frater at Bonport[3] (Eure), the eastern range at Mortemer (Seine-Inférieure), and the eastern range at the Cistercian nunnery of Fontaine-Guérard (Eure). In the church at Breuil-Benoît, the nave clearstory has pointed relieving arches between the buttresses.[4]

The elevation of the west end of the nave at Kirkstall is less simply treated than any other part of the church. The west doorway (plate x), which has a semicircular arch of five orders, is set in a projection beyond the external face of the wall, which is finished by a gable in the fashion common

[1] C. Enlart, *Origines*, 264.

[2] C. Enlart, *Manuel d'archéologie française*, ii, 41, fig. 19 (from Verdier and Cattois, *Architecture civile et domestique*).

[3] E. Chevallier, *Notre-Dame de Bonport*, fig. 30 (pointed arches).

[4] *Ibid.* p. 106.

in churches of this period in Normandy and England. The stage above has two semicircular-arched windows,[1] wider and higher than any other windows in the church, and shafted both externally and internally. In the extreme angle on each side externally is a shaft which apparently received a great semicircular relieving arch in the gable, within which was a large circular window, part of the outer order of which is still to be seen on the inside. In the angles of the west wall inside, there is a tall attached shaft on each side, rising to the top of the side walls of the nave; apparently these shafts must have received a great internal relieving arch, as on the outside. The inside of the west end of Fountains seems to have been treated in a similar manner.[2] As at Fountains, too, there is a narrow gallery within the west windows,[3] approached from the stair in the south-west angle of the south aisle and giving access to the spaces between the vaults and roofs of the aisles; the projecting string at the floor of the gallery is carried by a range of corbels, as at Fountains. It will be noticed that this west front of Kirkstall, in its original condition, presented a further example of the use of the circular window and relieving arch, which has been discussed above.

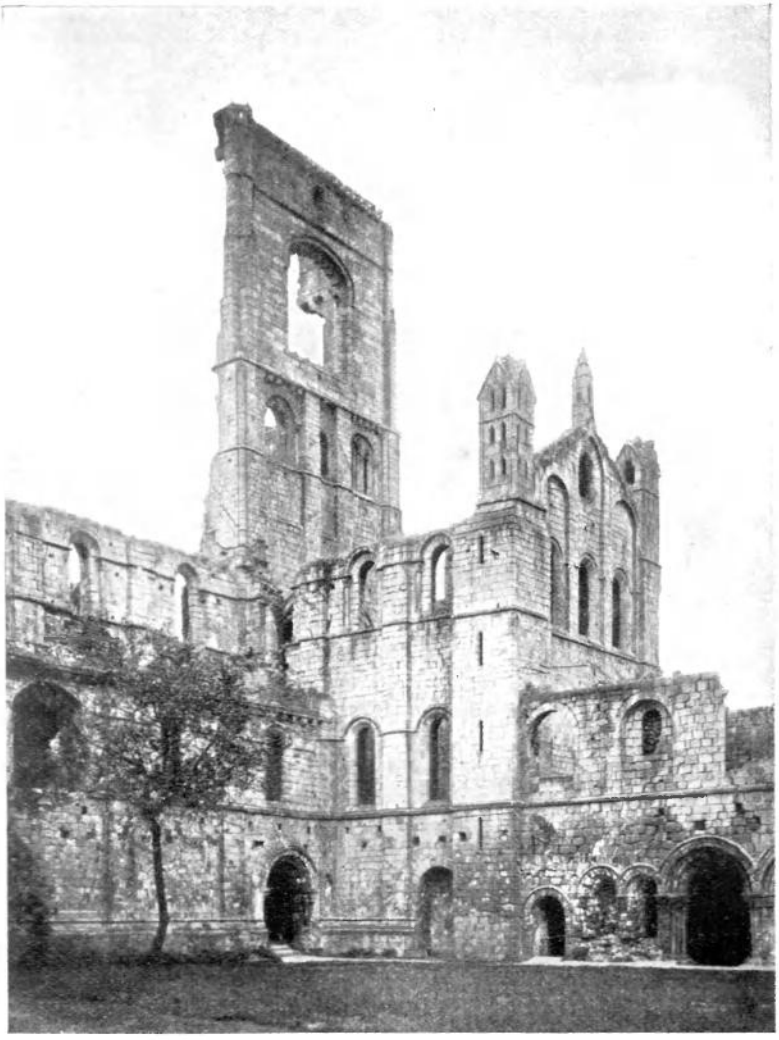
In some of the earlier Cistercian churches, the four arms of the cross were not carried up to the same height. At Fontenay, the walls of the transept and presbytery rise only to the same height as those of the aisles of the nave, and the ridges of the roofs of the former do not rise above the eaves of the nave roof. At Noirlac,[4] and also at Fontfroide, the presbytery is much lower than the transept and nave. Even in the great church of Pontigny (plate xi, no. 1), the transept is lower than the nave, the eaves of the transept roof springing at about mid-height of the nave clearstory. As a rule, too, Cistercian

[1] The west end of Buildwas, which has no doorway, has two semicircular arched windows on either side of a broad central pilaster buttress. The gable itself has been destroyed. See J. Potter, *op. cit.* plate v.

[2] See the drawing of this elevation (restored) in E. Sharpe, *Architectural Parallels.*

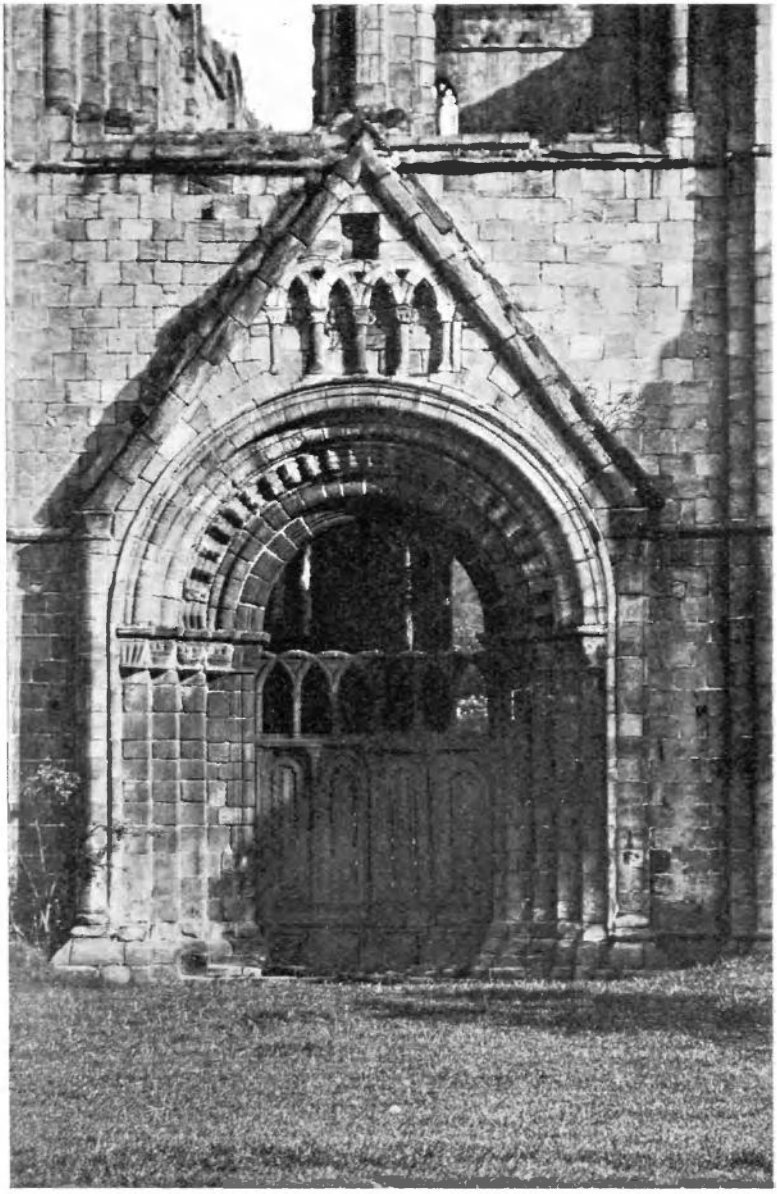
[3] At Vaux-de-Cernay there is a similar gallery inside the west window, obtained by giving the wall below a greater thickness than above (L. Morize, *op. cit.* pl. vii). The gallery was approached from a stair in the north-west angle of the north aisle (the cloister here was on the north side of the church), and it gave access to the roof spaces over the aisle vaults.

[4] There is a window in the east wall of the crossing, opening above the roof of the presbytery, like the five windows in the similar position at Fontenay. See E. Lefevre-Pontalis, *op. cit.* section of transept.



C. C. Hodges, phot.

KIRKSTALL, SOUTH TRANSEPT AND NAVE.



[*C. H. Bothamley, phot.*

KIRKSTALL, WEST DOORWAY.

[*J. V. Saunders, phot.*

NO. 1. PONTIGNY, SOUTH SIDE OF CHURCH.

[*C. H. Bothamley, phot.*

NO 2. BUILDWAS, INTERIOR LOOKING EAST

[*Godfrey Bingley, phot.*

KIRKSTALL, PRESBYTERY AND SOUTH TRANSEPT.

ideas of simplicity did not admit of the crossing showing above the roofs. Clairvaux, Citeaux, Pontigny,[1] and many other churches only had a wooden *flèche* over the crossing. Dispositions of this kind were not, however, in harmony with the practice of the builders of the greater churches in England in the twelfth century. Consequently we find, at Fountains, Kirkstall, and Buildwas, for example, that the English Cistercian builders, following the manner of their time, carried up all the four arms of the cross to the same height, and built a tower over the crossing. Stone towers were indeed altogether prohibited by the General Chapter of 1157,[2] but this statute was frequently disregarded.[3] In England, however, the towers were only very low, and at Kirkstall and Buildwas the windows were placed near the angles of the tower on each side of the abutting roofs, so that the top of the tower rose but little above the ridges.

I have left to the last one of the most important questions of structure—the vault. At Kirkstall the vaults of the presbytery, transept chapels,[4] and aisles of the nave are still practically perfect, and the ribbed vaults of the presbytery and nave aisles are sufficiently interesting in their relation to the general development of twelfth-century architecture in England to deserve detailed examination. Before considering this question, however, it is necessary to describe the vaults themselves.

The presbytery is covered with quadripartite ribbed vaults, in two oblong bays (plate xii). The westernmost transverse rib is placed a little to the east of the eastern arch of the crossing, and the space between the two is covered by a narrow strip of pointed barrel vault, in rubble. The ribs of the vault spring from corbels of similar design to those in the aisles of the nave. The transverse ribs are pointed, and the diagonal ribs appear to be true semicircles.[5] The transverse and diagonal

[1] This is shown in the views of Clairvaux and Citeaux mentioned above. The *flèche* at Pontigny was destroyed in 1793 (Henry, *op. cit.* p. 40).

[2] See p. 193 and note 1, *supra*.

[3] E.g. the fine central tower of Obasine (Viollet-le-Duc, *Dictionnaire*, iii, 310, figs. 21 and 22), and the similar tower of Fossanova (C. Enlart, *Origines*, p. 34, pl. 1 and fig. 3).

[4] Pointed barrel vaults (see p. 224, *supra*).

[5] I believe these observations to be accurate, but they are not founded on actual measurement, for it would be impossible to measure these vaults without scaffolding. Their system, however, appears to be exactly the same as that of the nave aisle vaults, which I have measured.

ribs have similar profiles, a large half-roll flanked by a flat on each side, but the transverse ribs are considerably wider than the diagonal ribs. The ribs are in separate stones from the springings. The junctions of the lateral cells with the side walls form pointed arched curves, but there are no wall-ribs. On the east wall, however, there is a narrow square-edged wall-rib, forming a pointed arch. The crowns of the vault cells appear to be level, and the cells are probably parts of cylinders.[1]

The aisles of the nave are covered with quadripartite ribbed vaults (plates xiii and xiv), in bays which are pronounced oblongs on plan. In the bay measured (plate xiv),[2] the dimensions are 16 ft. 5 ins. from east to west, within the transverse ribs, and 11 ft. 10 ins. from north to south, from the aisle wall to the back of the arcade arch. The ribs of the vault spring from the octagonal capitals of the arcade piers on the one side, and from triple corbels (plate xxii, no. 1) projecting from the aisle wall on the other side. The transverse ribs across the aisle are pointed, stilted some 8 or 9 inches. The arcade arches are pointed, the soffit curves being struck from centres which divide the span into three nearly equal parts. The diagonal ribs are true semicircles[3]. The junctions of the lateral cells with the aisle wall form pointed arched curves, corresponding to those of the arcade arches, and there are no wall-ribs. The transverse ribs[4] have the same profile as the ribs of the presbytery vault, a large half-roll flanked by a flat on each side (fig. 13, i^T). The diagonal ribs, which are considerably narrower, have a somewhat similar profile, but the angles of the flat on each side are bevelled off[5] (fig. 13, i^D). The keys of the diagonal ribs are shouldered, and the joints

[1] See note 5, page 233.

[2] South aisle, fourth bay from transept. In the plan of the vault, plate xiv, the dotted centre line of the rib or arch on plan represents the springing line on which the rib or arch-curve is set up. This drawing also shows the sections at the crown in each direction.

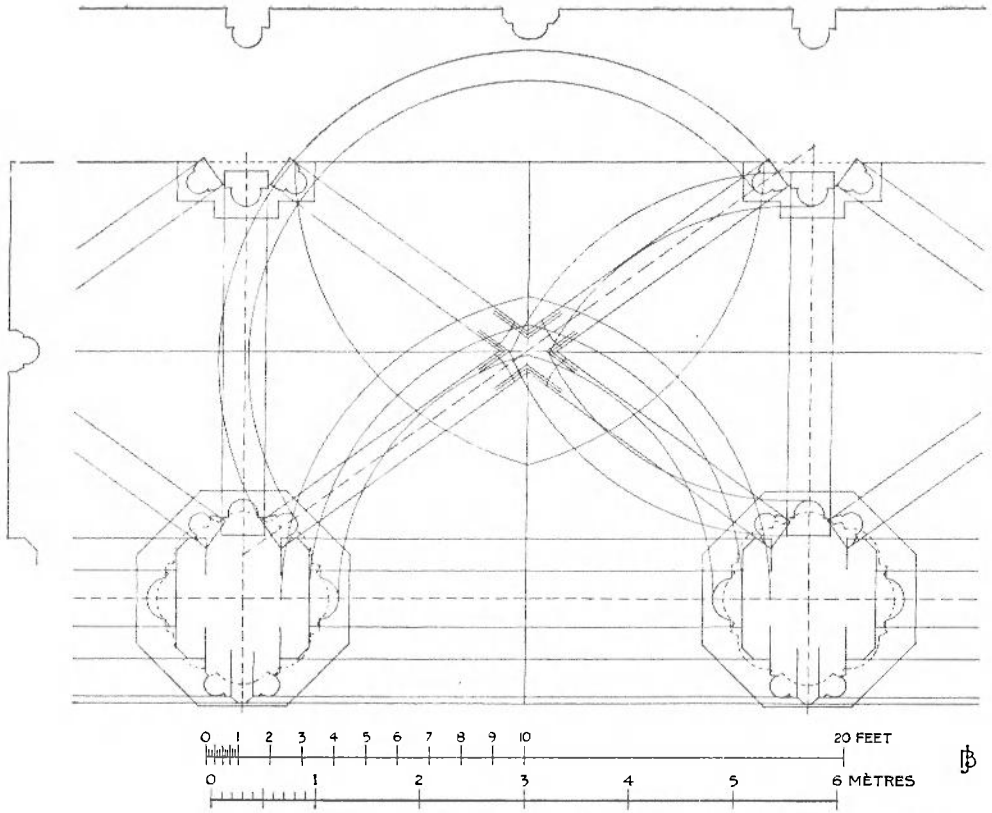
[3] In the bay measured, the curve of the diagonal rib is actually some 3 inches lower than a true semicircle, but this is probably due to settlement.

[4] In the drawing of the aisle bay in E. Sharpe, *Architectural Parallels*, the profiles of the transverse and diagonal ribs are unaccountably transposed. The sections of these two ribs in another plate of the same work are drawn too large in scale; so also in the copies of them in F. Bond, *Gothic Architecture in England* (London, 1905), p. 673.

[5] This is also the profile of the inner orders of the piers and arches of the openings from the transept to the eastern chapels (fig. 11, iii), and of the inner order of the eastern arches of the earlier part of the chapter-house.

[*Godfrey Bingley, phot.*

KIRKSTALL, VAULTING OF SOUTH AISLE OF NAVE.



[*Measured and drawn by John Bilson.*

KIRKSTALL, VAULT OF SOUTH AISLE OF NAVE.

To face page 235.

are at right-angles to the rib. All the ribs are in separate stones from the springings. The crowns of the vault cells are level in both directions,[1] and geometrically the cells are parts of cylinders, having been built on a centering of straight boards from rib to rib, etc. It is evident from this description and from plate xiv, that the section of the arcade arches was designed with the aisle vault, and that the curves of these arches were governed by the vault. The controlling factors were the semicircular curve of the diagonal rib, and the level crowns of the vault cells.

The cells of the vaults of the presbytery and nave aisles are constructed in rubble masonry of rough thin stones, coursed roughly parallel with the ridges. The barrel vaults of the transept chapels are constructed in the same manner. All were intended to be plastered, in accordance with the uniform Anglo-Norman practice of the time.

It is worthy of remark that, at Kirkstall, although the transverse ribs of the presbytery and aisle vaults are pointed, those of the vaults of the original buildings around the cloister are semicircular. The vaulting of the chapter-house follows the system of the earliest Anglo-Norman ribbed vaults—semicircular transverse ribs, and segmental diagonal ribs the curves of which are struck from centres below the level of the springing. The profile of the transverse rib shows a pointed or keel-shaped roll between two small rolls, and that of the diagonal rib is a pointed roll, quirked, the rib being of less width than the transverse rib (fig. 13, v). The vaulting of the ground story of the *cellarium* appears, from the indications which remain, to have followed the same system; here the transverse ribs have the same profile as the transverse ribs of the aisle vaults, and the diagonal ribs have the same profile as the diagonal ribs of the chapter-house vault. The profiles prove that the vaults of the chapter-house and of the ground-story of the *cellarium*, in spite of their semicircular arches, were designed at a later date than the aisle vaults of the church. In the sub-vault of the dorter, there is an even more remarkable reversion to an earlier type of vaulting —unribbed groined vaults on semicircular transverse ribs—

[1] In the bay measured, the extreme variation in the level of the crowns is 3 inches, but settlement must be taken into account.

in work which is of a continuous build with the chapter-house.

It is probable that the reversion to the semicircular arch in the buildings around the cloister was due to the necessity of keeping the vaults comparatively low, on account of the story above. The same thing is to be seen at Fontenay where, although all the main arches of construction in the church are pointed, the vaults of the later chapter-house and dorter sub-vault (which are not earlier than c. 1160) have the same system as the vaulting of the chapter-house at Kirkstall—semicircular transverse ribs and segmental diagonal ribs.[1] The use of the unribbed and ribbed groined vault simultaneously is characteristic of twelfth-century Burgundian architecture,[2] and is not uncommon in Cistercian building outside Burgundy.[3] The *cellarium* at Clairvaux, of St. Bernard's time, affords an interesting early example. The ground-story has ribbed vaulting, with semicircular transverse ribs, these and the diagonal ribs being large and unmoulded. The upper story has unribbed groined vaulting on pointed transverse ribs, also unmoulded.[4]

To return to the vaults of the church at Kirkstall. The vaults of the presbytery and nave aisles are among the very earliest examples in England of the *complete* solution of the Gothic problem, so far as vaulting itself is concerned.[5] We naturally inquire what were the precise influences which brought about this solution at Kirkstall. Was it a case of foreign importation, from Burgundy by the Cistercians, or from the Ile-de-France, whose marvellous advance had already commenced before Kirkstall was begun? Or is it to be regarded as a native English development? The question is one of great difficulty, but I will attempt to give at least a probable answer.

The question of importation from Burgundy by the

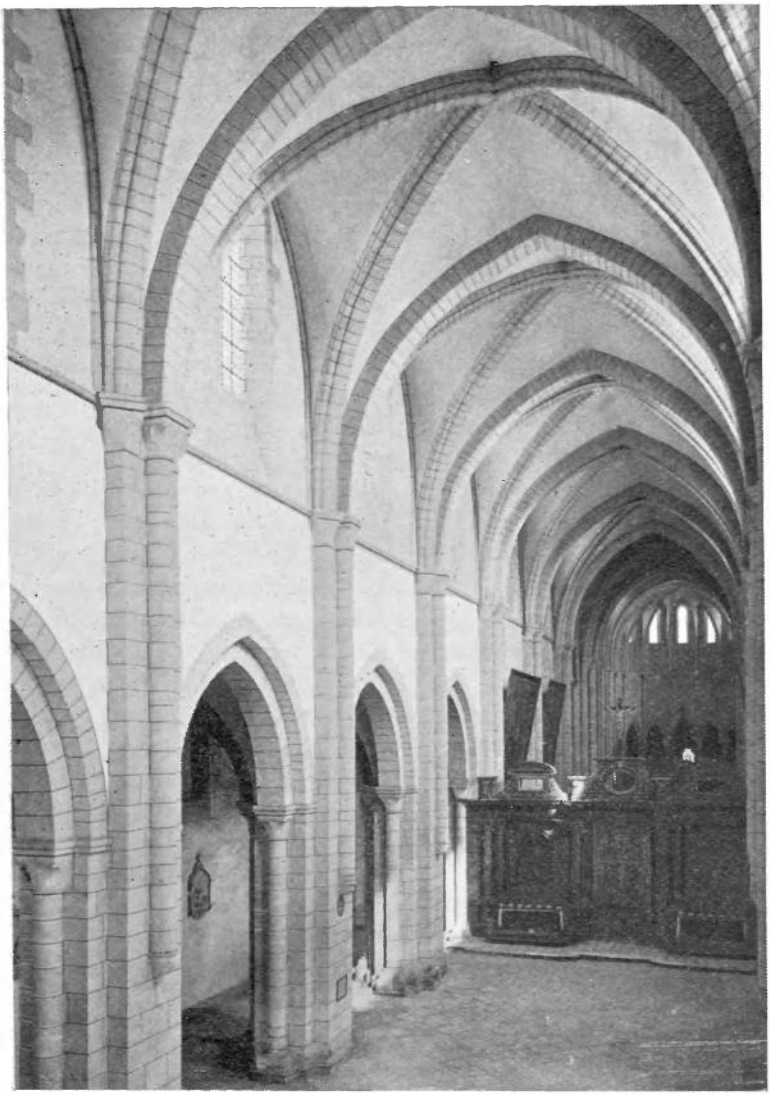
[1] The vaults of the chapter-house at Vezelay follow the same system.

[2] This mixture of vault-systems is found in all schools in the twelfth century, but it is very common in Burgundy. It is not rare in Cistercian and civil buildings of the thirteenth century, and lasts into the fourteenth century in the school of southern France.

[3] A late example in Normandy occurs at Breuil-Benoit, begun c. 1190, and consecrated in 1224, where the chapels around the ambulatory have unribbed vaults, although the other vaults in the church are ribbed (E. Chevallier, *Notre-Dame de Bonport*, p. 106, and plan, fig. 52).

[4] J. T. Fowler, *Further notes on Clairvaux*, etc., in the *Yorkshire Archaeological Journal*, xx, 1, and plates 5 and 6.

[5] I.e. apart from the question of abutment of high vaults.



[*C. Enlart. phot.*

PONTIGNY, INTERIOR OF CHURCH FROM S.W.

Cistercians may be answered at once, and in the negative. Burgundy was not one of the districts which was the earliest to develop the ribbed vault. The church at Pontigny is contemporary with Kirkstall, and, as the church of one of the mother-houses of the order, we may fairly look upon it as an adequate representative of Cistercian construction of the time.[1] Yet the vaults of the transept chapels, the high vaults of the transept, and the vaults of the aisles of the nave, are still unribbed vaults (on pointed arches), and it is only in the high vault of the nave itself (plate xv) that the rib was introduced in the course of the construction, springing from supports which were obviously designed to receive unribbed vaults. Clearly, therefore, the builders of Kirkstall could not have borrowed the system of their vaults from Burgundy, and there is nothing Burgundian either in their construction or details.

With regard to the Ile-de-France, the systematic use of the ribbed vault does not seem to have begun before about 1130. In this school, however, the pointed arch was employed in the ribbed vault almost from the first. In the absence of definite dates, the precise chronology of the earliest examples is still open to some difference of opinion. Nevertheless it is beyond all doubt that by the time of the Suger's rebuilding of Saint-Denis, the narthex of which was completed in 1140, and the choir in 1144, the new system had been completely developed. In view of the relative dates, it is therefore quite possible that the builders of Kirkstall may have known of the solution arrived at in the Ile-de-France.

According to the evidence at present available, the ribbed vault was used by the Anglo-Norman school a quarter of a century before its appearance in the Ile-de-France. In the earliest dated example, the choir aisles of Durham (begun in 1093), and in the early examples which follow, the transverse ribs are semicircular, sometimes stilted, and the diagonal ribs are segmental, struck from centres below the springing line. Sometimes the crowns are level, but frequently they rise towards the key of the diagonal rib, in order to gain greater strength

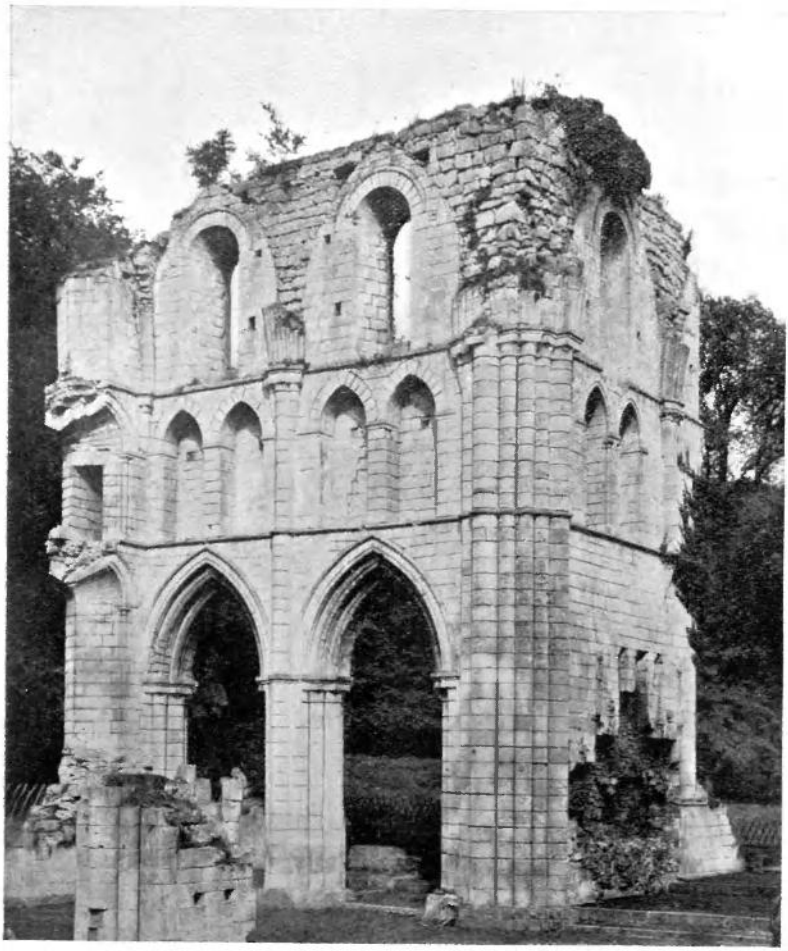
[1] I refer here to the existing parts of the earlier building, and not to the later eastern extension.

by increasing the height of the segmental diagonal rib. The next step in advance was to make the diagonal ribs semicircular, stilting the semicircular curves of the transverse ribs, so that the crowns were level, or nearly so. This method is proved by some existing examples of the first half of the twelfth century. The vaulting over the nave of Durham, built between 1128 and 1133, presents more than a suggestion of the final solution, for, not only are the diagonal ribs semicircular, but the transverse ribs are pointed, though their curves are awkwardly struck from centres below the springing line. It might be suggested that the Kirkstall vaults were directly descended from the Durham nave vault, but between them there is something like a quarter of a century, which does not afford very much evidence of progress in this particular respect, so far as England is concerned.[1] Indeed any English examples of the ribbed vault, with the pointed arch, which can with any show of probability be attributed to an earlier date than 1150, are so rare as to call for special remark.[2]

The Kirkstall vaults are, with the important exception of the pointed arch, purely Anglo-Norman in their construction, as well as in their details. The plastered rubble cells continue the tradition of the earlier vaults mentioned above, in contrast with the regularly coursed and worked masonry of the cells (*voûtains appareillés*) of contemporary and earlier vaults in the Ile-de-France. The profiles of the ribs are exactly the same as those which occur in much earlier Anglo-Norman vaults, or, in the case of the diagonal ribs of the aisle vaults, are developments from them. With regard to the pointed arch, we know that it was employed at an earlier date in the transept and nave of Fountains, as in the transept of Kirkstall, apart from any connection with the ribbed vault. While, therefore, it is impossible to assert positively that the Kirkstall builders knew nothing of the solution of the Ile-de-France, it seems to me that

[1] The advance in Normandy, in the development of the sexpartite vault, is not here in question.

[2] The vaults of the nave aisles of Malmesbury have been frequently quoted as the earliest example in England of pointed transverse ribs (the diagonal ribs are semicircular). They probably date from somewhere near the middle of the twelfth century. Apart from the pointed arch, the Malmesbury vaults are purely Anglo-Norman, both in their construction and in their details. See my *Beginnings of Gothic Architecture*, in the *Journal R.I.B.A.*, 3rd ser. vi, 309 (1899).



[*J. V. Saunders, phot.*

ROCHE, NORTH TRANSEPT.

there may be some ground for explaining these Kirkstall vaults as a continuance of the Anglo-Norman system, modified by the Cistercian use of the pointed arch. It is true that we have examples of the pointed arch in connection with the ribbed vault in some English churches,[1] almost contemporary with Kirkstall, the design of which indicates that their builders had some knowledge of what was being done in contemporary work in the Ile-de-France, or more probably in upper Normandy, which by that time had to some extent come under the influence of the Ile-de-France. But there is nothing in the church at Kirkstall which can with the least probability be attributed to French influence until we come to the latest work of all, in the west front and the north clearstory of the nave. It is beyond all doubt that the pointed arch at Fountains and Kirkstall represents quite another building tradition, and its application to the current system of Anglo-Norman ribbed vaulting may with some plausibility be considered to be a sufficient explanation of the Kirkstall vaults.

The vaults of our later examples need not detain us long. The complete solution of the vaulting problem had been reached, and their details show analogies with the contemporary and earlier vaults of the Ile-de-France and upper Normandy, which prove French influence beyond any doubt.

The presbytery at Buildwas, like that at Kirkstall, was covered with quadripartite ribbed vaults in two oblong bays. The ribs spring from corbels,[2] but only the springers now remain. The vaults had no wall-ribs, and the transverse ribs were doubtless obtusely pointed, like the crossing arches. The profiles of the ribs (fig. 13, ii) are more advanced than those at Kirkstall. Each of the transept chapels is covered with a quadripartite ribbed vault with diagonal ribs chamfered on each angle, springing from corbels. The junctions of the cells with the walls form pointed arched curves, without wall-ribs.[3] The cells, like those of the chapter-house vault, are of rubble in rough thin stones.[4]

What remains of the vaults of the presbytery, transept, and transept chapels at Roche shows a considerable im-

[1] E.g. St. Cross (Hampshire), which was probably begun before the church at Kirkstall was finished.

[2] J. Potter, *op. cit.* pl. viii.

[3] *Ibid.* pl. iii.

[4] The aisles of the nave at Buildwas were not vaulted, but only wood-ceiled.

provement in the workmanship of the cells. They are built in well worked coursed rubble, in rather long narrow stones, and it is worthy of remark that the courses work out parallel with the ridge.[1] The cells form pointed arched curves against the walls, but they are still without wall-ribs.

The remaining fragments of the aisle vaults at Byland show further improvement in the construction of the cells. The rubble construction of the cells of the early vaults, but faintly surviving at Roche, has here given place to ashlar, well worked both on the face and on the beds, and of much the same character as the excellent walling. This improvement had long been anticipated by the builders of the Ile-de-France, who appear to have constructed their ribbed vaults with cells of worked masonry from the first; in England, so far as my observation goes, this method of construction is rarely found before the last quarter of the twelfth century.

Both at Byland and Furness, the vaults have wall-ribs.[3] At Byland, the profile is a simple roll. At Furness, in the transept aisles, the profile is a quarter-round, or half-roll, but in the aisles of the nave, it is a quirked roll with a flat face over, a profile which is extremely common in the Ile-de-France and Normandy.

In the vaulting of the chapter-house at Buildwas,[6] which was practically contemporary with the later parts of the church, the sides of the transverse and diagonal ribs (fig. 13, viii) are worked with a shallow rebate, into which the masonry of the cells is fitted. This is an early example of a method which became usual in later English vaulting, and its occurrence here must evidently be con-

[1] The method of constructing the cells with courses working out obliquely at the ridge is usually called, in too general terms, the "English" method, for many important examples in England, like Roche, follow what is generally called the "French" method, and the so-called "English" method is not unknown in France.

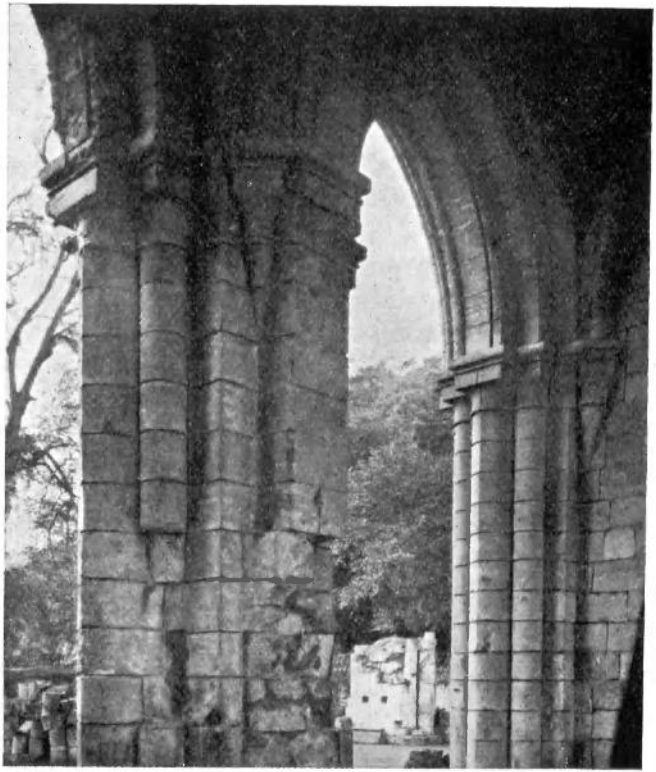
[2] The wall-rib appears in unribbed groined vaults before the end of the eleventh century, in a rudimentary form in the wall-arches of the ambulatory and apsidal chapels at Gloucester, and as a narrow square-edged member in the aisles and ambulatory at Norwich, and in the crypts under the chapels of St. Andrew and St. Anselm at Canterbury. Ribbed vaults as a rule, however, have no wall-rib before the third quarter of the twelfth century. The vaults of the eastern arm of St. Cross (Hampshire) have narrow square-edged wall-ribs.

[3] The bays of the vault are oblong. The transverse ribs over the longer sides are semicircular, while those over the shorter sides are pointed. The diagonal ribs are segmental. The cells are of coursed rubble, and there are no wall-ribs (see J. Potter, *op. cit.* pl. xxvi).

[*J. V. Saunders, phot.*

NO. I. ROCHE, NORTH TRANSEPT ARCADE.

PLATE XVII.



[*J. V. Saunders, phot.*

NO. 2. ROCHE, CHAPELS OF SOUTH TRANSEPT.

To face page 241.

nected with the greater care in technique which is characteristic of Cistercian building.[1] An experiment in this direction was tried at a much earlier date in some of the oldest ribbed vaults in the Ile-de-France,[2] but the ribs of Suger's vaults at Saint-Denis are not rebated, and the vaults of this school always have the cells passing over the back of the rib, which certainly gives them greater elasticity.[3]

The development of the system of abutting high vaults by the flying-buttress, which plays such an important part in Gothic construction, finds no place in the English Cistercian churches noticed here. The short presbyteries of Kirkstall, Buildwas, and Roche are aisleless, and their walls afford sufficient abutment for their vaults. The short transept arms at Roche have no flying-buttresses over their eastern aisles, and the destruction of its nave, which was almost certainly vaulted, makes it impossible to say how it was abutted, though it is not likely that it had flying-buttresses.

Details.

I propose now to touch briefly on those characteristics of the ornamentation of the earlier Cistercian churches in England which have not already been noticed above.

It will save repetition to remark here on the general tendencies which this study of details will serve to illustrate. In the earlier Cistercian churches, Fountains and Kirkstall, the details (with some exceptions to be noted) are rendered in the current national manner of the time, and treated, especially at Fountains, with great reticence and refinement. In the latest work at Kirkstall, there are some slight signs of other influences, which are more pronounced at Buildwas. The gradual transformation of the national manner due to influences from the continent is fully exemplified at Roche; and Furness, Byland and Dore, in their slightly more advanced fashion, tell the same story. This continental influence seems to me to be a sufficiently

[1] Cf. the diagonal rib of nave aisle vaults at Jervaulx, fig. 13, xi.

[2] Saint-Étienne, Beauvais, aisles of nave; Morienval, ambulatory; and Saint-Leu-d'Esserent, porch.

[3] On the other hand, ribs which tail back into the cells are frequent in the school of Anjou.

obvious fact, but, as English writers, with an excess of patriotism, have frequently either denied it or tried to minimise it,[1] I add some notes on the earlier occurrence in northern France of certain details which I shall have occasion to discuss. When we approach the last third of the twelfth century, the influence of the powerful school of the Ile-de-France had so permeated the schools of Champagne and Burgundy on the east, and that of Normandy on the west, that it becomes extremely difficult, if not impossible, to say precisely from what quarter certain influences made their way into England. In speaking of French influence, therefore, it will be understood that what is meant is influence either from the Ile-de-France, or from those provinces to the east or west which were increasingly dominated by it.

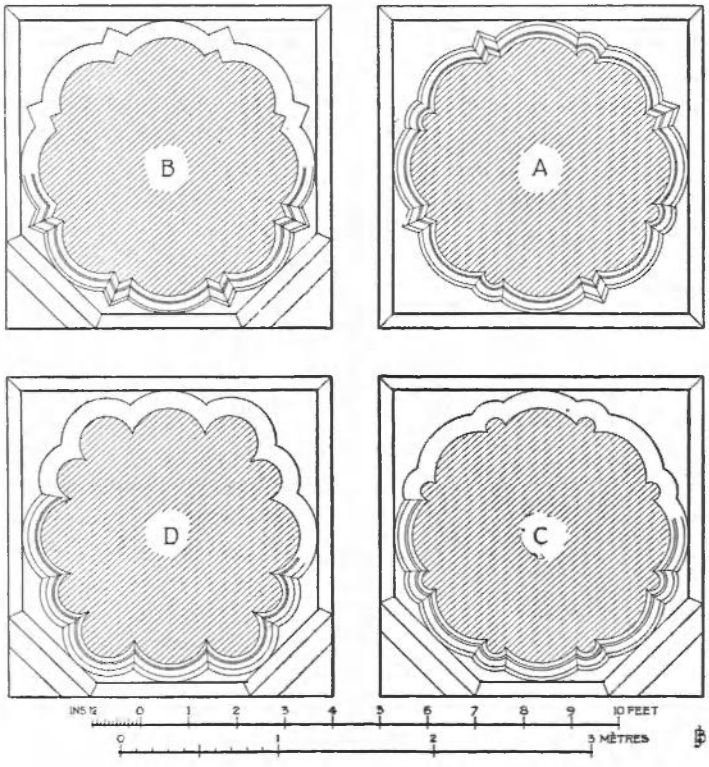
PIERS. The crossing piers are generally treated with clustered shafts of similar plan to those of the adjoining piers. At Kirkstall, the piers under the east arch of the crossing consist simply of a large three-quarter attached shaft, the projection on the west side being brought out to the square under the capital by a straight corbel, scalloped (plate xii). The piers under the north and south arches are more refined in their detail, although the eastern piers are continuous work with the piers at the angles of the presbytery. Each consists of a pilaster projection, on the face of which is a group of shafts in two orders; the outer order has an attached shaft on each side; the inner order has an attached shaft on the face of a narrow pilaster, of the usual plan except that here the angles of the pilaster are chamfered. At Buildwas, the piers under the north and south arches of the crossing have the usual Romanesque plan of a central half-shaft on the face of a pilaster, with a half-shaft in the recess on either side.[2] The piers under the west arches of crossings spring from shafts corbelled out from the wall, and, as is frequently the case in monastic churches, no pier projects from the wall face, on account of the stalls.[3]

[1] Mr. Lethaby has expressed what I believe to be the true view—"Gothic art in England was a true development *continuously* influenced from France, but not artificially imported" (*Mediaeval Art*, London, 1904, p. 269).

[2] J. Potter, *op. cit.* pl. xx.

[3] At Buildwas and Furness the shafts under the east arch of the crossing are also corbelled out.

So long as the chapels on the east side of the transept were divided from each other by solid walls, the openings into them from the transept were treated as archways in the wall.[1] After the chapels had become an open aisle, the piers generally do not differ from those of the naves.



[*Measured and drawn by John Bilson.*

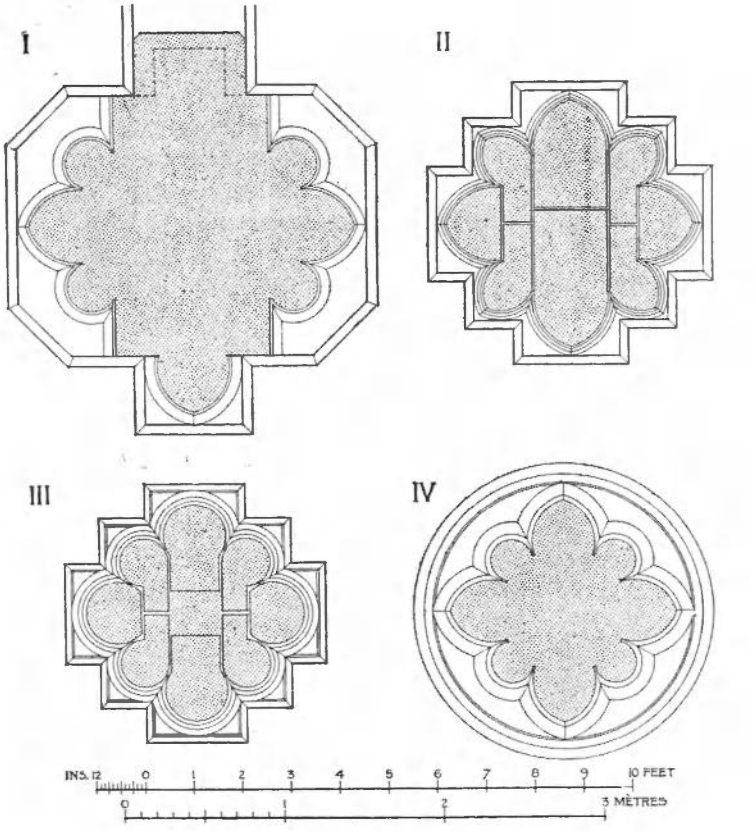
FIG. I. KIRKSTALL, PLANS OF NAVE PIERS.

The piers of the nave arcades of the earlier churches are, as already mentioned, modelled on the great cylindrical pier motive, which was so common in the Anglo-Norman Romanesque.[2] At Fountains the plain cylindrical piers have an attached shaft at each angle next the aisles to receive the unmoulded rear-arch of the arcade. At

[1] See above page 206.

[2] It is far less common in the Romanesque of Normandy.

Buildwas, where the aisles were not vaulted, the piers are simple cylinders,[1] as also at Dore, where the capitals are corbelled out at the back to receive the ribs of the aisle vault.



I. Roche, north transept. II. Roche, nave. III. Furness, transept *Abbey Square Sketch Book*, ii, pl. 9). IV. Byland, south transept.

FIG. 2. PLANS OF PIERS OF MAIN ARCADES.

In the piers of the nave arcades at Kirkstall, the motive is the same, but it is elaborated by a series of shallow shafts, etc. as shown on the plans in fig. 1. The opposite pair

[1] Except the easternmost on each side, that on the south being octagonal, and hat on the north half cylindrical and half octagonal.

of piers on each side of the nave have the same plan. The eastern respond piers and the first, second, and third piers from the east[1] have the plan A, eight shallow shafts separated alternately by a roll (or small shaft) and an angular fillet. In the second pier the positions of these small members are reversed. In the fourth pier on each side, all the smaller members are angle fillets (B), and in the fifth all are rolls (C). The sixth and seventh piers on each side each have a cluster of twelve attached shafts of three different diameters (D), and the western respond piers are of the same design. Although the plan D shows an approach to the type of clustered pier which was soon to become general in English churches, it must be regarded here rather as a variant of the other plans, since the shafts do not correspond to the orders of the arch.

The piers on the east side of the transept at Roche[2] (fig. 2, i, and plates v, xvi and xvii) belong to a different type, which again differs from the usual compound pier of Burgundy. This latter generally shows a cruciform plan, with a single shaft attached to each of the four faces; only the inner order of the arcade arch is thus received by a shaft, the outer order springing from the square pilaster projection.[3] In the Norman Romanesque, however, each order of the arch is generally received by its own shaft. So in these transept piers at Roche, triple shafts receive the two innermost orders of the arch, but instead of being separated by square-edged projections, as in the Romanesque piers, they are here set close together. The outer order of the arch, however, springs from the pilaster to which the shafts are attached, as in the nave of Pontigny (plate xv), but here the side of the pilaster is corbelled over to receive the arch, by a continuation of the capital, its plan following that of the returned base-moulding below.[4]

[1] On the north side, the eastern respond and the first pier are modern. Mr. Micklethwaite's method of treating his new masonry makes it perfectly easy to distinguish new from old.

[2] In fig. 2 and the following figures, the authorities from which details have been copied are indicated in the titles of the several figures. Where no authority is quoted, the details are from my own drawings.

[3] Naves of Vezelay (Yonne) and Saint-Andoche, Saulieu (Cote-d'Or). Cf. also the naves of Fontenay (plate iii) and Pontigny (plate xv). This type of pier is, of course, common enough outside the Burgundian school.

[4] In the respond piers next the crossing (plates v and xvii, no. 1), and in that at the south end of the south transept there is an additional shaft to receive the outer order of the arch.

In the transept piers at Roche (fig. 2, i) the central shaft of the group of three under the arcade arch, and the vaulting-shaft on the face of the pier, are pointed in section, or keel-shaped. This form of shaft is due to French influence. It appears in the piers of the nave of Saint-Étienne, Beauvais, which is attributed to about 1130 or 1135 at latest, and it became general in northern France before it appeared in England.[1] The vaulting-shafts in the transept at Dore show a variant of this form of shaft, which appears to be an English development, and is especially common in the west of England; this consists in forming a sharp arris on a cylindrical shaft by a sharp reversed curve outwards on each side of the arris.[2]

The three other pier-plans shown in fig. 2 are early examples of the type of clustered pier which became most frequent in English Gothic. It resembles the earlier cylindrical pier in that it provides supports for the arcade arches and aisle vault, but makes no special provision for the high vault. Where, as at Furness and Byland, the central spans were not vaulted, this type of pier is logical, for it provides a shaft to receive each order of the arch and a single shaft to receive the ribs of the aisle vault. Where the central span was vaulted, as the nave of Roche almost certainly was,[3] the ribs of the high vault would spring from vaulting-shafts corbelled out above the piers, in what became the most frequent fashion in England. In the naves of Cistercian churches, where the stalls of the monks and *conversi* extended nearly the whole length of each side, piers of this type had the advantage that they dispensed with any projection on the side next the nave. It should be remarked that these piers are not placed centrally under the wall arched over them, but that the arches have (in these cases) three orders on the side next the nave, but only two next the aisle, where the additional projection provides for the springing of the ribs of the aisle vault. In this respect they continue the system of some of the earliest ribbed vaults over aisles in the Anglo-

[1] See C. Enlart, *Manuel d'archeologie française*, i, 327.

[2] Cf. the hood-mould of the nave arcade of Dore on fig. 12, iv.

[3] As the transept was vaulted, it is a reasonable inference that the nave was also, and this is confirmed by the large number of voussoirs still lying on the site.

Norman school, such as those of the naves of Gloucester and Southwell.[1]

The nave piers at Roche (fig. 2, ii) are composed of a cluster of eight keel-shaped shafts, four larger on the cardinal faces, and four smaller on the diagonal faces. In the transept at Furness (fig. 2, iii), the eight shafts are all parts of cylinders, of two diameters. At Byland (fig 2, iv), keel-shaped shafts on the cardinal faces alternate with circular shafts on the diagonal faces.[2] At Furness and Byland each shaft has a capital of rectangular plan to receive the arch orders,[3] and at Roche and Furness the plinths follow the same plan. At Byland the plinth is circular on plan.

In the nave of Furness, the piers are alternately cylindrical and clustered, the latter of the same plan as those of the transept. This alternation repeats a motive employed in the Norman Romanesque, but here its structural reason has disappeared, and it becomes merely a decorative device.

BASES. The base mouldings of our earlier examples show the simple and shallow-cut profiles of the current Romanesque type. The bases of the nave arcade piers at Fountains (fig. 4, i) have two chamfered faces above a roll. The bases of the nave piers at Kirkstall are illustrated by fig. 3. Those to the easternmost piers (1 south, 1 north, and 2 south[4]) show profiles composed of a series of shallow rolls, of slightly more developed character than the Fountains profile. Further west (3 south, 4 north, and north-west respond) the bases have a shallow hollow between a small upper and a larger lower roll.[5] In the bases of the crossing piers (fig. 4, ii) and nave arcade piers (fig. 4, iii) at Buildwas, the hollow

[1] So also at Kirkstall; see plate xiv, and the section of the nave in Sharpe's *Architectural Parallels* (reproduced in the *Publications of the Thoresby Society*, xvi, 109, fig. 65).

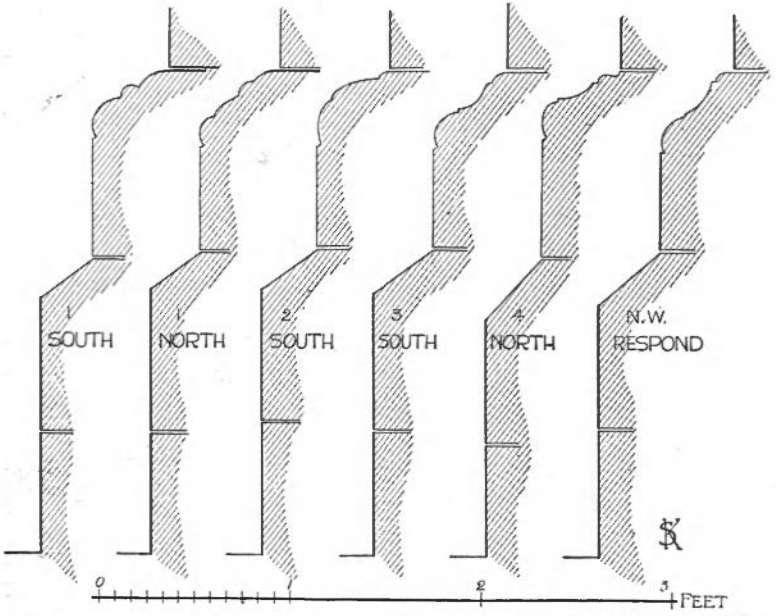
[2] In the piers at Jervaulx, keel-shaped shafts on the diagonal faces alternate with circular shafts on the cardinal faces, but the latter have the sharp arris fillet mentioned above (see plate of pier plans in Sharpe's *Architectural Parallels*).

[3] In the western respond piers of the nave of Byland, the three shafts have a single capital of circular plan.

[4] The piers are numbered from the east, 1 being the first pier west of the crossing.

[5] The advance towards the "attic base" is still more marked in the bases of the west doorway at Fountains.

is more pronounced. The more developed profiles illustrated in fig. 4, those of the transept piers at Roche (iv),[1] Furness (v), and Byland (vi), and those of the cloister arcade at Kirkstall (fig. 10), show an approximation to the graceful "attic base" then current in northern France. The flattened elliptical profile of the lower torus seems, however, to have had a shorter vogue in England than in France, and it was soon superseded by the circular torus, as in the bases of the nave arcade piers at Dore (fig. 4,



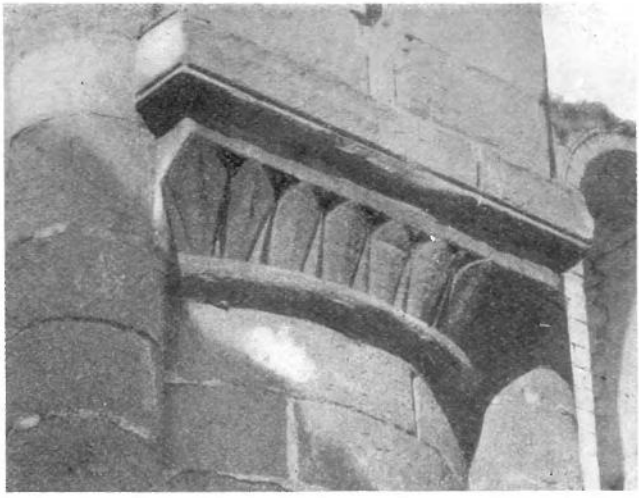
[*Measured and drawn by Sydney D. Kitson.*

FIG. 3. KIRKSTALL, BASE MOULDINGS OF NAVE ARCADE PIERS.

vii), which also show the depression of the hollow which is characteristic of the so-called water-holding base of the thirteenth century.

The bases most frequently surmount a chamfered plinth. At Furness (fig. 4, v) and Byland (vi), the projection of the plinth is formed by a quirked roll; at Byland, there is a lower chamfered plinth in addition.

[1] In the central pier on the east side of the transept at Roche, the base moulding around the triple shafts is returned along the side of the pilaster (fig. 2, i), a survival of a frequent treatment in the Norman Romanesque.



[*J. V. Saunders, phot.*

NO. I. FOUNTAINS, BACK OF NAVE PIER.

[*J. V. Saunders, phot.*

NO. 2. KIRKSTALL, NORTH TRANSEPT, NORTH CHAPEL.

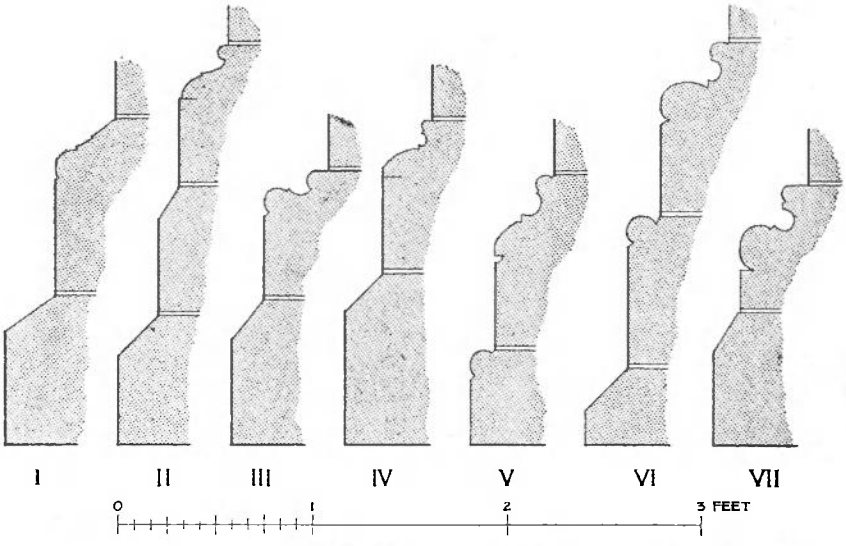
[*J. V. Saunders, phot.*

NO. 3. KIRKSTALL, NORTH TRANSEPT TO NORTH AISLE.

[*Ph. des Forts, Phot.*

FONTENAY, ANGLE OF CLOISTER.

CAPITALS. It has already been remarked that the Cistercian renunciation of ornament was interpreted less strictly in their churches in England than it was in those of Burgundy. This is especially true of the ornamentation of the capitals at Fountains and Kirkstall, which indicate how the Anglo-Norman tradition in design overcame Cistercian simplicity. These capitals show the great variety and inventiveness, particularly in the treatment of the scalloped capital, which is so characteristic



I. Fountains, nave. II. Buildwas, crossing (Potter, pl. 20). III. Buildwas, nave (Potter, pl. 10 and 11). IV. Roche, north transept. V. Furness, north transept (*Abbey Square Sketch Book*, ii, pl. 9). VI. Byland, south transept. VII. Dore, nave (Roland W. Paul).

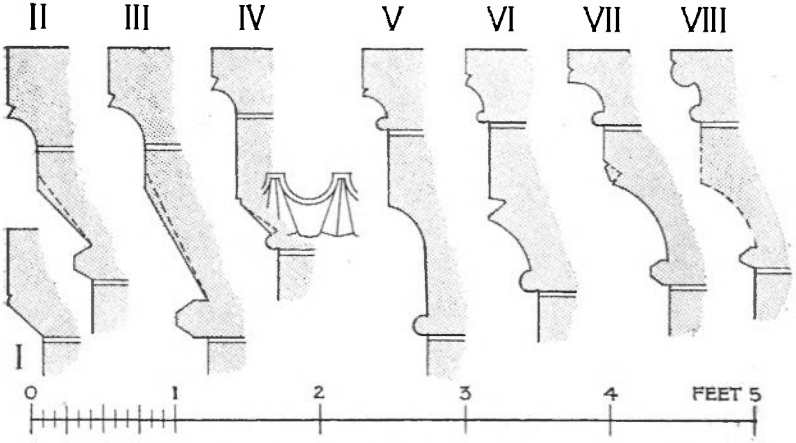
FIG. 4. BASE MOULDINGS OF MAIN ARCADE PIERS.

of the latest Romanesque manner in our country. Some attempt may be made here to indicate the principal varieties.

Some few details in the church at Kirkstall show interlacing ornament which is an interesting survival of a pre-Conquest motive.[1] The resemblance to earlier work

[1] These are fully described in a paper by the late J. T. Irvine, *Notes on specimens of interlacing ornament which occur at Kirkstall Abbey*, in the *Journal of the British Archaeological Association*, xlviii, 26.

is most marked in the interlacing on the flat face of the impost on the west jamb of the piscina in the south wall of the presbytery,[1] and in the knot-work on the base of one of the nave piers.[2] In both cases the cord forms a continuation of one of the moulded members; in the piscina impost it continues the sunk bead on the flat face above the hollow, and in the base the two ends of the cord continue one of the base-mouldings. The corbel which supports the short shaft under the southern springing of the west arch of the crossing is ornamented with an interlaced cord which bears but little resemblance to Saxon interlacings. The capitals under the northern springing of the arch opening into the southern chapel



I. Rievaulx, nave (east end of south aisle). II. Fountains, nave (Sharpe's *Parallels*). III. Kirkstall, nave (Sharpe's *Parallels*). IV. Buildwas, nave (Potter, pl. 10 and 11). V. Roche, north transept. VI. Furness, north transept (*Abbey Square Sketch Book*, ii, pl. 10). VII. Byland, nave (Sharpe's *Parallels*). VIII. Dore, nave (Roland W. Paul).

FIG. 5. CAPITALS OF MAIN ARCADE PIERS.

of the north transept are carved with an interlacing pattern terminating in leafage.[3] There is something of the interlacing motive, but more leafage, in the vigorously carved capital under the southern springing of the arch

[1] *Publications of the Thoresby Society*, xvi, fig. 79.

[2] *Ibid.* fig. 80. Pier 3 north, north-west angle of base.

[3] *Ibid.* fig. 85.

opening from the north transept into the north aisle (plate xviii, no. 3).

The capitals in the churches at Fountains and Kirkstall, however, show more frequently some variety of the scalloped capital, a form extremely common in England, and common also in Normandy, which was developed by subdividing the simple cushion capital. In its simplest form the scalloped capital shows a row of semicircles traced on the flat upper face of the capital, and prolonged downwards to the necking by truncated cones.[1] Many examples of this simple form are to be seen in the church at Kirkstall[2] (fig. 6, A). In some of the capitals in the eastern part of the church, the scalloped face is sunk below the flat face immediately beneath the abacus, forming a horizontal line above the scallops,[3] but as a rule the upper face is not sunk in this manner. In several of the scalloped capitals in the western bays of the nave of Fountains, and in most of those at Buildwas (fig. 5, iv), the line of the scallop itself is emphasized by a sunk fillet around the semicircle. The curves of some of the scallops at Buildwas[4] are pointed, instead of semicircular. Generally the profile of the cone is straight, but in a few cases at Fountains, Kirkstall and Buildwas it is convex.

A variety of the scalloped capital which occurs frequently at Fountains, Kirkstall and Buildwas is that in which the cones are separated by V-shaped fillets, diminishing upwards (fig. 5, iv). In some of the capitals of the arcade piers in the nave at Kirkstall this projection is rounded, as a narrow cone diminishing upwards between the wider cones of the scallops.[5] In another common variety, the cones are separated by V-shaped indentations.[6]

[1] Hence it is called by some the cone-bearing or coniferous capital.

[2] For example, under the crossing arches, under the arches opening into the transept chapels (plate xviii, no. 2), in the triforium at the south end of the south transept, to the arcade piers in the nave (fig. 6, A), in the westernmost doorway of the south aisle, and in the north and west doorways. In the capitals of the arcade piers in the nave, the cones of the scallops under the octagonal abacus follow the lines of the shafts, etc. of the piers.

[3] Capitals of the sedilia on south side of presbytery, capitals under the arches opening into the transept chapels (plate xviii, no. 2), and some of the capitals under the crossing arches.

[4] Crossing (see J. Potter, *op. cit.* pl. xx, g. h).

[5] Piers 2 north, 5 north, and north-west and south-west responds. Illustrated in E. Sharpe, *Ornamentation of the Transitional Period*, no. 1, pl. 6.

[6] Fountains, nave and westernmost doorway in south aisle. Kirkstall, transept, crossing and westernmost doorway in south aisle.

Sometimes a reed, cut square at the top, is placed between the cones[1] (fig. 6, B).

Other varieties show decorations upon the faces of the cones under the scallops. In one of the capitals (north jamb) of the west doorway at Fountains (plate xxiv, no. 1), and in the capitals of two piers of the nave arcade at

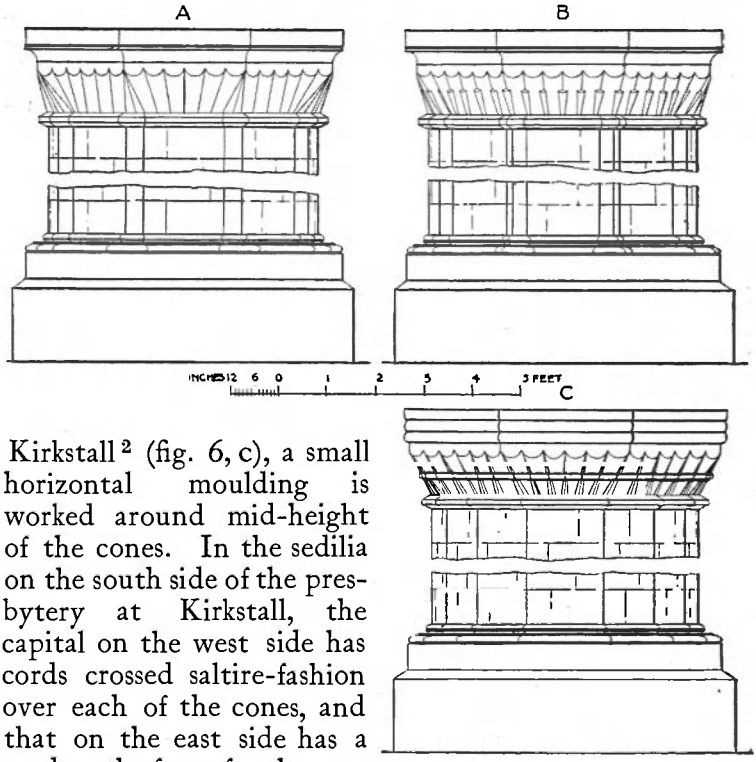


FIG. 6. KIRKSTALL, NAVE ARCADE PIERS, from Sharpe's *Parallels*.

Kirkstall[2] (fig. 6, c), a small horizontal moulding is worked around mid-height of the cones. In the sedilia on the south side of the presbytery at Kirkstall, the capital on the west side has cords crossed saltire-fashion over each of the cones, and that on the east side has a reed on the face of each cone; two reeds on the face of each cone occur on one of the nave arcade capitals.[3] More frequently at Kirkstall a row of flutes is set close around the lower part of the

[1] Fountains, nave arcade pier and aisle corbel. Kirkstall, transept and nave arcade, illustrated in E. Sharpe, *The Ornamentation of the Transitional Period of British Architecture* (London, 1871), no. 1, pl. 6. Cf. also no. 1, pl. 3 (Peterborough, nave), and pl. 16 (Steyning, Sussex); and no. 2, pl. 4 (Ely, Infirmary). I noticed a loose capital of this kind at Vaux-de-Cernay—a Norman "erratic."

[2] 3 north and 6 north; also on east jamb of south-east doorway.

[3] 2 south.

cones, as in several capitals of the nave arcade and elsewhere; in some cases the flutes are finished with straight pointed tops. In one of the capitals of the west doorway at Fountains (south jamb), and in the clearstory on the west side of the north transept at Kirkstall, the indented or zigzagged line, which forms the top of the flutes or grooves, takes the place of the scallop. In some of the scalloped capitals at Buildwas the face of each cone is cut into a sort of double leaf encircling the cone.[1]

A later development of the scalloped capital in which the cones, instead of having a straight profile, form a hollow curve from the necking to the scallop,[2] is of frequent occurrence in the latter part of the twelfth century, especially in the west of England,[3] where it survives into the thirteenth century. This type of capital, which appears, in a somewhat rudimentary form, in the church at Fontenay (plate iii), must be regarded as a modification of the native Anglo-Norman scalloped capital by giving it the hollow bell of the Corinthianesque capital, which must now be noticed.

All the capitals described above (with the exception of those mentioned in the last paragraph) belong to the current English manner of the time. We come now to an entirely different type of capital, which is certainly not of English origin. The capital with the perfectly plain hollow bell, which was so much affected by the Cistercians, in England as abroad, is excellently exemplified at Roche (plates v, xvi, xvii, and fig. 5, v), which in so many respects shows remarkable advance on its predecessors. That the type is not of English origin is amply proved by more than one consideration. It is a reproduction of the hollow corbel of the Corinthianesque type of capital, which is reduced to its simplest elements by omitting all the sculpture, and it can have originated only in a school where this Corinthianesque type was in vogue;[4] early examples of

[1] J. Potter, *op. cit.* plates xvi and xx.

[2] Examples of this kind of capital from Dore are illustrated in E. Sharpe, *The Ornamentation of the Transitional Period*, no. 1, plates 31, 32 and 33.

[3] The theory advanced recently that the west of England developed an early Gothic manner in advance of other districts cannot, I think, be accepted. It is *prima facie* improbable, and it appears to have originated in a mistaken reading of the evidence for the dates of Worcester and Wells.

[4] The Norman variety of the Corinthianesque type of capital was introduced into England after the Conquest, but it cannot be said to have been greatly developed in England in the first half of the twelfth century.

it are found in central France and Burgundy in churches which were not Cistercian, as well as in the earliest work in the Cistercian churches of Fontenay and Pontigny; its simplicity commended itself to Cistercian ideas, and it is characteristic of their work almost everywhere. When once introduced into England, it was adopted in many churches which were not Cistercian, and it had a great vogue in the latter part of the twelfth century in the nave arcades of village churches in certain districts.[1]

The simplicity of the hollow-belled capital was, however, frequently relieved by simple leaf ornamentation on the

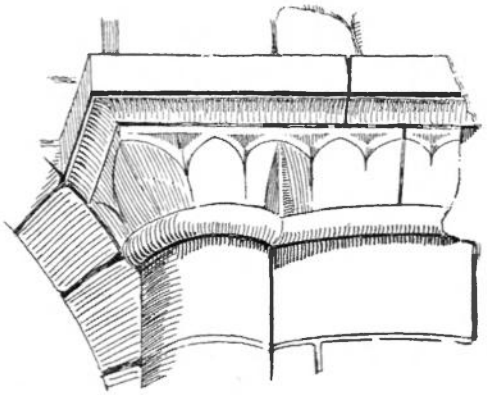


FIG. 7. FOUNTAINS, NAVE, NORTH-EAST RESPOND PIER.

bell. Early examples of leaf ornament occur on some of the capitals of the arcade piers (fig. 7 and plate xviii, no. 1)[2] and on some of the corbels on the aisle wall (fig. 8) of the nave of Fountains, but here the bells are not hollow, and the leaves are carved on a straight profile, the reversed pyramid of the cubic capital. The ornament, of charmingly refined character for its date, consists of a series of flat leaves with pointed tops, set close together,

[1] Occasionally the top of the plain hollow bell finishes with a circular moulding beneath the rectangular upper part of the capital. An example from Roche is illustrated in E. Sharpe, *The Ornamentation of the Transitional Period*, no. 1, pl. 23, and others occur at Furness and Byland.

[2] Fig 7 is from the western face of the north-east crossing pier. Plate xviii, no. 1, represents the capital under the transverse arch of south aisle, at the back of the second (detached) pier from the west end. One of the pier capitals is illustrated in E. Sharpe, *The Ornamentation of the Transitional Period*, no. 1, pl. 5.

and generally with a smaller pointed leaf in the little spandrels between the tops of the larger leaves. Sometimes the leaves taper towards the necking, but the lower ends of the leaves are not pointed, as they are in some capitals of the transept at Kirkstall[1] (fig. 9), where the carving is in higher relief. These leaf capitals are evidently not native to the Anglo-Norman Romanesque, and are probably due to Burgundian inspiration.

The simple flat leaf with pointed top, decorating the hollow bell, occurs in the naves of Fontenay and Pontigny,[2]

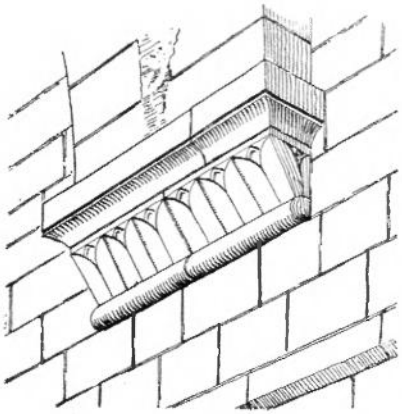


FIG. 8. FOUNTAINS, SOUTH AISLE, GORBEL UNDER TRANSVERSE ARCH.

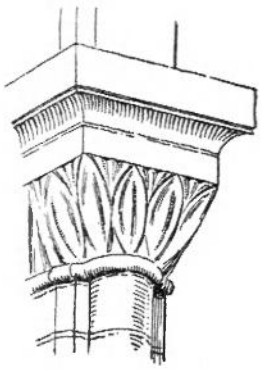


FIG. 9. KIRKSTALL, SOUTH TRANSEPT.

and in the cloister-arcade at Fontenay (plate xix), which is of later building than the church, and may be dated c. 1160. It was certainly in use in northern France before it made its appearance in England. Some capitals of this type occur in the latest work in the church at Kirkstall; in the north clearstory of the nave, outside, one of the jamb shafts to each window in the five westernmost bays has a capital with flat leaves with pointed tops on a hollow bell, although all the other capitals are of the scalloped type.[3] A more advanced example from the east aisle

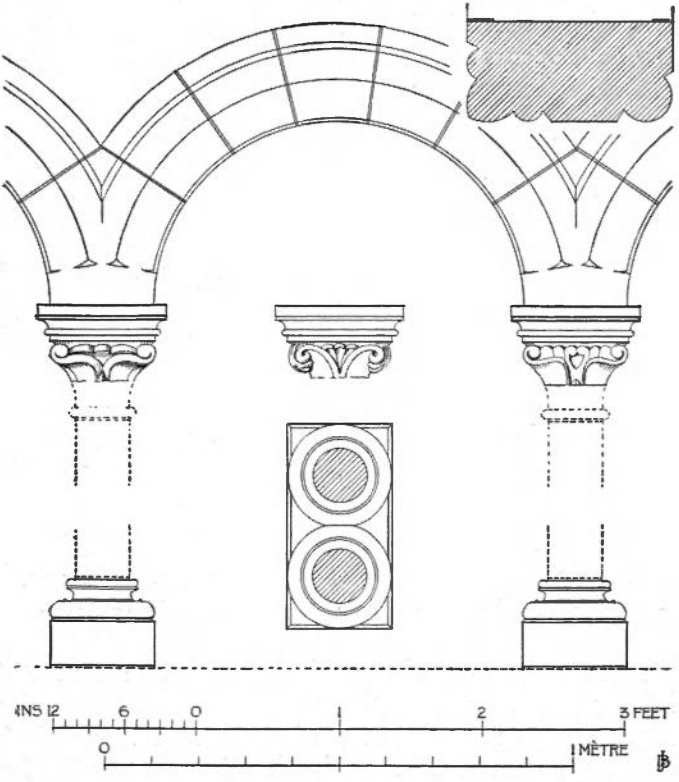
[1] South transept, middle chapel, under northern springing of arch.

[2] C. Enlart, *Origines*, p. 289, and fig. 126.

[3] The capitals of the central jamb shafts of the west windows (outside) at Kirkstall have flat-leafed volutes above a row of closely-set flutes.

(south-east angle) of the south transept at Byland is illustrated in plate xxi, no. iv.

More frequently the capital with the hollow bell is decorated with the simple water-leaf curling over at the top, which Mr. Sharpe called 'the Transitional volute.' This occurs at Buildwas, in the corbel-supports of the crossing arches;[1] at Roche, in some of the capitals in



[*Measured and drawn by John Bilson.*

FIG. 10. KIRKSTALL, CLOISTER ARCADE (RESTORED).

the transept; at Furness, in the capitals of the arcade piers of the transept (plate xx, no. 1); at Byland (plate xx, no. 2); and in the eastern range at Fountains, the *edificia sumptuosa* built by abbot Robert (1170–9).[2] In line with the last-mentioned works was the arcade of

[1] J. Potter, *op. cit.* plates 8 and 16.

[2] *Memorials of Fountains*, i, 114, 132.

[*Arthur Bond, phot.*

NO. I. FURNESS, NORTH TRANSEPT, PIER OF EAST ARCADE

[*S. Gardner, phot.*

NO. 2. BYLAND, SOUTH TRANSEPT, EAST ARCADE, SOUTH RESPOND PIER

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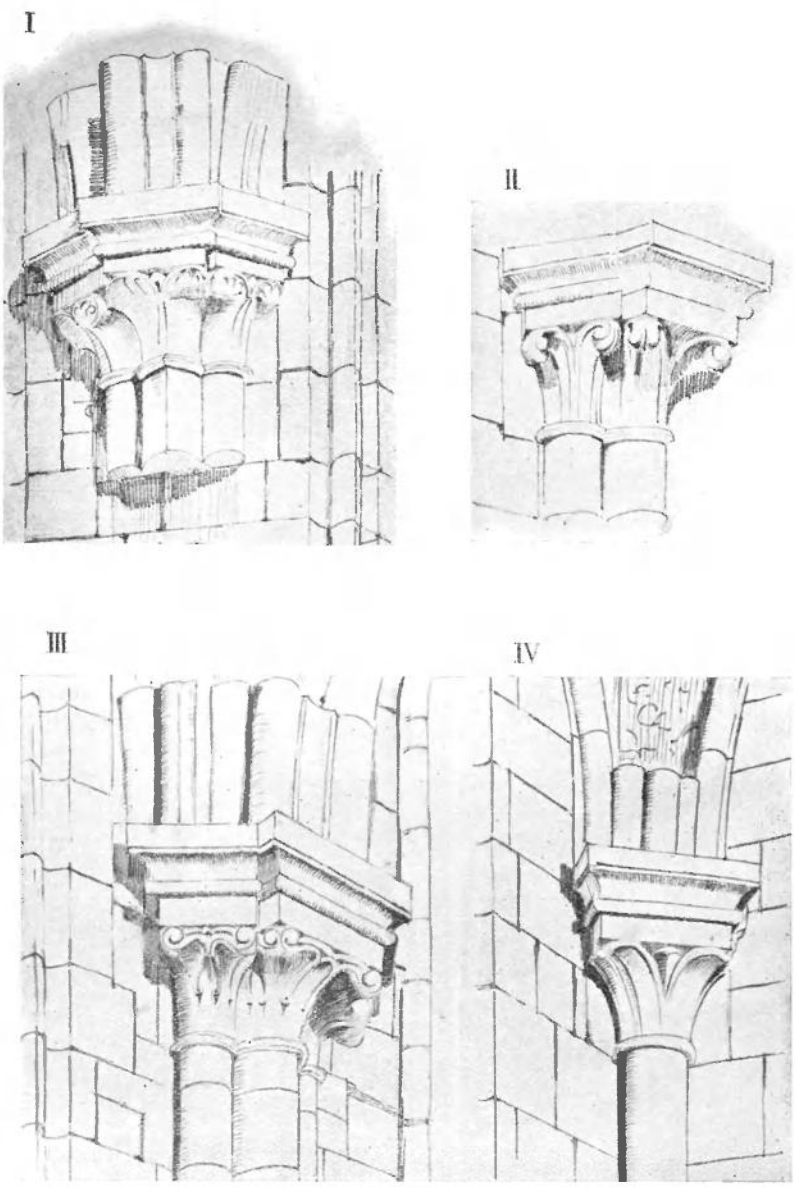


[*John Bilson, del.*

I. East aisle of presbytery, north of centre. II. North aisle of presbytery, second from east. III. East aisle of south transept. IV. East aisle of south transept, south-east angle.

BYLAND, CAPITALS OF VAULTING SHAFTS.

the cloister at Kirkstall, which appears to have been the latest work undertaken to complete the monastery; the arcade was of the usual twin-shaft type, with semi-circular arches and water-leaf capitals of varied design, as may be seen from the restoration in fig. 10, which I have drawn from the existing fragments. As of the capital with the plain hollow bell, so of the water-leaf decoration, a continental origin may be asserted, for capitals with this type of ornament were current in northern France at the time of its first appearance in England.

Some of the capitals in our later examples are of the *crochet* type, which appears in a rudimentary form in the capitals of the jamb shafts of the clearstory windows (inside) at Buildwas,[1] and in a more advanced form in those of the west window (outside) of this church.[2] The capital from the north aisle of the presbytery at Byland, illustrated in plate xxi, no. ii, shows a closer approximation to the English type of *crochet* of the thirteenth century.

The neckings of the capitals are generally either a simple roll (fig. 5, iv, v, vi), or chamfered on the upper and lower edges (fig. 5, ii, iii, vii, viii). Exceptions at Kirkstall are the neckings of the capitals to the sedilia on the south side of the presbytery, which have a quirked bead between two chamfers, a profile which also occurs in the north transept; those of the capitals on the north side of the north chapel of the north transept are ornamented with a two-cord plait (plate xviii, no. 2).

The abaci of the capitals in the earlier churches have the usual Romanesque profile of a flat upper face, a quirk, and a chamfer. In the impost moulding under the arch at the east end of the south aisle of the nave at Rievaulx, the chamfer is straight (fig. 5, i). In the normal profile at Fountains, Kirkstall[3] and Buildwas, the chamfer is hollow (fig. 5, ii, iii, iv). At Kirkstall, the abaci to the capitals of minor shafts (sedilia and four doorways of nave) have a sunk bead above the hollow.

[1] J. Potter, *op. cit.* pl. 12.

[2] *Ibid.* pls. 18, 23 and 25.

[3] In the nave of Kirkstall, the abaci to the capitals of the two westernmost piers on each side, and of the western responds have an exceptional and ungraceful profile of three rolls of equal projection (fig. 6 at C).

The normal profile of the abaci at Roche, Furness, and Byland (fig. 5, v, vi, vii), and of those to the cloister arcade at Kirkstall (fig. 10) shows a flat upper face, a quirk of which the lower member forms a convex lip over the hollow, a large hollow, and a bead. This profile has been regarded as a development of the Romanesque profile described above, but the early forms of it which are found in northern France suggest that it was rather a development from the Roman cyma, arrived at by emphasizing the contrast between the upper and lower curves of the cyma.

Some of the abaci at Buildwas (corbel supports of the presbytery vault, internal shafts of clearstory windows of nave)[1] have simply a flat face above a quirked roll. The profile of a flat face with two rolls below separated by a hollow, which occurs at Buildwas (jamb shafts of west windows of nave)[2] and at Dore (fig. 5, viii),[3] is more common in the south and west of England than in the north.

In all the profiles of abaci noticed above, the upper angle is square. In the west door of Byland (plate xxv, no. 2) the abaci, which otherwise have the same profile as elsewhere in the church, have their upper angles rounded, an English characteristic which becomes normal.

With the exception of the abaci of the great arcade piers of the naves of Fountains and Kirkstall, which are partly or wholly octagonal on plan, the abaci are invariably square on plan, until we come to our latest examples. In the church and chapter-house at Kirkstall, the abaci are square-planned, as also are those of the corbel supports of transverse ribs in the other buildings; but early examples of the circular-planned capital and abacus occur in the corbel supports under the groins or diagonal ribs of the parlour, sub-vault of dorter,[4] warming-house, kitchen and *cellarium*. In the north aisle of the nave of Byland, the abaci of the vaulting shafts in the eastern bays are square-planned, but the capitals of the seven westernmost shafts have a single circular abacus over the triple shafts, although

[1] J. Potter, *op. cit.* pls. 8 and 12.

[2] *Ibid.* pls. 18, 23, 25.

[3] See also E. Sharpe, *The Ornamentation of the Transitional Period*, no. 1, pl. 30–34. Cf. also pl. 26–29.

[4] On the side walls the corbel-supports all have the square-planned abacus. The circular form only occurs in those at the north and south ends (see *Publications of the Thoresby Society*, xvi, fig. 77).

the abaci of the external jamb shafts to this part of the aisle, and all those of the west front are still square on plan. The capitals of the western respond piers seem to indicate that the nave piers also had a single circular abacus over the whole group of shafts. At Dore, in the nave piers and in the eastern chapels, the characteristically English round capital is definitely adopted.

In the capitals which receive the ribs of the vault in the presbytery and nave aisle walls at Kirkstall, the abaci of the capitals under the diagonal ribs are set square, (plates xiv, and xxii, no. 1), as they generally are in the supports of the earlier ribbed vaulting of the Anglo-Norman Romanesque.[1] At Buildwas, the capitals of the corbel supports of the presbytery vault have abaci of semi-octagonal plan,[2] while the corbels which receive the diagonal ribs of the transept chapels are set diagonally on the axis of the diagonal rib.[3] The capital set diagonally under the diagonal rib is the normal form at Roche[4] (plates v, xvi, and xvii, no. 2), and at Byland (plate xxi) until it is superseded by the circular capital.

CORBEL SUPPORTS.

The method of supporting the springings of arches and vaults on corbels, instead of attached shafts rising from the floor, is extremely common in Burgundian architecture, and it is one of the motives most frequently imported by the Cistercians into other countries.[5] Practical in all things, the preference shown by the Cistercians for this form of support was doubtless due to the fact that it left all the floor space free and unobstructed by projections from the faces of the walls. Numerous examples of this motive are found in all our examples. In the aisles of the nave of Fountains it takes the form of a straight impost corbelled out from the wall-face to receive the transverse arches which support the barrel vaults (fig. 8), and a similar form of corbel occurs under the east arch of the crossing.[6] At Kirkstall, this

[1] So also generally at Furness, in the church.

[2] J. Potter, *op. cit.* pl. 8.

[3] *Ibid.* pls. 3 and 16.

[4] At Roche, in the eastern piers of the crossing, the bases of the shafts which received the diagonal ribs of the crossing vault are set diagonally.

[5] For examples from Burgundy and Italy, see C. Enlart, *Origines*, 267–272.

[6] J. A. Reeve, *op. cit.* pl. 5 and 10, and the reproductions in *Yorkshire Archaeological Journal*, xv, figs. 1 and 2 (pp. 283 and 285).

form is found under the east and west arches of the crossing, in continuation of capitals (plate xii), and also under the short pilasters which flank the west windows of the nave on the inside.

The more general form, however, is that of a short length of attached shaft, surmounted by a capital of the usual type (scalloped in the earlier examples, hollow-belled in the later), and supported by a reversed cone. At Kirkstall, the corbels which receive the springings of the vaulting ribs of the presbytery (plate xii) and those of the ribs on the aisle walls of the nave (plate xxii, no. 1), which are of almost precisely the same pattern, represent a Burgundian motive expressed in details of the current Anglo-Norman manner. Corbels of similar type support the presbytery vaulting ribs[1] and the crossing arches[2] at Buildwas, and the presbytery vaulting ribs at Roche, with capitals of the more advanced types already noticed. The conical corbel, which is employed in the supports for the diagonal ribs of the high vault and chapel vaults[3] of the transept at Roche (plates v, xvi, and xvii, no. 2), had a considerable vogue in English architecture of the late twelfth and thirteenth centuries. Plate xxii, no. 2, illustrates an example from the eastern range at Fountains (1170–9), in which the decoration of the capitals is apparently based on the leaf of the water-lily, and has its analogies in the capitals of northern France.[4]

ARCHES. The progression of the profiles of the arches of main arcades is illustrated by figs. 11 and 12. In the early nave of Rievaulx, the arches opening from the nave aisles into the transept (fig. 11, i), and at Buildwas the arches of the crossing[5] and of the nave arcades (fig. 11, v) have voussoirs of plain rectangular profile, without mouldings, as is usually the case in contemporary Cistercian churches abroad.[6] In both these cases, and also in the nave arcades at Fountains, the soffit of the inner order, between the ashlar voussoirs,

[1] J. Potter, *op. cit.* pl. 8.

[2] *Ibid.* pl. 8, 16 and 20.

[3] E. Sharpe, *The Ornamentation of the Transitional Period*, no. 1, pl. 23.

[4] At Roche, the capital of the corbel under the diagonal rib at the south-west angle of the southern chapel of the north transept has leafage of a somewhat similar type.

[5] J. Potter, *op. cit.* pl. 20.

[6] Cf. the naves of Fontenay (plate iii and Pontigny (plate xv).

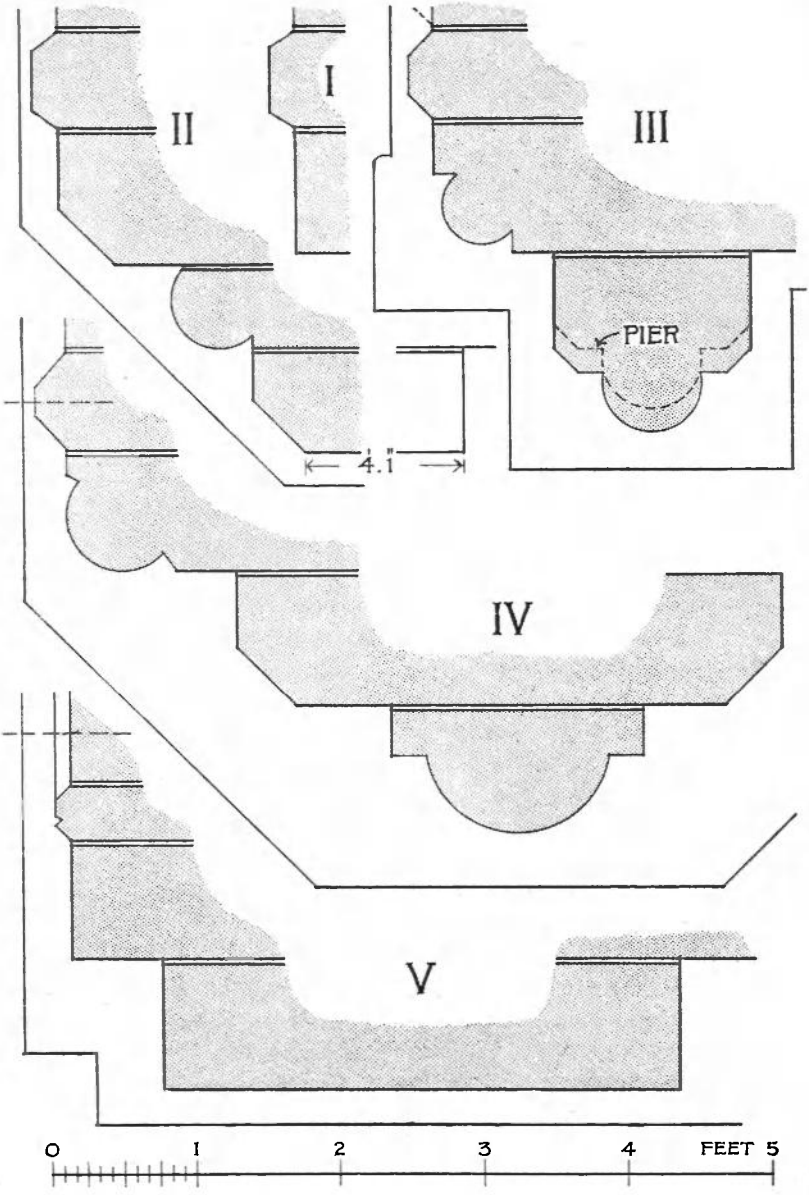
Fr. V. Saunders, phot

NO. I. KIRKSTALL, VAULT CORBEL,
NORTH AISLE OF NAVE.

To face page 260.

S. Gardner, phot.

NO. 2. FOUNTAINS, PARLOUR.



I. Rievaulx, nave (east end of south aisle). II. Fountains, nave (Sharpe's *Parallels*). III. Kirkstall, transept. IV. Kirkstall, nave. V. Buildwas, nave (Potter, pl. 10 and 11).

FIG. II. ARCHES OF MAIN ARCADES.

is constructed of rubble, for plastering—a survival of a Romanesque method which of course disappears when the soffit of the arch is finished with a narrower moulded order.

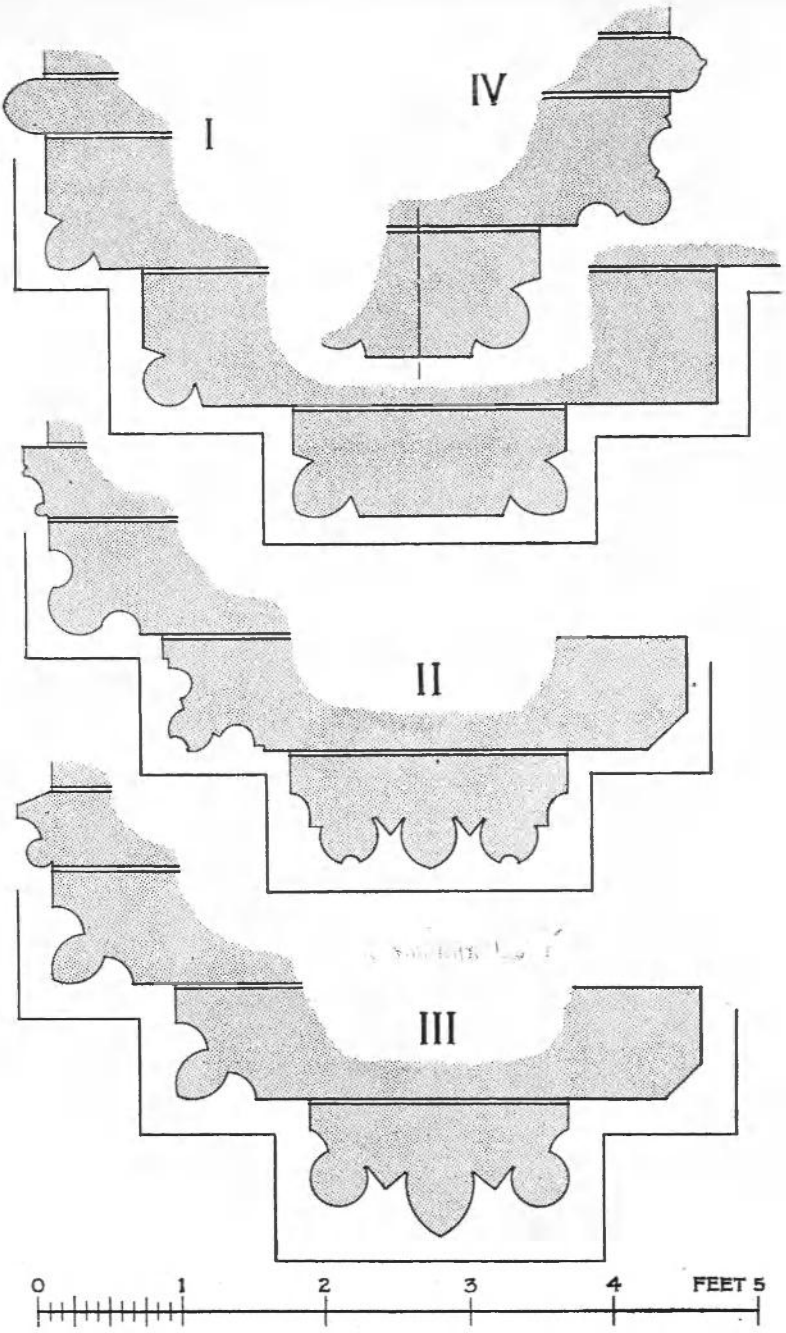
In the main arcades at Fountains and Kirkstall, we see how the English love of mouldings overcame Cistercian austerity. The arch orders have either roll profiles which are a simpler version of the current native manner, or plain chamfered profiles which are less characteristically native (fig. 11, ii, iii, iv). The profile of the inner order of the nave arcade arches at Kirkstall, a large half roll flanked by a flat on each side (fig. 11, iv), is the most primitive type of roll profile in the Norman Romanesque ;[1] the inner order of the arches opening into the transept chapels shows a similar profile, but with the angles chamfered (fig. 11, iii). In the arch from the north transept to the north aisle, the inner order has a roll flanked by chevrons on each side (plate xviii, no. 3)—a further concession to the native manner.

In the transept at Roche, the arch mouldings (fig. 12, i), like all the other details, show marked advance and great refinement of expression. The orders have the clean rectangular outline which is characteristic of the best contemporary work in northern France, and the mouldings profiled on their angles are of extreme simplicity. The middle order has a quirked roll, like the outer order at Kirkstall (fig. 11, iv), but here the diameter of the roll is reduced to one-third.[2] The rolls on the outer and inner orders are pointed, or keel-shaped, a form which was extremely common in the last third of the twelfth century. Although there is an early dated example of the pointed roll in the diagonal ribs of the chapter-house vault at Durham (1133–40),[3] there can be no doubt that it was in *general* use earlier in northern France than in England. In the middle and outer orders at Byland (fig. 12, iii), the roll becomes more sharply pointed, with wider and hollow quirks. The channel worked on the face of the

[1] It is found, however, at an earlier date in the crypts of the cathedrals of Auxerre and Nevers, both of the second quarter of the eleventh century.

[2] The relatively large scale of much of the detail at Kirkstall must be considered in connection with the material, a coarse-grained and extremely hard millstone-grit, known in modern times as Bramley Fall stone.

[3] *Journal of the Royal Institute of British Architects*, 3rd ser. vi, 346.



I. Roche, north transept. II. Furness, north transept (*Abbey Square Sketch Book*, ii, pl. 10). III. Byland, nave (Sharpe's *Parallels*). IV. Dore, nave (Sharpe's *Mouldings*).

FIG. 12. ARCHES OF MAIN ARCADES.

roll, which occurs in the middle and inner orders in the transept at Furness (fig. 12, ii),[1] is another detail which is common in northern France. The roll, flanked on each side by a fillet and wide hollow, which occurs in the west doorway at Kirkstall (fig. 14, i) and in the outer order of the nave arcade arches at Dore (fig. 12, iv), is of frequent occurrence,[2] and leads up to the characteristic English profiles of the early thirteenth century. The filleted roll, which makes its appearance in the arches of the west doorways (north and central) at Byland, is of much earlier general use in England than in northern France. The sharp fillet, shown in the hood-mould of the nave arcades at Dore (fig. 12, iv), is a peculiarly English detail.

VAULTING RIBS.

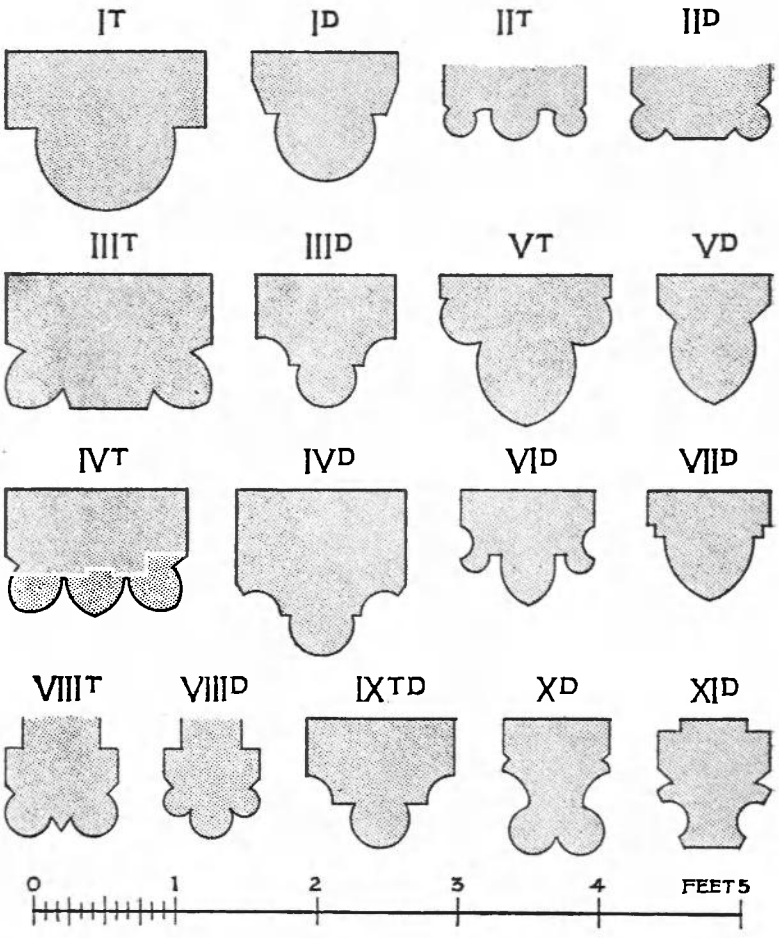
The rib profiles of vaults show the same progression which has been noticed in arch mouldings. The profiles of the ribs of the vaults of the presbytery and aisles of the nave (fig. 13, i^{T}, i^{D}) at Kirkstall are entirely in the Anglo-Norman Romanesque manner. Some of the later rib profiles are simply refined versions of profiles which had been used in some of the earliest ribbed vaults in England. For instance, the roll flanked by a hollow on each side, which is the profile of the diagonal ribs in the transept chapels (fig. 13, iii^{D}) and in the high vaults of the presbytery and transept (fig. 13, iv^{D}) at Roche, and that of both transverse and diagonal ribs of the nave aisles at Byland[3] (fig. 13, $ix.^{TD}$), reproduces the motive found in the earliest diagonal ribs known in England, those of the choir aisles at Durham. The profile of two rolls separated by an angle-fillet, of the transverse ribs of the chapter-house at Buildwas (fig. 13, $viii^{T}$), is that of the diagonal ribs in the nave aisles of Gloucester (north aisle) and Peterborough.[4] The rib of rectangular outline with a roll on each angle, the diagonal rib of the presbytery vault at Buildwas (fig. 13, ii^{D}), is a refinement of the

[1] Also in some of the diagonal ribs of the vaults of the aisles of the presbytery and south transept at Byland.

[2] Furness, north transept, triforium (*Abbey Square Sketch Book*, ii, pl. 10). Cf. also Furness, transept arcade, middle order (fig. 12, ii.).

[3] So in the eight westernmost bays of the north aisle, and also in the western bays of the south aisle.

[4] This particular profile, which occurs in the narthex of Saint-Denis and in the apse of Saint-Martin-des-Champs, Paris, is common also in northern France, as also are some of the other profiles here noticed.



I. Kirkstall, aisles of nave. II. Buildwas, presbytery (Potter, pl. 19). III. Roche, transept chapels. IV. Roche, transept, high vault. V. Kirkstall, chapter-house. VI. Furness, transept chapels. VII. Furness, aisles of nave. VIII. Buildwas, chapter-house (Potter, pl. 19). IX. Byland, aisles of nave (western bays). X. Dore, transept chapel (Roland W. Paul). XI. Jervaulx, aisles of nave.

Transverse ribs are marked T, and diagonal ribs D

FIG. 13. RIBS OF VAULTS.

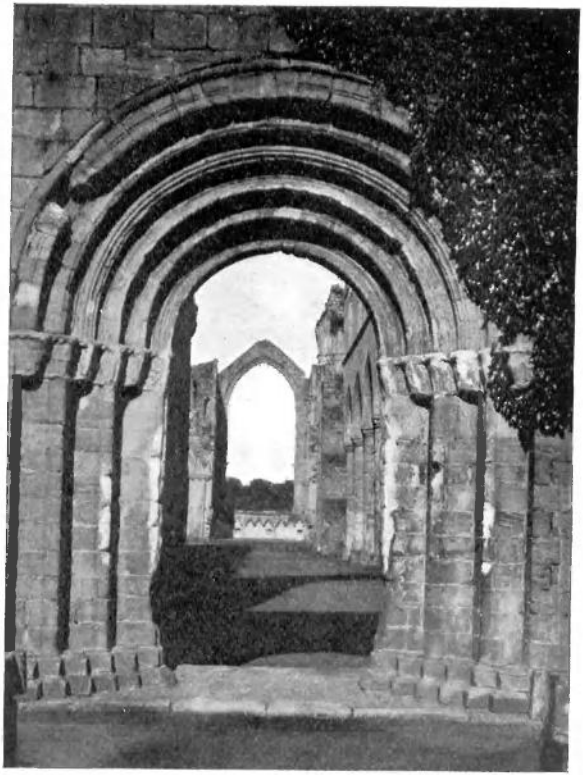
profile of the transverse rib of the choir aisles at Peterborough.[1] In the transverse rib of the transept chapels at Roche (fig. 13, iii^{T}), the rolls become pointed, as in the arcade arches.

The pointed roll is of very frequent occurrence in rib-profiles. The diagonal ribs of the chapter-house at Kirkstall (fig. 13, v^{D}) have a single pointed roll. In the nave aisles at Furness, the diagonal ribs have a single pointed roll with a fillet on each side (fig. 13, vii^{D}).[2] In the parlour at Fountains (plate xxii, no. 2) the transverse ribs have a single roll flanked by a hollow on each side, which is an extremely common profile of diagonal ribs in northern France.

The triple roll is another favourite profile. It occurs in the transverse ribs of the presbytery at Buildwas (fig. 13, ii^{T}), in a somewhat rudimentary form, and in the diagonal ribs of the chapter-house there (fig. 13, viii^{D}). The diagonal ribs of the aisles of the presbytery and transept at Byland have triple rolls (plate, xxi, iv), and the larger central roll has in some cases a channel worked on the face (plate xxi, i, iii). In the diagonal ribs of the chapter-house at Fountains, there is an angular fillet above each of the side rolls ; in the diagonal ribs of the parlour there (plate xxii, no. 2), the three rolls are separated by fillets. In the transept chapels at Dore, some of the diagonal ribs have triple rolls, with a more open hollow above the side rolls. The transverse ribs of the chapter-house at Kirkstall have a pointed roll between two smaller circular rolls (fig. 13, v^{T}). The transverse ribs of the high vaults at Roche have three pointed rolls (fig. 13, iv^{T}). The diagonal ribs of the transept chapels at Furness (fig. 13, vi^{D}) show another variety. The transept chapels at Dore present an example of a diagonal rib with two rolls flanked by wide quirked hollows (fig. 13, x^{D}). The diagonal rib of the nave aisles at Jervaulx shows a very simple profile, in which the usual roll is absent (fig. 13, xi^{D}).

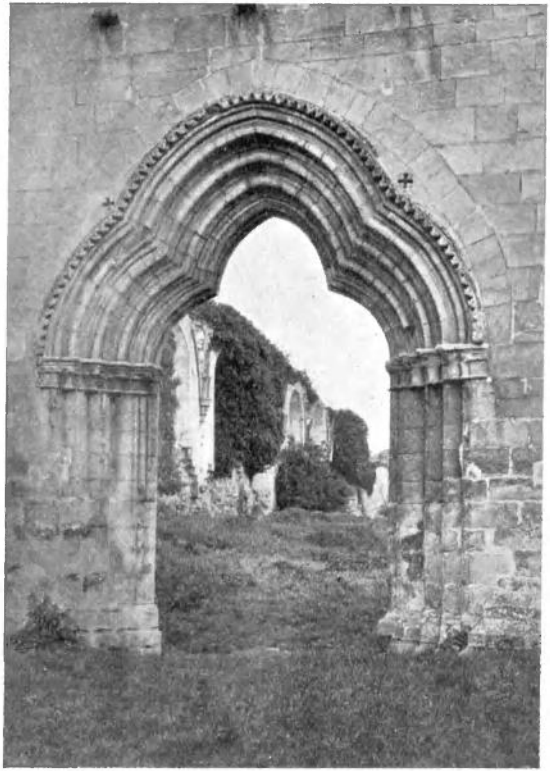
[1] In the transverse ribs of the aisles of the presbytery and transept at Byland, the angle rolls are separated by a hollow flanked by fillets (plate xxi, i, iii).

[2] The transverse ribs are simply chamfered, as in the southernmost bay of the *cellarium* at Kirkstall, and in the south transept chapels at Dore. The chamfered profile is not one of earliest occurrence in the vaults of the Anglo-Norman school.



[*Godfrey Bingley, phot*

NO. I. FOUNTAINS, WEST DOORWAY



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NO. 2. BYLAND, WEST DOORWAY

To face page 267.

In the earlier examples the transverse ribs are always wider than the diagonal ribs, and their profiles always differ. This is the case in the eastern parts of Byland, but in the western bays of the nave aisles we see the beginnings of a change; the transverse and diagonal ribs are of the same size and have the same profile (fig. 13, ix^{TD}).

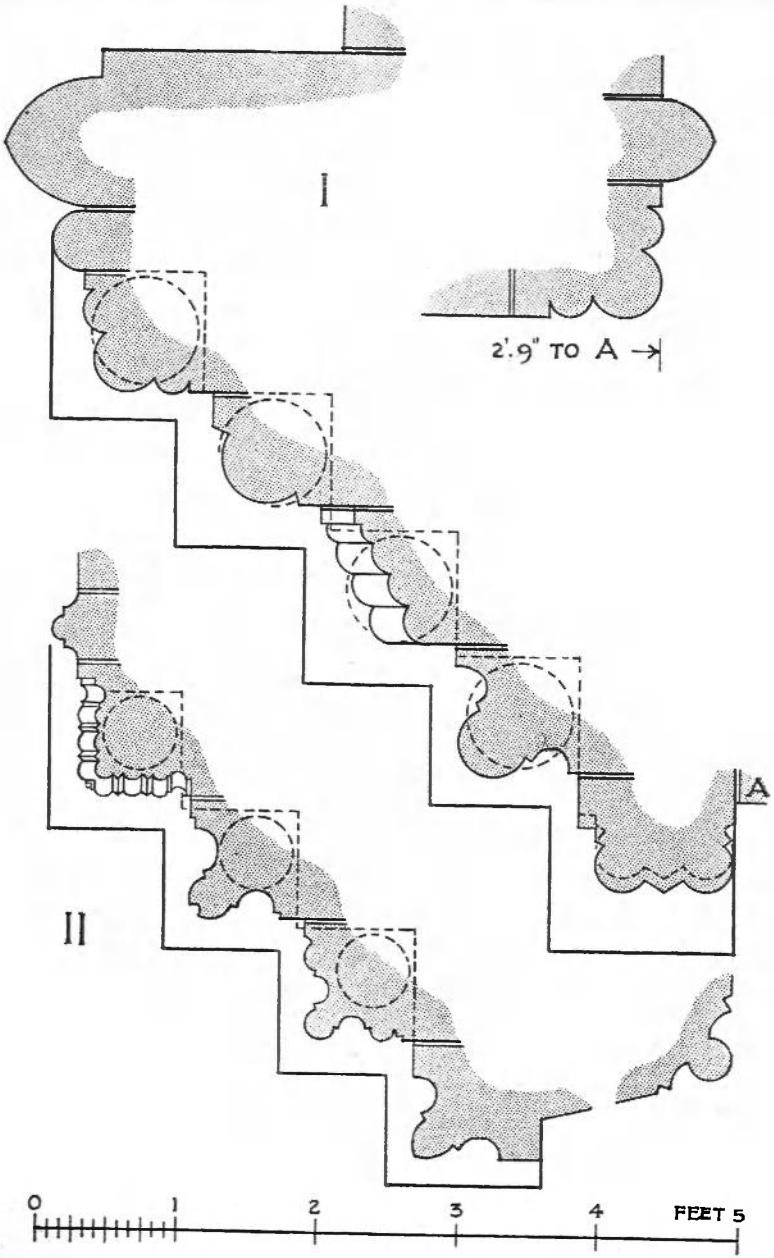
In all the earlier vaults the ribs are constructed of separate stones at their springings. The method of working all the ribs at their springings out of single stones (*tas-de-charge*) first appears in the latter part of the twelfth century. In the aisles of the presbytery at Byland, we see transverse, diagonal, and wall ribs[1] worked on a single springer (plate xxi, i), but the new method was not yet completely adopted, for in the western bays of the nave aisles, the ribs at their springings are in separate stones, though their section is not complete, the sides of the ribs being bevelled off in order to fit them more closely together.

The keys of the diagonal ribs of the presbytery and nave aisles at Kirkstall, like those of the earlier ribbed vaults in England, are without any ornament. In the transept chapels at Roche we see leaves worked on the key, or the mouldings of the rib are returned around a central eye to form a moulded ring. In the transept chapels at Dore, there is an example of a little rose worked on the key, a decoration also frequently found in northern France.

DOORWAYS. At the period of the earlier Cistercian churches in England, we generally find that the decoration of English churches was to a great extent concentrated in their doorways. In this respect the doorways at Fountains and Kirkstall (plates x, xxiii, no. 1; xxiv, nos. 1 and 2; and xxv, no. 1) show the influence of the native manner, as opposed to Cistercian love of simplicity, though their archivolts are less elaborately ornamented than was usual in other churches.

Except in the smaller doorways, such as that at the north end of the north transept at Kirkstall, the jambs generally have monolithic shafts, set within re-entering angles, one shaft to each order of the arch (fig. 14). The inner order,

[1] For some notes on the profiles of the early wall-ribs, see above, p. 240.



I. Kirkstall, west doorway (Sydney D. Kitson). II. Furness, north transept doorway (*Abbey Square Sketch Book*, ii, pl 11).

FIG. 14. DOORWAY ARCHES.

[*John Bilson, phot.*

NO. I. FOUNTAINS, WEST DOORWAY.

[*J. V. Saunders, phot.*

NO. 2. KIRKSTALL, WEST DOORWAY.

however, is usually received by smaller attached shafts, or roll mouldings, which sometimes repeat the profile of the inner order itself, as in the doorways at Kirkstall (fig. 14, and plates xxiv, no. 2, and xxv, no. 1). In the west doorway of Fountains, each jamb has three monolithic shafts, alternating with smaller attached shafts (plates xxiii, no. 1, and xxiv, no. 1). The capitals are of the general types described above, and the inner order of the arch either springs from a capital, as in the doorways at Fountains and Kirkstall, or from an impost moulding which continues the abacus of the other capitals, as in the north doorway of the north transept at Furness (fig. 14). The two doorways in the south aisle at Kirkstall have arches of two and three orders respectively, that in the north aisle three orders (plate xxv, no. 1), while the west doorway has five orders (fig. 14, and plates x, and xxiv, no. 2), and the west doorway of Fountains has six orders (plates xxiii, no. 1, and xxiv, no. 1). In the north and west doorways at Kirkstall, one order is ornamented with the chevron (plates xxiv, no. 2, and xxv, no. 1), and the jambs and arch of the north doorway are framed by a fret composed of a single roll (plate xxv, no. 1). The outer order of the north transept doorway at Furness has a kind of horizontal fret, formed by projecting forward at intervals the mouldings on the face and on the soffit (fig. 14). Generally, however, the arches have no other decoration than mouldings. The west doorway at Fountains (plates xxiii, no. 1, and xxiv, no. 1) affords an excellent example of the characteristically English love of elaborate mouldings.

The arches of all these doorways are semicircular, for it was only in the last years of the twelfth century that the pointed arch came into general use in doorways and windows. The arches of the side doorways in the west front of Byland are pointed, and that of the central doorway (plates vii, no. 2, and xxiii, no. 2) is trefoiled, with a pointed relieving arch over.

[1] Cf. the east end of Fontenay, plate ii, no. 1.

WINDOWS. The windows in the earlier examples are very simply treated, with a chamfer on the external jambs continued round the arch,[1] and with wide splays internally, as in the church at Fountains throughout, at Kirkstall (except as noted below), and in the eastern parts and nave aisles at Buildwas. This simplicity, however, soon gave way to the current use of shafted jambs, receiving a simply moulded outer order. At Kirkstall, the windows of the clearstories on the west side of the transept and on both sides of the nave have monolithic jamb-shafts externally, with an outer order moulded with a single roll. In the nave clearstory at Buildwas (plate xi, no. 2), the windows are shafted internally, but the arches are not moulded.[1] The two windows at the west end of the nave at Kirkstall, which also have had external jamb-shafts, have arches of two moulded orders;[2] the inner order has an angle-roll, and the outer order a triple roll, of which the larger middle roll is pointed, a profile which also occurs in the outer order of the chapter-house doorway, and in the doorways of the chapter-house and parlour at Fountains.[3] In the windows at the west end of Buildwas, the external jamb-shafts are bonded at mid-height with a moulded annulet; in the two west windows of the nave, the outer order which springs from these shafts is decorated with a late type of chevron ornament, with rosettes or leafage in the spandrels of the chevrons.[4] The external jamb-shafts of the aisle windows at Byland also have moulded annulets, and the angles of the internal splays are moulded with a pointed roll with open hollow quirks.[5] At Roche, the internal splays of the two lower tiers of windows in the gable end of the north transept have attached angle-shafts or rolls with flat-leaf volute capitals.

The window arches are invariably semicircular, except in the latest work under consideration here. At Roche, although the triforium arches of the presbytery and transept

[1] J. Potter, *op. cit.* pl. 9 and 12.

[2] The internal arches of these windows, unlike all others in the church, are moulded.

[3] The chapter-house windows at Fountains have monolithic shafts, both externally and internally.

[4] J. Potter, *op. cit.* pl. 5, 18, 23 and 25.

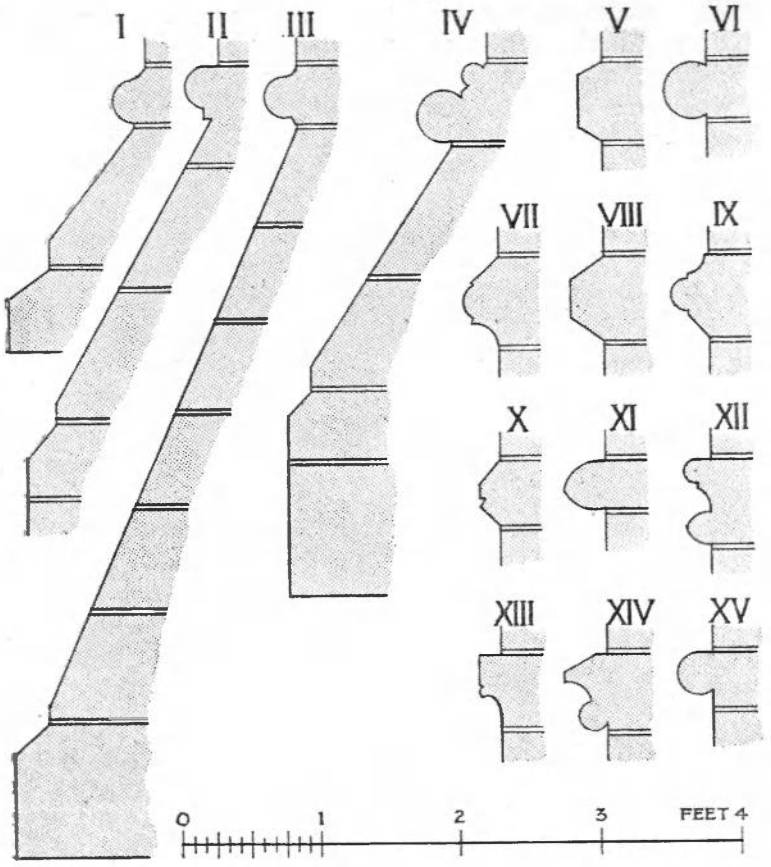
[5] In the western bays of the north aisle of the nave, the angles of the internal splays are not moulded.

are pointed, the clearstory windows (plate v and xvi), like those of the chapels below, are still semicircular-arched. At Byland, the window arches in the aisles throughout are semicircular, although the wall-ribs of the vaults immediately over them are pointed. Of the upper stages, only fragments have survived at the south-east angle of the south transept and at the west end of the nave, but these indicate that the arches of the triforium arcades, and of the clearstory arcades and windows, were pointed, as shown in Mr. Sharpe's restoration (plate v). In the west front (plate vii, no. 2), the three windows below the great rose have pointed arches, and externally they are set in an arcade, with acutely pointed blind arches between the window arches, a motive which became very characteristic of English Gothic of the first half of the thirteenth century.

PLINTHS. The external plinths, following Romanesque precedent, consisted at first of one or more chamfered courses, as in the church at Fountains and the eastern parts of Buildwas. Then the upper weathering was protected by a projecting moulding, generally some kind of roll. At Kirkstall, the lower projection is chamfered; above this is a long weathering, surmounted by a roll continued on the top by a hollow to the wall-face (fig. 15, i). The plinth at the west end of Buildwas has almost precisely the same profile, except that the weathering is very much longer (fig. 15, iii), and the plinth to the transept at Furness is very similar (fig. 15, ii). The plinths at Byland and Jervaulx consist of three chamfered or weathered courses, surmounted by a simple roll.[1] At Roche, the projecting member is developed into a larger lower and smaller upper roll, separated by a fillet (fig. 15, iv).

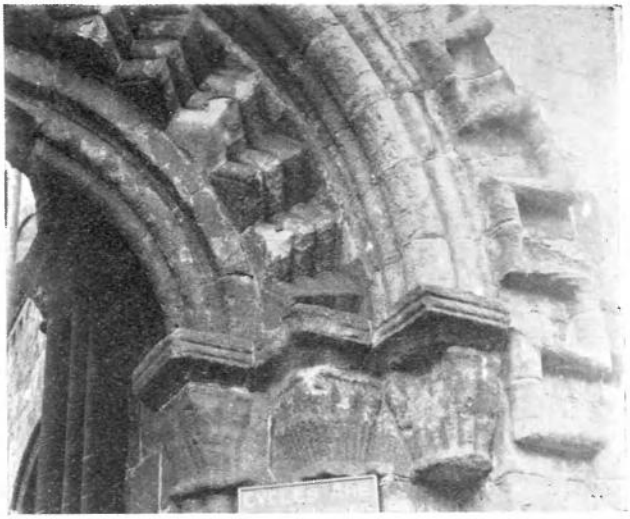
STRINGS. In the earlier examples the string courses are most frequently simply chamfered on their upper and lower edges, as at Fountains (fig. 15, v) and Kirkstall (fig. 15, viii). At Buildwas, the string courses are of the same type, but with a quirk above the lower chamfer (fig. 15, x). At Kirkstall, the internal string on the east wall of the presbytery has a bead

[1] See the profiles of base-courses in Sharpe's *Architectural Parallels*.



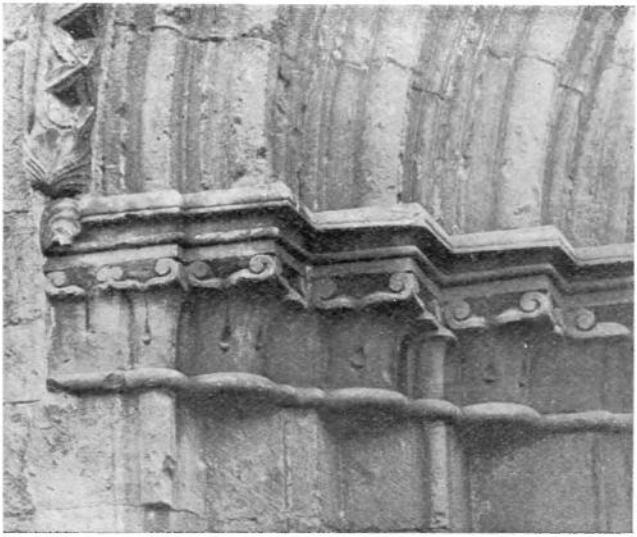
I. Kirkstall. II. Furness, transept (*Abbey Square Sketch Book*, ii, pl. 11). III. Buildwas, west end of nave (Potter, pl. 5). IV. Roche (Sharpe's *Parallels*). V. Fountains, aisles of nave (Sharpe's *Parallels*). VI. Fountains, nave clearstory (Sharpe's *Parallels*). VII. Kirkstall, presbytery, inside. VIII. Kirkstall, aisles of nave, inside. IX. Kirkstall, west end, outside (Sharpe's *Parallels*). X. Buildwas, presbytery, inside. XI. Roche, transept, triforium (Sharpe's *Parallels*). XII. Roche, transept chapels (Sharpe's *Parallels*). XIII. Furness, aisles of nave, inside (Sharpe's *Parallels*). XIV. Byland, aisle, outside. XV. Byland, aisle, inside.

FIG. 15. PLINTHS AND STRING COURSES.



[*J. V. Saunders, phot.*

NO. I. KIRKSTALL, NORTH DOORWAY.



[*S. Gardner, phot.*

NO. 2. BYLAND, WEST DOORWAY.

between a straight upper chamfer and a hollow lower chamfer (fig. 15, vii); and the lower string on the outside of the west front has a bead between a hollow upper chamfer and a straight lower chamfer (fig. 15, ix). The strings in the presbytery and transept at Furness have a similar profile, with hollow chamfers above and below the bead.[1]

A simple roll is another common profile. It occurs below the nave clearstory inside the nave at Fountains (fig. 15, vi), under the side windows of the presbytery at Kirkstall, and under the aisle windows internally at Byland (fig. 15, xv). In the string under the triforium of the transept at Roche, the roll is pointed (fig. 15, xi).

Sometimes the strings are simply chamfered on the lower edge, as in the transept clearstory at Roche, or with a quirk above the chamfer (the usual early abacus profile), as at Fountains and in the first work at Furness. The later abacus profiles are also used for strings, as in the transept and nave aisles at Furness (fig. 15, xiii). The string from the transept chapels at Roche (fig. 15, xii) has a roll, a hollow, and a lower pointed roll, and that under the aisle windows externally at Byland (fig. 15, xiv) has a hollow between an upper weathering and a lower roll, profiles which lead up to the deep hollows of the later strings.

HOODS. The profiles of hood-moulds follow much the same evolution as those of string courses. The simple profile, with its upper and lower edges chamfered, occurs in the examples illustrated in fig. 11, in the nave of Rievaulx (i), in the nave arcades at Fountains (ii), and in the transept and nave arcades at Kirkstall (iii, iv), and it is usual in window arches, frequently continuing impost strings of the same profile. At Buildwas the hood-moulds, like the strings, have a quirk above the lower chamfer (fig. 11, v). At Kirkstall, the hood-mould to the arch of the sedilia on the south side of the presbytery, and that to the internal arch of the south-east doorway, have two rows of billets, one on either side of a small roll, and that to the internal arch of the south-west doorway is similar, but with a small angular fillet between the billets.

[1] Returned as hood-mould to the north doorway of the north transept (fig. 14, ii).

The simple roll is also frequent. It occurs at Kirkstall in the west doorway (fig. 14, i) and in the chapter-house doorways; in the doorways of the church the upper roll of the plinth is returned up the jambs and around the arch as a hood-mould, and the roll of the fret around the north doorway also continues the roll of the plinth. In the transept arcades at Roche (fig. 12, i) the roll is pointed,[1] and in the nave arcades at Dore (fig. 12, iv) the roll has a sharp fillet.

Frequently hood-moulds have the same profile as abaci. The hood-mould to the westernmost doorway of the south aisle at Fountains is simply chamfered on its lower edge. The quirked chamfer occurs inside the nave clearstory windows at Fountains, and outside the west windows at Kirkstall. Later examples from Furness (ii) and Byland (iii) are shown in fig. 12. In the nave arcades at Jervaulx,[2] the hood-mould has the well developed hollow and rounded upper edge which becomes characteristic of English work.

Carved decoration of the hood-mould is rare. Outside the west windows at Kirkstall, the chamfer of the hood-mould is ornamented with a series of convex rosettes. The four-leaved ornament known as the 'dog-tooth' is found in hood-moulds, to the west window of the south aisle at Buildwas,[3] to the transept arcades at Dore, and to the west doorway at Byland (plate xxv, no. 2). The 'dog-tooth' is not a Norman ornament, but it is common in the valley of the Oise, and seems to have been of earlier occurrence in northern France than in England.[4]

Internal arches most frequently have hood-moulds. For instance, all the arcade arches illustrated in figs. 11 and 12 have hood-moulds. However, at Kirkstall, the windows of the presbytery and of the aisles of the nave have no hood-moulds internally, and the windows of the clearstory on the west side of the transept and on both sides of the nave have no hood-moulds externally. At Byland, the windows of the aisles have no hood-moulds, either externally or internally.

[1] The pointed roll occurs in some of the later hood-moulds in the church at Kirkstall, outside the south-west doorway, and inside the north and west doorways fig. 14, i.)

[2] Illustrated in Sharpe's *Architectural Parallels*.

[3] J. Potter, *op. cit.* pl. 18.

[4] For an example from Terouanne, of 1131–1133, see C. Enlart, *Manuel d'archéologie française*, i, 354.

EAVES CORBELS.

The walls generally are finished externally below the roofs with a row of corbels between the pilaster buttresses, supporting most usually a horizontal table, less frequently little semicircular arches. In their simplest form, the corbels consist of a short length of roll moulding, placed horizontally, as to the gables of the transept chapels (plate vi), and to the west gallery at Fountains. At Kirkstall, the corbels show great variety of pattern. Sometimes the rolls have a fillet above and below them, joined by a hollow in which the rolls are set,[1] and frequently the faces of the rolls are ornamented. Some have a flat fillet or strap around the middle of the roll, or a cord lozenge-wise across the roll. In others a triple roll is substituted for the single large roll, and some of these have a fillet, or two reeds, across the rolls. Others

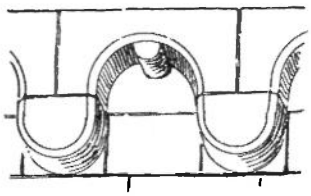


FIG. 16. BYLAND, PRESBYTERY AISLE, EAVES CORBELS.

have a triple roll set upright, following the convex profile of the corbel. It will be observed that all these motives are simpler than the heads and grotesques which usually ornament the corbels in the Anglo-Norman Romanesque. In some of the later examples, the corbels are simpler still—a plain quarter-round, chamfered on each edge, as in the presbytery at Roche,[2] and in the aisles of the presbytery at Byland. In the latter case the corbels support, not a horizontal table, but a series of little semicircular arches, as in the chapels of the north transept at Kirkstall. At Byland, however, these little arches have a horizontal roll under their crown (fig. 16), a motive which

[1] The corbels to the nave clearstory at Buildwas have a large roll set in a hollow (J. Potter, *op. cit.* pl. 12).

[2] Illustrated in Sharpe's *Architectura Parallels.*

appears also in several examples in Normandy and the north of France.[1] In the western bays of the nave aisles at Byland, the corbels are profiled with a roll above an open hollow.[2]

Conclusion.

In this attempt to analyse the architecture of the earlier Cistercian churches in England, one of my principal objects has been to determine precisely what influences contributed to form their architectural manner. My conclusions may be summed up in a few concluding words.

First, as to what is Cistercian. The plans of the earlier churches follow the type developed by the Cistercians in Burgundy, and carried abroad by them wherever their influence extended. Byland and Dore are examples of the expansion of the eastern arm on the same general lines, adopted at Citeaux and many Cistercian churches abroad. In construction, the pointed barrel vaults over the transept chapels at Fountains and Kirkstall, and the vault system of the nave aisles at Fountains, are importations from Burgundy. The use of the pointed arch for the principal arches of construction is characteristically Cistercian. The general simplicity of design is due, of course, to the ideas which were the very *raison d'être* of the order. Some characteristics which, although not unknown to the Anglo-Norman school, may be attributed to Cistercian influence are the absence of the triforium, and the use of the circular window and the relieving arch. The corbel support is a Cistercian motive translated into Anglo-Norman terms of expression.

With these exceptions, and with the exception of

[1] It occurs in Normandy at Colombiers-sur-Seulles, Mouen and Saint-Contest (Calvados), and in England in the nave of Sempringham (Lincolnshire). Also at Quesmy (Oise), and at Ames, Esquerdes, Guarbecques and Violaines (Pas-de-Calais). See C. Enlart, *L'architecture romane et de transition dans la région picarde*, pp. 30, 225, 226; and E. Lefèvre-Pontalis, *Les influences normandes au xi^e^ et au xii^e^ siècle dans le Nord de la France*, in the *Bulletin Monumental*, lxx, 33. For Quesmy, see C. Enlart, *Manuel d'archeologie française*, i, 455.

[2] Illustrated in Sharpe's *Architectural Parallels*.

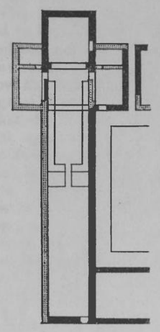
some details at Fountains which are probably of Burgundian inspiration, the architecture of Fountains and Kirkstall is entirely Anglo-Norman. Even the system of vaulting employed at Kirkstall in the presbytery and aisles of the nave, and in the presbytery at Buildwas, may possibly be considered to be Anglo-Norman, modified by the Cistercian use of the pointed arch. At Kirkstall, the details throughout are purely in the Anglo-Norman manner, and even those features which have been noticed as Cistercian are expressed in the native architectural language. It is only in those parts of this church which were built last of all (upper part of west front and north clearstory of nave) that we find any trace of details which may be attributed to foreign influence. The church seems to have been built by native craftsmen, working in their native manner, and the specially Cistercian characteristics which have been noticed were doubtless dictated to them by those who had the general oversight of their work. At Buildwas, though its expression is for the most part that of the Anglo-Norman Romanesque, there are much more decided signs of the coming change, which is completely exemplified at Roche.

Roche must have been begun somewhere about the time that the church at Kirkstall was being finished. So far as their structural system is concerned, the advance is not great. The suppression of the wall, and the concentration of strength in the pier, with a developed system of abutment, are still in the future. Indeed, so far as the abutment of the high vault is concerned, the builders of the transept at Roche not only had not arrived at the flying-buttress, but they did not even construct the abutting arches beneath the triforium roof which were adopted at Durham and Chichester before the end of the eleventh century. In this respect, therefore, they were still far from the structural system of the choir of Canterbury (1175-7), where William of Sens built both abutting arches below the triforium roof and flying-buttresses above it. Nevertheless, the expression of Roche is just as truly Gothic as that of Kirkstall is Romanesque, and this is true of the slightly later Furness, Byland, and Dore. I speak here of what one may call the facial expression of the buildings, for the

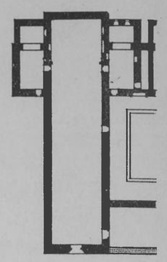
beginning of the constructive development which was the essence of what we call Gothic lies behind Kirkstall. To what cause are we to attribute the striking difference between Kirkstall and Roche? It is true that the same development was in progress everywhere, but it cannot be doubted that the development in England was greatly accelerated by the influence of the wonderfully powerful and rapidly advancing school of the Ile-de-France. It was not indeed a case of the wholesale importation of a foreign style, such as the Cistercian importations from Burgundy into Germany and Italy. English architecture in the middle of the twelfth century was too strong to admit the possibility of this. It was rather a development on parallel lines, a little later than, but continuously influenced by, the more advanced school of the royal domain. There cannot be the slightest doubt that the Ile-de-France exercised a powerful influence on upper Normandy[1] from about the middle of the twelfth century onward, and that this influence extended to England was a necessary consequence of the intimate relations which existed between this country and the continent in the second half of the twelfth century. The analogies between the English architecture of this time and that of upper Normandy are naturally more pronounced in the south of England than in the north, but the particular influences from northern France which went to form the architectural manner of Roche are indicated clearly enough by a comparison with the earlier work at Pontigny. There is perhaps no more difficult question in the study of mediaeval architecture than this question of the influence of one school or one district on another, and it is often very easy to mistake mere analogies for influence. We must remember, too, what was perhaps the most important factor, the universality of the mediaeval Church, which knew no bounds of nationality. In the case of the Cistercians, one possible way by which such influence could be exercised is obvious. Richard, the abbot of Fountains, who died in 1170, was a native of York, who had been abbot of Vauclair and precentor of Clairvaux,

[1] In lower Normandy, Romanesque forms seem to have persisted longer than was usually the case in England.

WAVERLEY



LYSA



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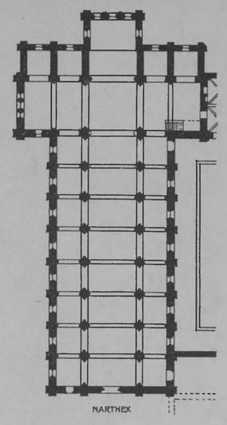
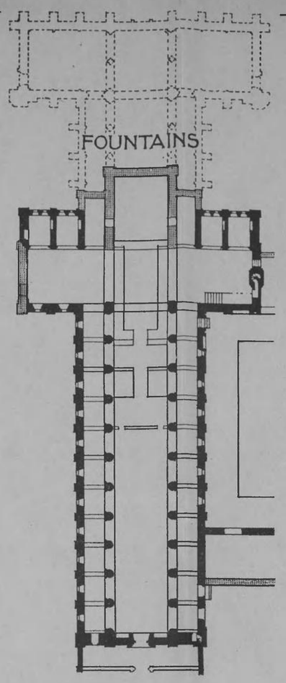
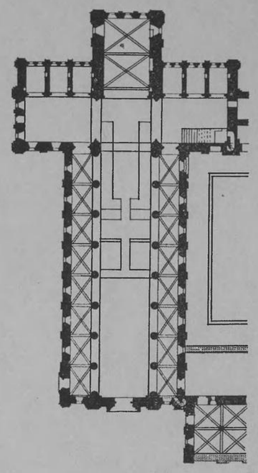


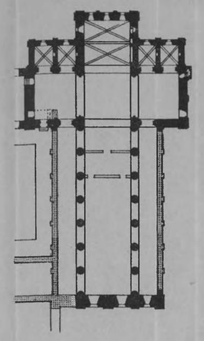
FOUNTAINS



KIRKSTALL



BUILDWAS



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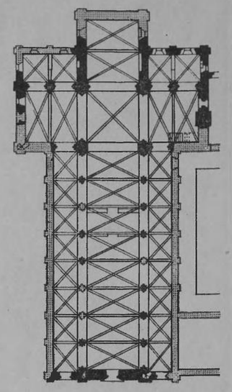
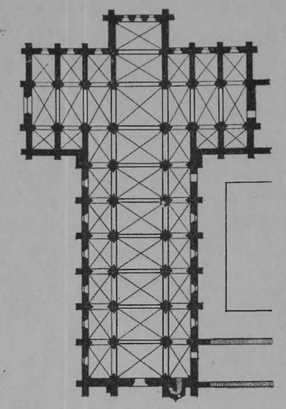
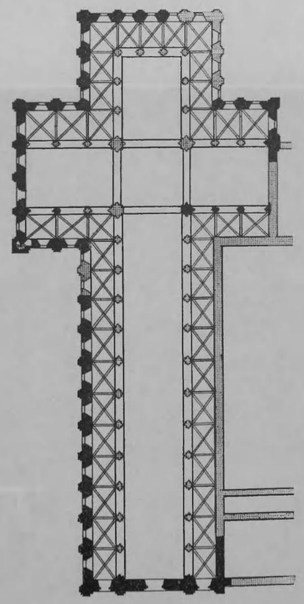


LA COUR-DIEU



BYLAND



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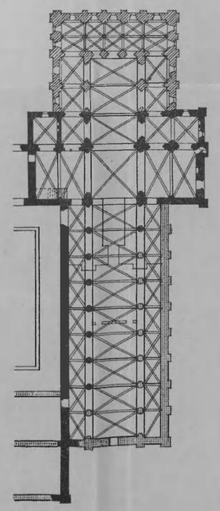
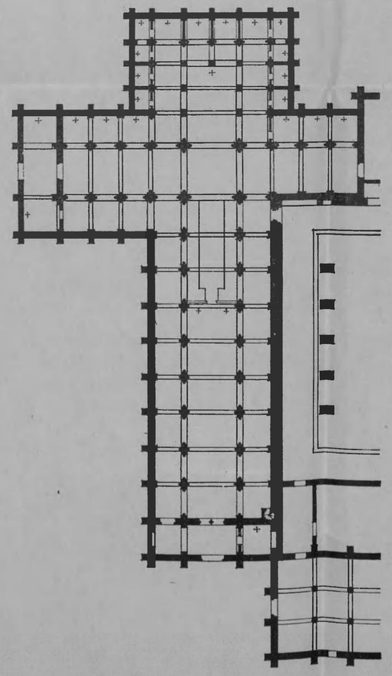
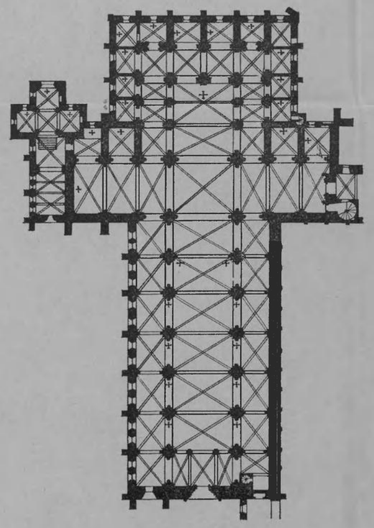


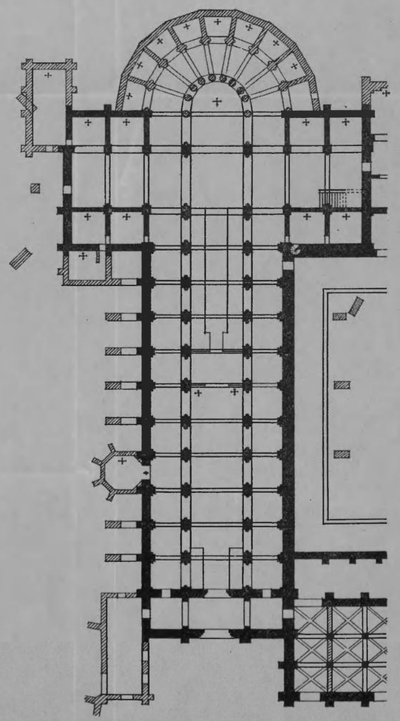
CITEAUX



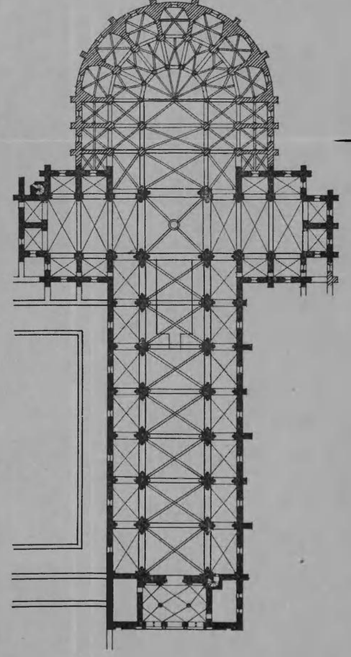
EBRACH

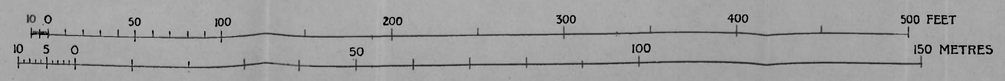


CLAIRVAUX



PONTIGNY





COMPARATIVE PLANS OF CISTERCIAN CHURCHES.

and his career may well represent that of some of the brethren over whom he ruled. In the eastern range of Fountains, there are some interesting bits of detail which seem to me to indicate that, if the mason, possibly a lay brother, who worked them was an Englishman, he was one who had travelled abroad. The earlier occurrence in northern France of certain motives of decorative expression, which we find at Roche and the later churches of our Cistercian group, sufficiently proves the source of their inspiration. This French influence is, of course, by no means confined to Cistercian building. It is characteristic of English building generally during the second half of the twelfth century, for never again did English architecture so closely follow the movement on the continent as it did during the reign of Henry II. Nevertheless, it can scarcely be doubted that the Cistercians must be counted among the most active agents in the diffusion of this influence from northern France, which is so important a factor in the development of English architecture during this period.

Nowhere in England had the Cistercian reform a greater measure of success than in Yorkshire, and nowhere was the influence of its architecture so considerable. Not that this influence was exercised so much in the direction of the spread of Burgundian motives of design, as was the case, for example, in Germany and Italy, for towards the close of the twelfth century the architecture of the Cistercians in England was gradually losing its specially Cistercian characteristics. But its influence was exercised rather by permeating architecture with something of that simplicity and restraint which was essentially the spirit of Cistercian building from the beginning. Its first severity gradually disappeared, but not before it had administered a powerful check to the somewhat redundant ornamentation of the later Romanesque. Two buildings erected by archbishop Roger of Pont l'Evêque (1154–1181) illustrate this point. What remains of his choir of York Minster shows the rich ornamentation of the time at its best, while the surviving parts of his work at Ripon have much in common with the severe beauty of Cistercian Roche. So the sober and restrained spirit of Cistercian architecture spread northward, and over the border into Scotland, and it is due in no small measure to its influence

that the eastern parts of Fountains, Rievaulx, and Beverley are distinguished by a purity of design which was rarely equalled and never surpassed in the thirteenth-century architecture of northern England.

It remains for me to express my sincere thanks to those who have so kindly allowed me to use their photographs, and in several cases have taken them specially for me, for the illustration of this paper. To my always obliging friend, M. Camille Enlart, I owe the photograph reproduced in plate xv, as well as many notes and references, and to M. Philippe des Forts the photographs reproduced in plates ii, iii, and xix. For other photographs, I am indebted to Mr. Godfrey Bingley, of Leeds (plates viii, xii, xiii, and xxiii); Mr. Arthur Bond, of Furness (plate xx, no. 1); Mr. C. H. Bothamley (plates x, and xi, no. 2); Mr. S. Gardner, of Harrow (plates xx, no. 2, xxii, no. 2, and xxv, no. 2); Mr. C. C. Hodges (plates vii, no. 2, and x); Mr. J. V. Saunders, of Hull (plates xi, no. 1, xvi, xvii, xviii, xxii, no. 1, xxiv, no. 2, and xxv, no. 1); and Mr. T. W. Thornton, of Leeds (plates iv and vi). To Mr. Sydney D. Kitson I owe the details reproduced in figs. 3, and 14, i, and to Mr. Roland W. Paul the details from Dore in figs. 4, 5, and 13.